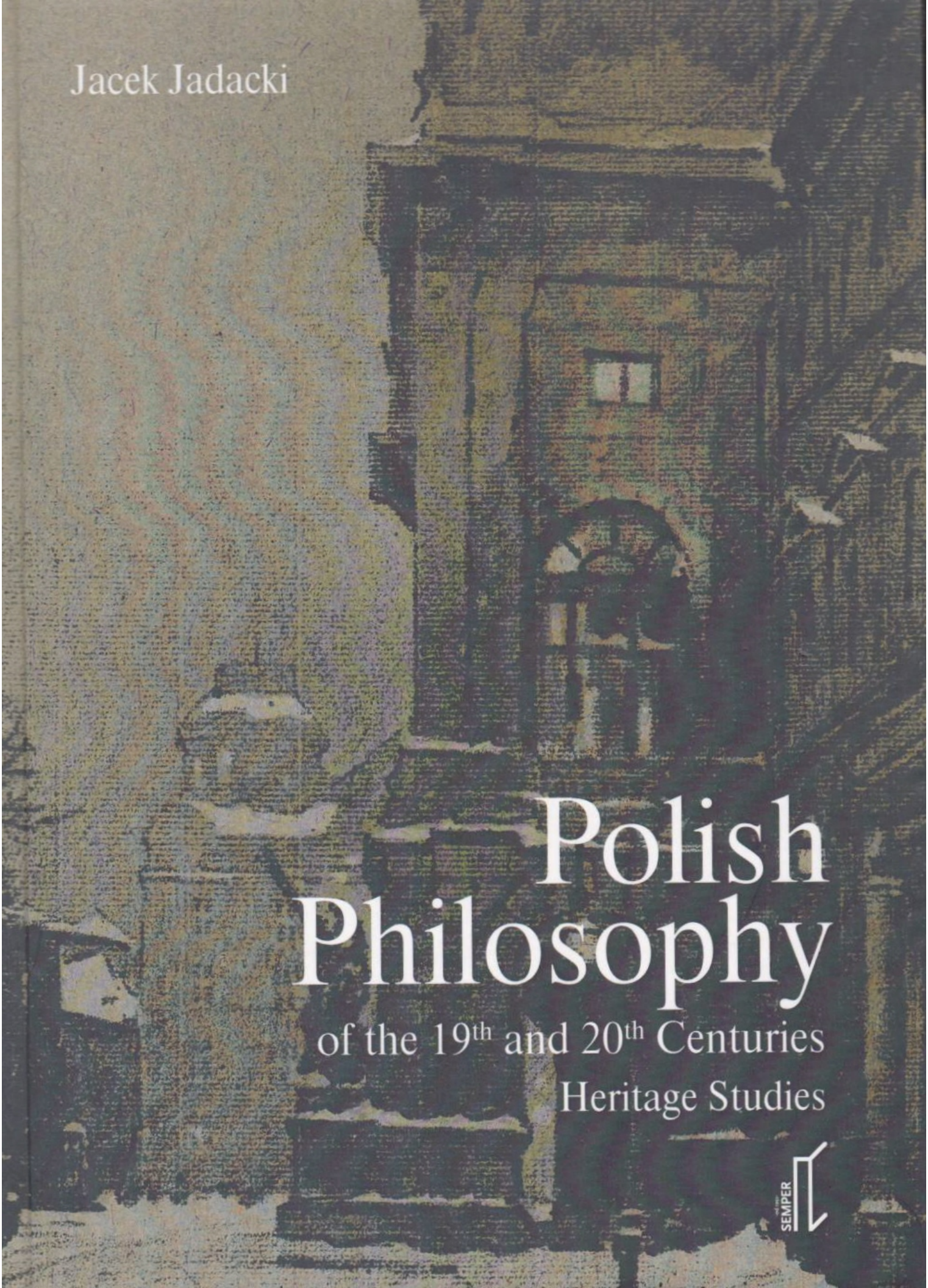
Jacek Jadacki
Polish Philosophy
of the 19th and 20th Centuries
Heritage Studies
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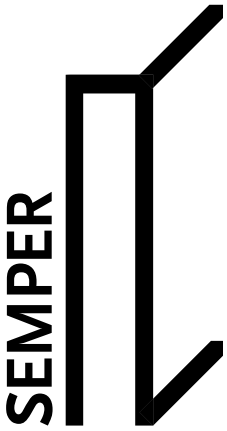

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Wydawnictwo Naukowe

Jacek Jadacki

Polish Philosophy of the 19th and 20th Centuries

Heritage Studies

Warsaw 2015

NARODOWY PROGRAM
ROZWOJU HUMANISTYKI

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All the illustrations come from the private collection of Jacek Jadacki.

On the front cover: Odo Dobrowolski's autolithograph (1915) presenting the former building of Galician Parliament; in the years 1919-1939, the main seat of John Casimir University. The autolitograph was given to the author by Maria Ajdukiewicz née Twardowska: a daughter of Kazimierz Twardowski and the wife of Kazimierz Twardowski.

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Foreword

1. I have been involved with the history of Polish philosophy for over 40 years. Some results of my research in this area – in the English language – were presented in the volume entitled *Polish Analytical Philosophy. Studies on Its Heritage* [Jadacki 2009].

This volume features, firstly, review texts on the sources of contemporary Polish logic, the development of the Polish philosophy of science, the history of modern philosophy of science in Warsaw, the conceptual system of the Lvov-Warsaw School and its impact on the Polish philosophy in the 20th century; it also addresses the fate of Polish philosophers during World War II. The texts have been supplemented with an appendix containing a bibliography of the Polish logic, dating from the second part of the 14th century to the first part of the 20th century.

The volume includes, secondly, the texts discussing the links of the Polish philosophy with the philosophy of German speaking countries (based on the examples of Alexius Meinong and Heinrich Scholz).

Thirdly, it presents monographs devoted to eminent Polish philosophers of the 20th century: Kazimierz Twardowski, Leon Chwistek, Władysław Tatarkiewicz, Tadeusz Czeżowski, Roman Ingarden and Jan Salamucha.

2. This book is a continuation of that volume, limited, as a matter of fact, to the 19th and 20th centuries. It also contains review texts and monographs devoted to individual philosophers. As regards the monographs, my emphasis is on the views of philosophers, not on the sources of their inspiration (the focus is on the reconstruction of their philosophical standpoints, not on the so-called affiliation of ideas, which is addressed primarily by the historians of the Polish philosophy).

In tandem with *Polish Analytical Philosophy,* this *Polish Philosophy of the 19th and 20th Centuries* offers English language readers a wealth of information about Polish philosophers of the last two centuries.

I am deeply convinced that all discussed philosophers are the most prominent figures of the Polish thought of that period.

3. No part of this volume has been published in English before – with the exception of a study devoted to Jerzy Perzanowski, published as [Jadacki 2008].

Some of the texts were originally written in Polish (and depart to a greater or lesser extent from the versions contained in this volume), and one text was originally written in French. Below is their complete list: [Jadacki

1987], [Jadacki 1993a], [Jadacki 1993b], [Jadacki 1994], [Jadacki 1996], [Jadacki 1998a], [Jadacki 1998b], [Jadacki 1998c], [Jadacki 1999a], [Jadacki 1999a], [Jadacki 2013], [Jadacki 2014], [Jadacki 2015], and [Jadacki & Przełęcki 1993].

4. As I have already mentioned, ALL the Polish philosophers discussed in separate monographs in both the volumes are outstanding. It cannot be said, however, that all prominent Polish 19th and 20th century philosophers have been covered. The picture of Polish philosophy of that period captured in these books is yet to be completed.

The line-up of academic thinkers active in the first part of the 19th century at the Jagiellonian University, Vilna University, and Warsaw University comes without Michał Wiszniewski, for example. As regards non-academic thinkers, *i.a.*, Józef Maria Hoene-Wroński is absent. The Polish philosophy of the mid-19th century is not represented at all: such thinkers as, for example, Karol Libelt or Józef Kremer have not been included. As regards the representatives of the second part of the 19th century, such a notable figure as Adam Mahrburg has not been featured.

Another absent figure from the turn of 19th and 20th century is, for example, Mścisław Wartenberg.

The most conspicuous absence as regards the first part of the 20th century is Jan Łukasiewicz and many more prominent philosophers – even though this publication is assumed to feature only those who are no longer with us.

I hope that this underrepresentation will be made up for in volume III to follow, addressing the most recent developments in Polish philosophy.

Jacek Jadacki.

Warsaw, 11 September 2015.

Introduction.
Seven centuries of the Polish thought

1. Phases of the history of Polish philosophy

I would like to precede the texts on 19th and 20th century Polish philosophy, with – on the one hand – a general overview of its history and division into periods, and with a more in-depth look into the thoughts of our philosophers representative of particular epochs on the other hand.

Henryk Struve, a prominent historian of Polish philosophy from the turn of the last century, pointed out that one of the characteristic features of our philosophy is the special place occupied by the research on logic and ethics. The former, unfortunately, is not fit to be presented in a popular synthesis due to being too «abstract», complex, and requiring the use of a difficult technical language. Therefore, all the examples of the Polish thought contained herein pertain to ethics: a domain which is more «practical» than logic, at least in some respects simpler, and capable of being expressed in everyday language without a compromise to the content (essence).

The history of Polish philosophy to date is broken down into the phases I shall refer to as: PERLOCUTION, INITIATION, CONSOLIDATION, EXPANSION, TURBULENCE, EXPECTATION, ACCELERATION, COMPRIMATION AND LIBERALIZATION.

Let us look into these phases by turns.

2. The phase of perlocution

The first phase of the history of Polish philosophy – the PHASE OF PERLOCUTION – covers the turn of the 13th and 14th centuries: the periods when Gothic style begins to emerge in the Polish art. (The concept of "turn of the centuries" will denote a period of time commencing more or less mid-13th century and ending more or less mid-14th century.) This phase has only one representative. It is Witelo (Ciołek) of Legnica (*ca.* 1230 - *ca.* 1314), a Silesian: half-German and half-Pole (on the distaff side).

Witelo of Legnica

In *ca.* 1268 he writes a Latin ethical-metaphysical treaty entitled *O głównym źródle pokuty ludzkiej i o istocie złych duchów* [Witelo 1268]. This is where he saw the said source:

> The sight of God brings great delight to a human soul imprisoned in the body; it is known to everyone who heads for the Holiest Being by pursuing scientific research or contemplation. Human souls decay in the filth of sin and steer ever further away from eternal vision of God. Human soul becomes tainted by wallowing in evil doings. […] The greatest punishment […] for sinful souls […] is [exactly] casting them away from their Creator […].
>
> The reason why people stray from the path that they are obliged to follow is the triumph of senses over reason. A truly humane activity is the activity of the mind aimed at attaining eternal life in this life on Earth; it is neither eating nor drinking, because those latter are also characteristic of plants and animals. And this deviation from the right path, equal to the denial of the goodness vested in every individual, is what we call a sin. Hence, a sinner (as the one deprived of his humanity as a consequence of his sins) is not a human being! […]
>
> Thus, a [human] soul, […] [through the operation of conscience] not only fights against sinful impulses, but overcomes them successfully […]. And this is the very origin of […] penance [Witelo 1268: 66-69].

3. The phase of initiation

The second phase of the Polish thought – the PHASE OF INITIATION – covers the turn of 14th and 15th centuries, and therefore the period when Gothic style is very much at home in the Polish art. This phase starts with the rule of Kazimierz III Wielki (Casimir III the Great) – is culminated with the opening of the Cracow Academy – and ends with the death of Władysław II Jagiełło (Ladislaus II Jagiello). The most prominent Polish philosophers of this period are three professors of the Cracow Academy: Mateusz of Cracow (1345-1410), Stanisław of Skalbmierz (*ca.* 1360 - 1431) and Piotr of Sienno (*ca.* 1382 - *ca.* 1460).

Cracow University
(the building of Collegium maius;
a present-day view)

The commowealth must fulfil five conditions "if it is to grow and flourish".

Firstly, [its] "government should be based on just acts of law ensuring equal justice to all".

Secondly, "consensus – which ensures unity" – should be the foundation of government.

Thirdly, the governments should never betray the "honest trust of the citizens", otherwise the community is doomed to disintegrate as a result of "some people claiming the duties of others".

Fourthly, the commowealth should be governed by listening attentivel to "good advisers", not "youngsters – both in age and custom".

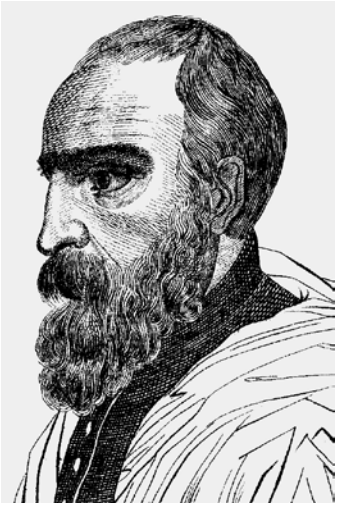
And finally, fifthly, the commonwealth should have a "carefully-thought out and indicated goal", which, in a way, "crowns all the effort that is made", because if the endeavours of the citizens are discrepant, then "the community […] will be heading for a collapse".

Stanisław of Skalbmierz

Those words sound as if they were written yesterday and resonate still until today, even though they originate from *Mowy o mądrości Boskiej*, written more than five centuries ago by the above mentioned Stanisław of Skalbmierz [Stanisław 1409-1415].

4. The phase of consolidation

The third phase of history of Polish philosophy, the PHASE OF CONSOLIDATION, covers the turn of 15th and 16th centuries, therefore, a period when Renaissance is prevalent in our art. The rule of Kazimierz IV Jagiellończyk (Casimir IV Jagiellon) begins this phase, which is brought to an end with the death of Zygmunt I Stary (Sigismund I the Old). Cracow sees the formation of an academic environment, credited to Benedykt Hesse (*ca.* 1389 - 1456), which goes down in history as the first Polish philosophical school. One of Hesse's disciples is Grzegorz of Sanok, the Polish Socrates, the best-known philosopher of the period who – just like his Greek counterpart – exerted a tremendous influence on the formation of the intellectual elite of his time, even though there is no written record of his work. The pinnacle of the Cracow School's development occurs after



Jan Schilling of Głogów

Grzegorz's death, namely in the years right before and right after 1500; the School's representatives include, among others: Michał Twaróg of Biestrzyków (*ca.* 1450 - *ca.* 1520), Jan of Gostynin (*ca.* 1454 - 1506) and Jakub of Stobnica (1470 - *ca.* 1519).

Jan Schilling of Głogów (*ca.* 1445 - 1507) is by no means the most eminent representative of the entire School. Schilling was primarily interested in metaphysics and logic, but he also devoted much attention to the questions of ethics. This is what we read in his *Quaestiones in Aristotelis libros* "*De anima*", published in 1501.

> A man should seek, first, such [goods] that make him more perfect. […] The purest perfection of man comes from what makes his best part perfect, namely his mind. Therefore, a man should be diligent in […] striving towards wisdom and knowledge [Schilling 1501: 419].

Both knowledge and wisdom are supplied by philosophy. Since philosophy is "knowing the entire entity of beings".

5. The phase of expansion

The fourth phase in the history of Polish philosophy, the PHASE OF EXPANSION, covers the turn of the 16th and 17th centuries, the period in which the Renaissance style in the arts is changing into Mannerism. The period begins with the rule of Zygmunt II August (Sigismund II Augustus) and ends with the death of Zygmunt III Waza (Sigismund III Vasa). In philosophy, the phase is opened by Jan of Trzciana (*ca.* 1519 - 1567) and Jakub Górski (*ca.* 1525 - 1585), a logician, and crowned by two other logicians: Adam Burski (*ca.* 1560 - 1611) and Marcin Śmiglecki (*ca.* 1565 - *ca.* 1618), and Maciej Sarbiewski (1595-1640), an aesthetician-poet.

Sebastian Petrycy of Pilzno

A unique position in this period is occupied by the translator of Aristotle, Sebastian Petrycy of Pilzno (*ca.* 1554 - 1626), a philosopher who was – unlike his predecessors – the first to write in Polish and not only in Latin. Let us take a look at how he analysed the notion of "moral virtues" in his *Przydatki do "Etyki" Arystotelesowej* to the Aristotelian ethics, published in 1618.

It is the purpose of human life to reach goodness, in other words, the highest degree of happiness: the sense that one's own life is virtuous, wise and just. Because justice is a social virtue, such a life can only be led in society. The

urge to achieve goodness is shared by all humanity. Even if somebody *de facto* wishes evil, in his own understanding, he will be striving towards goodness (which is always connected with delight and joy). Although people are not born with moral virtues, they are born with the "seeds" [Petrycy 1618: 139] of moral virtues, which can be developed or stunted.

That man leads a virtuous life who (a) is aware of what he is doing and, (b) does it with deliberation, (c) with good intentions and (d) "staidly" (with persistence). A necessary condition of virtuous actions is knowledge and purposefulness, though "thick unawareness" (lack of knowledge) and "being compelled" (lack of intentionality) will not strip evil deeds of their negative quality. Since:

> There are […] deeds so evil that they could never be good, and no man shall ever be compelled to perpetrate them, […] even at the price of his own life, and those are: […]: to cast away religion, to betray one's country, to kill one's father [or] mother [Petrycy 1618: 227].

Since a deed can be morally judged based on its intentionality, therefore "a man deprived of freedom (of choice) can be neither virtuous nor wicked".

6. The phase of turbulence

The fifth phase of the history of Polish philosophy – the PHASE OF TURBULENCE – covers the turn of 17th and 18th centuries and, therefore, a period of Baroque's dominance in the arts. This phase is bracketed by two distinct political and economic milestones: Polish-Swedish war (1655-1658) with ensuing economic degradation, and the era of partitions (1772-1795), resulting in the loss of administrative and economic unity as well as independence. This phase starts with the rule of Jan (John) III Sobieski, and ends with the death of August III Sas (Augustus III the Saxon).

Development takes two separate directions in this phase, which is its distinctive feature. Academic (educational) philosophy is continued on the one hand, represented by, among others: Szymon Makowski (*ca.* 1612 - 1683), Wojciech Tylkowski (*ca.* 1625 - 1695), Jan Morawski (the elder) (1633-1700) and Stefan Sczaniecki (1655 - *ca.* 1736); then Adrian Miaskowski (1657-1737) and Kazimierz Ostrowski (1669 - *ca.* 1731); finally Antoni Wiśniewski (1718-1774) adn Kazimierz Narbutt (1738-1807). It is more of a «sideways» continuation, not an «in-depth» exploration. The real depth is reached by the philosophers working outside the academic world of aristocratic background. Three figures – all subtle moralists – deserve a mention: province governor Andrzej Fredro (*ca.* 1620 - 1679), Marshal of

Stanislaus I Leszczyński
(king of Poland)

the Crown Stanisław Lubomirski (1612-1702) and philosopher-king Stanisław I Leszczyński (Stanislaus I Leszczyński), the Polish Marcus Aurelius.

In his work *Le philosophe chretien*, published in French after finally leaving Poland in 1749, Leszczyński defines the core principle of happiness:

> Wisely avoid disasters which you can avoid, and accept unavoidable misfortune with patience [Leszczyński 1749: 3].

He holds that there is no happiness without virtue and without the realization of what virtue is. There is no virtue without the desire to be honest, and no realization of what happiness is without experiencing misfortune.

An honest man, according the philosopher-king, has certain obligations towards others and towards himself. The former include: obedience towards your superiors, kindness towards those who are your equals and acting as a setting an example to those who are your subordinates; loyalty to friends, justice towards the guilty of crimes, showing mercy to those who repent, respect to those deserving respect, and understanding to those who are imperfect. According to Leszczyński it would be wrong to think that impeccable moral conduct excludes the pleasures and delights of life. Passion could develop into bad habits, but it is not a bad habit in itself.

A moral ideal recommended by the philosopher-king seems to be minimalist. Nonetheless, in his opinion, "there is nothing more common than to be perceived as an honest man, and is there is nothing more rare to be an honest man at heart" [Leszczyński 1749: 40].

7. The phase of expectation

The sixth phase of history of Polish philosophy is the PHASE OF EXPECTATION. It covers the turn of the 18th and 19th century, a period in which Classicism and Romanticism prevail in art. A dramatic finale of this phase is the January Uprising whose defeat paralysed not only our philosophy, but also other areas of national culture for a period of time. One of the most prominent philosophers who come to the fore at that time are: Marian Nikuta (*ca.* 1740 - 1812), Józef Skrzetuski (1743-1805), and Michał Wiszniewski (1794-1865), who happens to be a relative of the above-mentioned Antoni

Wiśniewski, Józef Kremer (1806-1875) – the participant in the November Uprising; as well as Karol Libelt (1807-1875) – *nota bene*, one of the leaders of the Greater Poland Uprising.

The most original Polish thinker of this era is Anioł Dowgird (1776-1835). His philosophical oeuvre is so extraordinary, and the style of writing in Polish so exquisite, that it may until this day be considered a gold standard.

This is how Dowgird presents one of the key questions of ethics, *i.e.* the issue of free will, in his *O logice, metafizyce i filozofii moralnej rozprawa*, published in 1821.

Warsaw University (the former building of the Main School; a view dated from the 19th century)

He insists on a distinction between three issues: (1) the will, which is the power to desire and make choices; (2) freedom, in other words, the possibility to act on one's decisions, and finally; (3) free will itself. As far as freedom is concerned, if it is conceived as the possibility to desire something or experiencing a lack of such desire, then freedom so conceived does not exist. A man always desires what is good, and if he does evil things, he does it out of ignorance. Freedom of will, however, does exist if it is conceived of as synonymous with the ability to suspend choices.

Conscience is the source of moral standards – approval or disapproval: "remorse" (qualms of conscience) and shame. Thus, the key moral rule is:

> Act so that you would not be ashamed to confess your actions and motives to the whole world [Dowgird 1821: 152].

This principle is complemented by the core rule of happiness: "Try to free yourself from suffering", so strikingly different that of Leszczyński given a century before.

8. The phase of acceleration

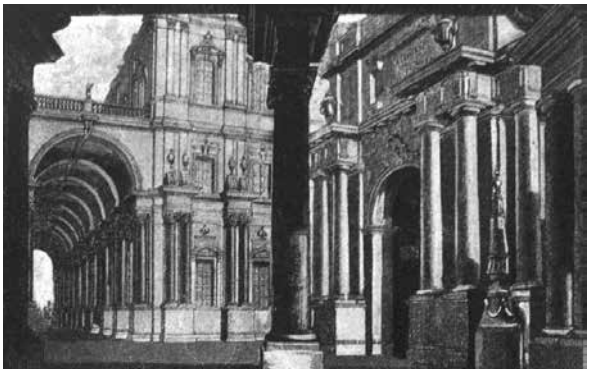
The seventh phase of history of Polish philosophy, the PHASE OF ACCELERATION, covers the turn of the 19th and 20th century – a period in which art is dominated by Modernism. Its tragic *terminus ante quem* is the German and Russian invasion in September 1939.

The beginnings of the phase are quite modest and pertain mostly to the activity of Władysław Kozłowski (1832-1899) – otherwise participant of

January Uprising – and to Struve (1840-1912), quoted at the beginning, as well as Adam Mahrburg (1855-1913) and Władysław Biegański (1857-1917). A true impetus or *accelerando* in its development is credited to Kazimierz Twardowski (1866-1938), the founder of the Lvov-Warsaw School, the second philosophical formation after the Cracow School to achieve universal renown. In that period we had a number of magnificent thinkers, such as Mścisław Wartenberg (1868-1938), Jacek Woroniecki (1878-1949), Florian Znaniecki (1882-1958), Leon Chwistek (1884-1944), Henryk Elzenberg (1887-1967), Joachim Metallmann (1889-1942), or – *last but not least* – Roman Ingarden (1893-1970). Nonetheless, it is the representatives of Twardowski's School who set the intellectual tone of the period in question: Jan Łukasiewicz (1878-1956), Tadeusz Kotarbiński (1886-1981), Władysław Tatarkiewicz (1886-1980), Stanisław Leśniewski (1886-1939), Tadeusz Czeżowski (1889-1981) and many others.

From among the School's representatives, we select one bright shining star: Kazimierz Ajdukiewicz (1890-1963). One of his most elegant logical analyses can be found in this essay "O sprawiedliwości" published, *nomen omen*, in 1939, just before the outbreak of World War II. In this publication, Ajdukiewicz differentiates between two kinds of justice: strict justice and charitable justice.

> Strict justice requires that no one be given more or less than they deserve. In contrast, charitable justice requires only that no one be given less than they deserve; it permits, however, one to share goodness in excess.
>
> In view of charitable justice, only that man acts charitably who brings goodness to anyone who deserves it and does not do evil to anyone who deserves it. […] In the strict sense, only that person does justice to others, who brings goodness to everybody deserving goodness and does evil to everybody deserving it, and does not bring goodness or evil that is not deserved […].
>
> Charitable justice can be shown by the one who brings goodness or evil to another, but only in his own name. Strict justice is required from the one who administers good or evil to others on somebody else's behalf. It may be a judge or a professor during an exam – they should keep in step with strict justice. Charity shown when inflicting damages or granting rewards is



Połock Academy (the old building; a view dated from the 19th century)

with detriment to the society which has empowered the said persons to administer justice [Ajdukiewicz 1939: 367].

9. The phase of comprimation

Let us move to the second to last phase in the history of Polish philosophy – the PHASE OF COMPRIMATION – which started after World War II and lasted until the day when the Polish Republic was reborn in the last decade of the 20th century. Its character is defined by two political facts: the annihilation of a major part of the philosophical circles (especially younger generation) who met death from the hands of both aggressors – the Nazis and the Soviets – and eliminating for decades from active intellectual life all those philosophers who refused to subordinate to the ideological regime installed by the Soviet occupants after World War II. Although we have freed ourselves from this dictate in the end, the real freedom from its effects is yet to come: some people still try to promote active protagonists of Communist ideology (brainwashing) and idols of Communist ideology in the disguise of post-modernism.

As a representative of this particular phase I would to bring up at this point Józef Maria Bocheński (1902-1995), a philosopher who had emigrated from Poland. According to Bocheński, there are certain values which need to be defended by actively opposing foreign indoctrination from the East. His *"Sens życia" i inne eseje*, published in 1993, defined the core values which are the keystone of a free mind which form a free man, captured into five distinctive lines of thought:

SCIENTIFIC THOUHT. As to identifying and explaining certain inherent facts, there is only one human authority: the authority of genuine knowledge. […]

HUMANISTIC THOUGHT. Full and free development of modern man as an individual is the highest universal value and is therefore the major goal of all political activities. […]

SOCIAL-DEMOCRATIC THOUHT. Every human being enjoys fundamental, inalienable rights, and in view of those rights all people are equal. […]

POLITICAL-DEMOCRATIC THOUGHT. Among tried

Lvov University (the old building; a view dated from the first part of the 20th century)

democratic systems, the democratic-pluralist system is the least evil because it relatively effectively protects against injustice. […]

ECONOMIC-PLURALISTIC THOUGHT. Among tried economical systems, the pluralist system should be preferred over the monopoly of the means of production, first of all over the monopoly of the state because such monopoly leads to the enslaving of man [Bocheński 1993a: 52-57].

A free man's ideals are therefore: theoretical anti-dogmatism, political anti-collectivism, moral anti-elitism, systemic anti-totalitarianism and economic anti-etatism.

And, finally – we proceed to the sense of life. What, in fact, is the sense of life?

The sense of life is my private matter and, in this respect, I can rely only on myself. Striving towards a goal usually gives meaning to life: I must, therefore, make sure that I do not run out of goals. The sense can be found not only in pursuing a goal, but also in making the best of a moment in time. Relishing it, being able to enjoy what is given to me here and now is grand: conscious effort should be made to learn that ability. Human life is not a single series of endeavours, but a collection of such multiple shorter series. One must not let oneself be seduced by a single great cause, but be able to find joy in a multitude of smaller, transient moments of satisfaction.

Incidentally, what results from those deliberations is rejecting three mythologies harmful to the sense of life: the mythology of society, activism and havelism. It is not true that the meaning of life is a social issue: it is, as the majority of things which are really important to me, my own personal issue. It is not true that striving towards a goal may give meaning to life, that one needs ONLY and exclusively pursue goals. It is also not true that only absolute happiness has value, that small and transitory moments of satisfaction are merely «VANITIY».

A shallow and mediocre philosophy, some might say. Probably so. The thing is, though, that it holds true to me, while «deep» and «grand» philosophies are false. What is worse, I think that more than one grand philosophy had been the cause of misfortune for many people, while this humble philosophy, which probably captures the wisdom of ordinary people, may give a man a little bit of happiness, if it is at all possible in this world [Bocheński 1993a: 21-22].

10. The phase of liberalization

Currently, Polish philosophy is in the PHASE OF LIBERALIZATION. Political pressure has died down, along with the subordination of philosophy to the Communist doctrine. The latter has been almost eradicated form the Polish collective mind, which has come back to its natural tradition, seemingly dormant in the previous phase, but not completely wiped out.

Part 1
IDEAS, CENTRES, EPOCHS

1. Romanticism in the Polish culture of the 19th century

1. Exemplary definition

It never fails to shock that despite two centuries of discussions about Romanticism – what the experts in the field write about this phenomenon – is methodologically clumsy and disorderly, and factually incorrect.

One example shall suffice for illustration purposes, namely the entry "Romanticism" in *Encyklopedia muzyki*. (Subsequent sentences have been numbered for ease of analysis.)

> (1) A trend in the 19th century music whose major aesthetic thesis was the connection of music with other kinds of arts. (2) The Romantics considered music to be a fluent, fantastic art, capable of expressing moods and emotions. (3) It was seen as both the strength and weakness of music. (4) Therefore, the writings on music by eminent composers such as C.M. Weber, R. Schumann, H. Berlioz, R. Wagner, F. Liszt are attempts at finding *raison d'être* for their artistic standpoints. (5) The Romantics viewed the interaction between music and poetry dance, drama, and graphic arts as a way to «solidify» the fleeting fabric of sound. (6) The interaction between music and poetry took place primarily on the plane of vocal lyrics, whose main representatives were, among others: F. Schubert, R. Schumann, F. Mendelssohn; in Poland S. Moniuszko who, in appreciation of the expressive and formative power of words, drew on the texts of outstanding Romantic poets: J.W. Goethe, H. Heine, F. Rückert, J. Eichendorff, G. Byron, A. Mickiewicz, A. Pushkin. (7) Simultaneously, many poets wrote poems which referred to music (for example, Heine – *Das Buch der Lieder, Eichendorff Liederkreis*). (8) This is how rich vocal literature emerged, which also influenced Romantic instrumental music, which manifested in the use of songs as themes for variations, sonatas, quartets, fantasias (for example Schubert' songs: "Die Forelle", "Der Tod und das Mädchen", "Der Wanderer"), writing short lyric piano pieces modelled on songs (for example songs without words composed by Mendelssohn), and, finally, composing complete lyrical works (for example, F. Chopin, Schumann). (9) On the other hand, the lyrical elements filtered into extended musical forms (for example, Chopin's sonatas, ballads, fantasias) and played a crucial role in the formation of symphonic poems having its grounds mainly in literature. (10) A postulate of the collaboration of music with other kinds of art reached its mature form in R. Wagner's musical dramas. (11) Wagner regarded this genre to be a perfect artistic creation, capable of bringing together all arts in one masterpiece. (12) Also instrumentation flourishes in Romanticism. The greatest credit in this respect is given to H. Berlioz, the inventor of sound and colour pattern which is independent from earlier attempts of the so-called sound painting which basically imitated nature. (13) National schools are booming in Romanticism. (14) The music composed in this period had a profound impact on the further development

of music in the 19th century, and on the work of many 20th century composers [Chodkowski, ed. 2001: 758].

Sentences (1)-(5) communicate – besides an abundance of superfluous information and hazy metaphors (for example "fluent art", "fleeting fabric of sound") that:

(a) "the primary aesthetic proposition [of Romanticism] is the connection of music with other forms of art", in particular "with poetry, dance, drama [and] painting";

(b) music is, according to the Romantics, "fantastic art";

(c) music is capable of "expressing feelings and moods".

Sentences (6), (8) and (9) say that proposition (a) was implemented by the Romantics "primarily in vocal lyrics", and through the use of themes and song forms in instrumental music, chiefly in instrumental lyrics.

Sentences (10) and (11) say that proposal (a) "reached its mature form in R. Wagner's musical drama".

Sentence (12) suggests that Romantic music is distinguished by colour diversity (this is how the metaphor saying that H. Berlioz was "the inventor of sound and colour pattern" should be construed; otherwise – if taken literally – this sentence is nonsense).

Sentences (7), (13) and (14) are totally irrelevant for the concept of Romanticism in music.

It can be easily noticed that Romantic style boils down here to fantasy and expressiveness. It also claims that works of art should bring together various artistic domains. This claim can hardly be considered as typically Romantic in theory, and even less so in the actual practice, considering the works of Romantics.

2. Reconstruction

The quoted example – one of many – invites a logical therapy. Let us start with pointing out that the adjective "Polish" in the phrase "Polish Romanticism" is a modifying, not a determining adjective – it does not narrow, but «shifts» the notion of Romanticism, (the adjective "false" added, for example, operates in a similar fashion when added to the noun "diamond": the compound "false diamond" designates not a diamond, but a stone pretending to be a diamond).

In order to define Polish Romanticism (referred to briefly as Romanticism) we need to identify proper *genus proximum*. At least three *genera* must be considered at this point: an epoch, a programme, and a style.

3. Romanticism as an epoch in the history of Polish culture

The matter seems to be relatively simple – the period under consideration is the first half of 19th century. It is the actual area of culture that could raise doubts: is it the entire culture or only a part of it (for example literature, graphic arts, music, or perhaps also metaphysics, ideology, *etc*.).

4. Romanticism as an artistic programme

We need to distinguish, after Tatarkiewicz, between explicit program (formulated as a clearly defined manifesto) and implicit program. Coming up with a description of the former brings about the question of the extent to which it was implemented by artists and authors declaring themselves as "exercising" the Polish style of Romanticism. The description of the latter brings about the questions about the criteria for the adequacy of reconstruction.

It is even more difficult to distinguish between an artistic programme and its metaphysical and ideological horizon. Let us, for the sake of simplicity, differentiate between the process of creation, the created work – and its form and (if there is one) subject matter – and the reception of the work. Clearly, when we talk about mysticism in the context of Romanticism, it might be meant as imbuing the creative process or the subject matter of a work of art, or the attitudes of its protagonists, or perhaps it might mean that mystical aura is to be evoked in the recipients.

4.1. Metaphysical horizon

(1) Emotionalism: emotional sphere is more important than the intellectual sphere.

(2) Intuitionism: intuition, not perception, is the primary source of information for the creator.

(3) Idealism: the world of art should be beautiful.

Beauty of the world presented in the art can be achieved in two ways: by capturing only beautiful fragments of reality in the work of art – or by beautifying (*scil.* idealization) non-beautiful reality.

We could say that idealism was an element of the metaphysical vision of the world as seen from the perspective of both Polish Romanticism, and Classicism, its opposite. The former

Stanisław Moniuszko

beautified the reality, whereas the latter highlighted the true beauty in reality. It seems that the classicist attitude was, in principle, much more optimistic than the romantic one: the classicists did see spots of beauty in the world, while the romantics – unable to find it in reality – created beauty using idealization.

4.2. Ideological horizon

(1) Individualism: the good of the individual is more important than the good of the collective. Individualism is opposed to collectivism.

Let us assume that we know what this good is. It remains to be answered whose good it should be: the good of which individuals and which societies.

As regards the first part of the question, there are two completely opposite answers: the good of every single individual or the good of certain distinguished individuals. In the case of the latter – what is the factor "qualifying" for such a distinction, then?

As regards the second part of the said question: the good of the collective may be defined as the total good of single individuals who form this collective; such interpretation rules out any conflict between the individual and the society – making the term "individualism" no longer viable.

I would venture a hypothesis that individualism connected with Polish Romanticism declares the following:

If the good of the community is not the total good of single individuals who form this community, then the good of the most eminent individual (in a weaker version: eminent individuals) is in all circumstances more important than the good of every community.

(2) Libertarianism: the freedom of the individual is the most important good. Please note that sometimes libertarianism is erroneously put in opposition to authoritarianism.

Where does libertarianism stand in the context of individualism? These views are independent.

One can be:

(a) individualist and libertarian;

(b) individualist and non-libertarian;

(c) non-individualist and libertarian;

(d) non-individualist and non-libertarian.

The combination (a) seems to be characteristic of the Polish Romanticism.

Therefore:

If the good of the community is not the total good of the individuals forming this community, then the freedom of the most eminent individual is in every circumstance more important than any good of the community.

(3) Revolutionism: bed social systems should be changed – quickly and with the use of force. Revolutionism is usually opposed by evolutionism.

The greatest difficulty is to define clearly a "bad social system" actually is. All the approaches assume that a bad social system is, in every case, the past former social system. In extreme cases it is every time the present system – in which case revolutionism takes on a permanent form, in keeping with the slogan: "The new is always better than the old".

I must admit it is difficult to decide which form of revolutionism is the closest to Polish Romanticism.

The relationship between revolutionism, individualism and libertinism is quite complex. One of the combinations is as follows:

If the good of the community is not the total good of single individuals who form the community, then the freedom of the most eminent individual is in all circumstances more important than the good of every community, and all bad social systems which restrict this freedom should be changed into better systems – quickly and with the use of force.

5. Romaniticism as a style

It seems that *genus* is in theory of prime importance. Providing an accurate *differentia specifica* seems to be the most problematic. We need to look at such genre features which are formal or related to the form and subject matter. Theoreticians of art and aestheticians notoriously confuse them with the factors which determine the relationships between works of art – quite vaguely, many a time.

5.1. Formal-thematic feature

Fantasy (*resp.* exoticism): Art should be extraordinary – both in terms of form and its subject matter – and as removed from reality as possible.

5.2. Formal features

(1) Amorphousness: the content of the work of art is its key ingredient – the construction of the work of art should be governed by its content, not the existing canons (*resp.* conventions) and the principle of harmony.

(2) Expressivity: the primary goal of art is to express human experience.

5.3. Relationships

(1) Archaism: Works of art should refer to the works of earlier epochs…

(2) Folklore: … folk art …

(3) Exoticism: … folk art produced by the cultures from distant regions.

6. Conclusion

The results of reconstruction of the notion of (Polish) Romanticism are so precise that they could be first falsified and then – corrected. Falsification would consist in demonstrating that the components of the concept of Romanticism have been poorly chosen – either because they are not intrinsic to all the works of art deemed to be romantic, or because they are intrinsic to other works of art as well.

The historians of art explore this issue. They are to decide whether or not the concept of Romanticism is a conjunction of listed components (possibly corrected) or their alternative, and whether or not this concept is gradable.

2. Polish logic in the years 1870-1918

1. Environment

As regards the territory of the former Polish Commonwealth, the stronghold of logic was located in the south between 1870-1918 – in Ruthenia and Lesser Poland (*i.e.*, then Galicia). The logic circles of Lvov had the strongest representation. Its most prominent figures include: Aleksander Raciborski, Stanisław Piątkiewicz, Wacław Wolski, Kazimierz Twardowski, Jan Łukasiewicz, Bronisław Bandrowski, Wacław Sierpiński, Zygmunt Zawirski, Kazimierz Sośnicki, Stanisław Leśniewski, Tadeusz Kotarbiński, Tadeusz Czeżowski and Kazimierz Ajdukiewicz. The leader of the Lvovian group was certainly Twardowski. In that time, Cracow was an arena of activities of *i.a.*: Józef Kremer, Stefan Pawlicki, Antoni Molicki, Konstanty Czaykowski, Franciszek Gabryl, Konstanty Michalski and Leon Chwistek – with Gabryl at the forefront. Władysław Biegański, permanently residing in Częstochowa, and Franciszek Sękowski from Jasło also gravitated towards the Cracow environment. Warsaw, the only logic centre in Mazovia, was represented by: Henryk Struve, Władysław Gosiewski, Adam Mahrburg, Władysław Mieczysław Kozłowski, Józef Abramowski and Stefan Mazurkiewicz. Also Edward Stamm had connections with the Warsaw environment, although he was not a permanent resident of Warsaw. We can say that logic was the crucial area of interest of Struve – he was involved with logic to a much greater extent than with other scientific disciplines. The Greater Poland environment had even fewer members: in Poznań, logic was pursued to some extent only by Henryk Wize and Czesław Znamierowski. Prussia did not contribute to the development of Polish logic at the time – except for the contribution of Władysław Świtalski from Braniewo who wrote solely in German. The oppression that followed after the uprising, particularly ruthless in Lithuania, destroyed completely the once thriving logic circles of Vilna (which will undergo a revival in the 1920s).

Aleksander Raciborski

A number of people dealing with logic at that time were scattered around the world. Bronisław Trentowski resided in Germany, Platon Porecki – in Russia, Wincenty Lutosławski – mainly in Switzerland, England and France,

and Józefa Kodisowa, née Krzyżanowska – in the United States. Some of them, for instance Lutosławski, had close relationships with national centres; in other cases these connections were fairly loose; still others, such as Porecki, were completely alienated.

If we were to consider the origin of the logic circle members, the contribution of all districts would be more evenly distributed. What should be brought to the reader's attention is that that logicians working in particular centres were mostly newcomers from other districts. Only the researchers from Ruthenia (Eastern Galicia) remained generally within area of the Lvov centre. And thus: Struve, Molicki, Wize, Świtalski and Znamierowski came from Greater Poland; Konstanty Michalski from Silesia; and Pawlicki from Prussia. Trentowski, Lutosławski, Sierpiński, Kotarbiński, Stamm and Mazurkiewicz were born in Mazovia; Kremer, Czaykowski, Chwistek and Sękowski were from Lesser Poland. Mahrburg and Kodisowa came from the former Lithuania. Gosiewski, Raciborski, Piątkiewicz, W. Kozłowski, Wolski, Łukasiewicz, Bandrowski, Zawirski and Ajdukiewicz were born in Ruthenia. Finally, W. M. Kozłowski and Abramowski were from Ukraine, Porecki and Leśniewski from Russia, while Twardowski and Czeżowski – from Austria.

2. Breakthroughs

There are three sub-periods in the history of the Polish logic in the time period under discussion. The first period covers years 1870-1882, the second: 1884-1899 and the third – 1900-1917. The boundaries between the sub-periods, especially the first two, are extremely clear. Not even one work on logic was published in Poland between 1865 and 1869.

Certain attempts at grasping and evaluating the output of the Polish logic to date are made between 1870 and 1882. Relatively much attention is devoted to methodology. There is a tendency to base logic on new, empiricist psychology. The main works of those 12 years include: Struve's *Wykład systematyczny logiki* [Struve 1870], developed later into *Historia logiki jako teorii poznania w Polsce* [Struve 1911], *Nowy wykład logiki* [*New Lecture on Logic*] by Kremer [1878], and *Metodologia* by Molicki [1879].

Polish logicians are preoccupied with methodological issues also in 1884-1899. The most interesting conclusions are drawn at a point where psychology meets logic, further referred to as the so-called psycho-logic. The study of the history of logic is extended to include ancient logic.

At the same time, voices are raised against the psychologization of logic; a semi-conscious return to grammaticalism is observed as well. All these attempts are subsequently reflected in the most important works published

in the period, including Raciborski's *Podstawy teorii poznania w "Systemie logiki dedukcyjnej i indukcyjnej" J.S. Milla* [Raciborski 1886], Biegański's *Logika medycyny* [Biegański 1894], Twardowski's *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen* [Twardowski 1894] and *Wyobrażenia i pojęcia* [Twardowski 1898], Lutosławski's *The Origin and Growth of Plato's Logic* [Lutosławski 1897], and Gabryl's *Logika formalna* [Gabryl 1899].

Kazimierz Twardowski

The years 1900-1917 begin to bear fruit of the anti-psychologistic approach with a grammaticalist slant, which had been seen before. Semiotic study is flourishing. Methodological issues are the subject of heated debate. A trend to algebraize logic becomes evident. The most outstanding works of these 17 years are: Biegański's *Zasady logiki ogólnej* [Biegański 1903] and, in particular *Teoria logiki* [Biegański 1912] which drew on it, Twardowski's *Über Begriffliche Vorstellungen* [Twardowski 1903] and *O czynnościach i wytworach* [Twardowski 1912]; Bandrowski's *O metodach badania indukcyjnego* [Bandrowski 1904] and *O analizie mowy i jej znaczeniu dla filozofii* [Bandrowski 1905], Łukasiewicz's *Analiza i konstrukcja pojęcia przyczyny* [Łukasiewicz 1906], *O wnioskowaniu indukcyjnym* [Łukasiewicz 1907], *O zasadzie sprzeczności u Arystotelesa* [Łukasiewicz 1910] and *Die logischen Grundlagen der Warscheinlichkeitsrechnung* [Łukasiewicz 1913]; Stamms' *Zasady algebry logiki* [Stamm 1911-1912], Chwistek's *Zasada sprzeczności w świetle nowszych badań Bertranda Russella* [Chwistek 1912] and, finally, Leśniewski's *Логические рассуждения* [Leśniewski 1913c] and *Podstawy ogólnej teorii mnogości* [Leśniewski 1916].

The following three sub-periods: 1870-1882, 1884-1899 and 1900-1917 mark a breakthrough for the Polish logic. Never before has the scope of study been so vast and so brimful of new ideas. Never before has Polish logic seen so many researchers work on it and produce so many works (excluding translation) at such a rate. In 1870-1882 as many as 15 authors discussed logic-related issues in about 30 works; as many as 3 works were produced *per* year. To illustrate the above, years 1842-1864 saw the publication of 15 books by 10 writers, which means approximately one publication *per* year. In 1884-1899 as many as 30 researchers discussed logic in approximately 60 works, which means approximately 4 publications *per annum*. Between 1900 and 1917 (active) logic research environment from Poland recorded 60 members and 200 research publications; the number of annual publications

on logic rose to *ca.* 13, and in the number of publications in 1912 was equal to the total number of publications between 1870 and 1882.

A complete list of logic researchers of the day is as follows (except for the names already mentioned): Teofil Borzęcki, Antoni Bukaty, Franciszek Kautny, Aleksander Tyszyński, Stanisław Zarański, Feliks Jezierski, Kazimierz Kaszewski, Ignacy Boczyliński, Władysław Kozłowski, Zdzisław Korzybski, Henryk Hoyer, Bolesław Limanowski, Franciszek Krupiński, Józef Zagórzański, Antoni Kosiba, Stanisław Kramsztyk, Franciszek Kasperek, Kazimierz Niedźwiecki, Ignacy Skrochowski, Wojciech Dzieduszycki, Maurycy Straszewski, Aleksander Ostrzeniewski, Filip Świstun, Ignacy Dworzaczek, Julian Ochrowicz, Mieczysław Baranowski, Samuel Dickstein, Władysław Dębicki, Zygmunt Heryng, Jan Sleszyński, Roman Zawiliński, Aleksander Pechnik, Karol Appel, Stanisław Zaremba, Witold Rubczyński, Edmund Biernacki, Zofia Daszyńska-Golińska née Poznańska, Jan Nuckowski, Jan Rozwadowski, Władysław Bortkiewicz, Władysław Heinrich, Karol Bobrzyński, Zygmunt Skorski, Ignacy Halpern-Myślicki, Stanisław Brzozowski, Adam (Jacek) Woroniecki, Marian Borowski, Irena Jawicówna-Pannenkowa, Antoni Hoborski, Ludomir Wolfke, Zygmunt Koch, Adam Zieleńczyk, Benedykt Bornstein, Bronisław Biegeleisen-Żelazowski, Jakub Lewkowicz, Adam Stögbauer, Stanisław Bobiński, Bogdan Nawroczyński, Maria Franklówna, Leopold Wołowicz, Ludwik Zengteller, Franciszek Smolka, Edmund Gromski, Władysław Horodyski, Adam Cygielstreich, Władysław Tatarkiewicz, Zygmunt Janiszewski, Stanisław Kaczorowski, Daniela Tennerówna-Gromska, Bolesław Gawecki, Stefan Dańcewicz, Roman Ingarden, Zygmunt Kobrzyński and Kazimierz Kuratowski. The list features all the authors of at least one work on logic (excluding translators – unless they produced such a work themselves).

The greatest contributors to this development are three scholars: Struve, Twardowski and Biegański. From 1870 on, Struve started to promote the achievements of the Polish logic among his contemporaries. Twardowski began teaching in 1895 – with a roaring success nowhere to be seen for a long time. In 1903, Biegański undertook to give Polish people an overview of foreign developments in logic; he succeeded in 1912. In short: Struve focused on the past, Biegański on the present, and Twardowski on the future of logic in Poland. Struve gave us insight into the history of logic, Biegański introduced most of contemporary logic solutions and Twardowski provided the foundation on which most of logic researchers grew. The work of each of them is splendid. In terms of the scope of issues being addressed, Biegański's *Teoria logiki* [Biegański 1912] remains unmatched until the appearance

of Kotarbiński's *Elementy teorii poznania, logiki formalnej i metodologii nauk* [Kotarbiński 1929] several years later. Kotarbiński himself did not hesitate to draw on Struve's *Wykład systematyczny logiki* [1870] when writing *La logique en Pologne* [Kotarbiński 1959] several decades later. None of the Polish logicians of the time would deny the affinity with Twardowski's school.

3. Predecessors

> Logic and practical philosophy, *i.e.*, ethics are the two branches of philosophy most cherished in Poland, or perhaps nowhere else [Struve 1870: IX].

There is no denying that this statement from Struve's work holds true.

The first manuscripts containing logical treaties are traced back to the second part of the 14th century. This initial period in history of Polish logic is connected with Silesia. Our first logicians: Jan of Grotków (*ca.* 1300 - 1352), Jan Isner of Opole (*ca.* 1345 - 1411) and Jan of Ziębice (the second half of XIV century) were Silesians. It is no coincidence that the first inspiration to undertake research in logic originates from Silesia. Silesia was situated in the immediate neighbourhood of Prague – the closest to Poland academic centre dealing with logic. Later, however, Silesia fell silent for several centuries. Pomerania is the only former district of *Regni Polonia* without any contribution to this development.

An independent environment of Polish logicians emerged at the Cracow University in mid-15th century. It was formed by Benedykt Hesse (*ca.* 1382 - before 1460) and his disciples: Piotr of Sienno (*ca.* 1382 - before 1460), Jan Wacięga of Kęty (1389-1473) and Jan of Słupcza (1408-1488) – as well as Bartłomiej of Radom (*ca.* 1401 - 1450). This first period in the development of logic research in Poland can be called the ONTOLOGISTIC PERIOD. In the manuscripts preserved until today, logic mixes and mingles with ontology. What is striking is a nominalist attitude and the focus on principles of proper reasoning.

A shift in preferences occurs in the second period – in the 15th and 16th centuries. Nominalism is ousted by realism, parallel to extensive research on language, especially on how names are related to the objects they represent. The central figures of this GRAMMATICALISTIC – if it can be put this way – PERIOD, were: Jan of Głogów (*ca.* 1445 - 1507), Michał Twaróg of Biestrzyków (*ca.* 1450 - *ca.* 1520), Michał Falkener of Wrocław (*ca.* 1460 - 1534), Twaróg's disciple, Jan of Stobnica, and his disciple, Mikołaj of Giełczewo (the turn of the 15th and 16th century). *Questiones super "Analytica posteriora" Aristotelis* by Jan of Głogów [1499] is probably the first work

on logic by a Polish author ever published; any earlier mentions are only in manuscripts. A few years after *Questionibus* by Jan of Głogów, Michał Falkener published his concise and clear *Congestum logicum* [1504], probably the first guide on logic by a Polish author.

At the beginning of the 17th century, Cracow and Lesser Poland are no longer the only centres to conduct research on logic, and Latin is no longer the only language of the texts on logic. New centres of research on logic are being established in the Polish Commonwealth: in Ruthenia, in Lithuania and in Prussia. Jakub Górski (1525-1585), who has connections with Cracow, is the key link between the former period of grammaticalism, covering the first part of the 17th century, and the EPISTEMOLOGISTIC PERIOD. Adam Burski (*ca.* 1560 - 1611) carries on the study in Zamość, Marcin Śmiglecki (*ca.* 1562 - 1611) in Vilna, Bartłomiej Keckermann (1572-1609) in Gdańsk, and Marek Korona (*ca.* 1590 - 1651) – probably in Lvov, where his first work on logic is published – in Polish: *Directorium, albo raczej wprawowanie do pojęcia terminów elementów logicznych i filozoficznych* [Korona 1639]. Mikołaj Mościcki (*ca.* 1574 - 1632) is the only representative of the Cracow logic of the period. Samuel Wierzchoński (the end of the 16th century - 1642) is active chiefly in the new centre in Lesser Poland – in Lublin. Jan Makowski (1588-1644), Keckermann's student, works abroad, in Holland. During that period keen interest is on explaining the principles of scientific cognition. The validity of inductive and analogical reasoning comes under scrutiny. Attempts are made at defining the cause-effect relationship. Historical study, quite common at that time, inspires logicians to go beyond the relationships between names and to explore the relationships between sentences. It is shown first of all in Górski's *Commentariorum artis dialecticae* [Górski 1563], Keckermann's *Praecognitus logicus* [Keckermann 1599] and Burski's *Dialectica Ciceronis* [Burski 1604]. The trend is evident in the best guidebooks on logic of those times, including: *Systema logicae* written by Keckermann [1602], *Logica* by Śmiglecki [1618], *Quaestiones scholasticae* by Wierzchoński [1620], *Elementa logices* by Mościcki [1625] and *Logica* by Makowski [1660; *opus posthumous*].

The fourth period in the history of logic in Poland – DIDACTICISTIC PERIOD – falls on the second part of the 17th century and the first part of the 18th century. In that period the lead is taken by the centres located in Greater Poland and Lesser Poland. Greater Poland has never had a fully-fledged academic centre; Lesser Poland – tended to stay on the sidelines as regards the domain of logic. In the second part of the 17th century both the centres were equally active. The circles from of Lithuania did not lag behind them. This mobility of logicians of that period in Poland was conducive to such a situation. Jan

Morawski (1633-1700) and Stefan Sczaniecki (1655 - *ca.* 1737) were then active in Greater Poland (the former in Poznań, the latter in Kalisz). Lesser Poland (Cracow) was home to the acitivity of Szymon Makowski (the beginning of 17th century - 1673) and Lithuania (Vilna), Łukasz Załuski (the beginning of 17th century - 1673) and Wojciech Tylkowski (*ca.* 1624 - 1695), among others. Tomasz Młodzianowski (1622-1686) works at first in Greater Poland (Poznań, Leszno), then in Lesser Poland (Lublin, Cracow). And to the reverse: Ferdynand Ohm-Januszowski (1639-1712) from Lesser Poland (Cracow, Sandomierz, Tyniec) moves to Greater Poland (Poznań). Adam Krasnodębski (1645-1701) abandons Lithuania (Vilna) for Mazovia (Warsaw). Lesser Poland regains a clear advantage in the first part of the 18th century. Although Adrian Miaskowski still lectures both in Greater Poland (Poznań), and Lesser Poland (Cracow, Jarosław), but Kazimierz Ostrowski (1669-1732), Aleksander Podlesiecki (1682-1763) and Kazimierz Stęplowski (1700-1772) are the residents of Lesser Poland both by birth and by choice (Kazimierz Ostrowski lectured in Sandomierz, Aleksander Podlesiecki also in Lublin and in Cracow, Aleksander Podlesiecki – only in Cracow).

Three previous periods saw the development of the research on logic. Certain problematic issues were addressed and if not resolved – then at least explained or organized in order of priority. Creative work was replaced now by teaching, followed by dissemination activities. The dissemination of knowledge on logic became a part of general knowledge dissemination efforts: works on logic were then included in the vast philosophy outlines, consisting in many parts. It was still in the previous period when Załuski's *Compendium totius philosophiae* was published [Załuski 1640]. Then, more publications appeared subsequently: Morawski's *Totius philosophiae principia* [Morawski 1666], Tylkowski's *Philosophia curiosa* [Tylkowski 1669; enlarged edition: Tylkowski 1680], Młodzianowski's *Praelectiones philosophicae* [Młodzianowski 1671; enlarged edition: Młodzianowski 1682], A. Krasnodębski's *Philosophia Aristotelis explicata* [A. Krasnodębski 1678], Makowski's *Cursus philosophicus* [1679], Ohm-Januszowski's *Summa philosophica* [Ohm-Januszowski 1692], Sczaniecki's *Fragmenta philosophiae universae* [Sczasniecki 1694], Ostrowski's *Tractatus philosophicus* [Ostrowski 1719], Miaskowski's *Introductio in universam Aristotelis philosophiam* [Miaskowski 1720], and Podlesiecki's *Compendium philosophiae Aristotelicae* [Podlesiecki 1731].

A breakthrough occurs in the middle of the 18th century. Those interested in not only teaching, but also exploring and developing logic come to the fore. At the beginning primarily the logicians from Mazovia (Warsaw), like Hieronim (Stanisław) Konarski (1700-1773) and

Marcin Nikuta (1739-1812), from Ruthenia (Lvov and Krzemieniec), like Stanisław Kleczewski (1714-1776), and from Lithuania (Vilna), like Benedykt Dobszewicz (1722 - after 1773), Jan Benisławski (1736-1806) and Kazimierz Narbutt (1738-1807) are heard. Then, in the first part of the 19th century, Mazovia (Warsaw, Łomża), where Patrycy Przeczytański (1750-1817) and (Warsaw) Józef Gołuchowski (1797-1858) and Adolf Kudasiewicz (1820-1896) were very active, were joined by the centres in Greater Poland and Lesser Poland. Przeczytański moves to Greater Poland (Międzyrzec); in Lesser Poland, Feliks Jaroński (1777-1827) (Cracow, Kielce), and his disciple, Józef Jankowski Emanuel (1790-1847) and Michał Wiszniewski (1794-1865) (Cracow) work. Research on logic is still flourishing in Lithuania (Vilna), which is home to Anioł Dowgrid (1776-1835) and which attracts Jan Śniadecki (1756-1830). Certain authors write abroad: Ignacy Włodek (1723-1780) in Italy and Trentowski in Germany.

The output of the didacticistic period comes under their strong criticism. Their most serious objection is that it was focused on dissemination, not on creation. Interestingly, a negative assessment of being content with mere dissemination was shifted by many onto providing access to knowledge. A charge of noncreativity levelled against of the logicians of the past period later developed into a charge of sterility of the entire research on logic to date; Stęplowski's defence contained in *Logica incipientium* [Stęplowski 1753] did not help. Although this assessment of the past was unfair, there was an upside to it. The realization that logic required reconstruction at its very foundations prompted the search for such new foundations in rationalistic psychology, yet not seen as very different from to epistemology at that time. In the second part of the 18th century such attempts were very weak and manifested mainly as psychological and epistemological references. They can be found in all major works, starting from Dobszewicz's *Praelectionum logicorum* [Dobszewicz 1761] through Konarski's *De arte bene cogitandi* [Konarski 1767], and, Narbutt's *Logika* [Narbutt 1769], where they were most pronounced, to a lesser extent in Kleczewski's *Prima elementa philosophiae* [Kleczewski 1772] and Benisławski's *Institutiones logicae* [Benisławski 1774] and, finally, in Nikuta's *Sciographie de l'art de penser* [Nikuta 1798]. The first part of the 19th century brings the dissertations which materialize the concept of replacing old logic with new one. Epistemologized logic emerges in the publications of Jaroński's *O filozofii* [*On Philosophy*] [Jaroński 1812], Przeczytański's *Logika* [Przeczytański 1816] and, partly, in Gołuchowski's *Logika* [Gołuchowski 1821] and in Jankowski's *Krótki rys logiki* [J.E. Jankowski 1822]. Logic which is more psychological than epistemological is presented in *Filozofia*

umysłu ludzkiego by Śniadecki [1821b], *Wykład przyrodzonych myślenia prawideł* by Dowgird [1828] and in the essay *O rozumie ludzkim* by Wiszniewski [1848].

We could say that it is a PSYCHOLOGISTIC PERIOD in the history of Polish logic. Certain independent currents begin to appear besides the main current. The first idea is to redesign logic by way of its re-epistemologization: renewing methodology developed in the periods preceeding the didacticistic period. It is evidenced by the publication *O naukach wyzwolonych* by Włodek [1780-1814] and *Bacona metoda tłumaczenia natury* by Wiszniewski [1834]. Trentowski undertakes in his *Myślini* (this is a neologism in Polish; it is an intended «purely Polish» synonym of *Logic*) [1844] a conscious attempt at ontologizing logic, in other words, to bring it back to its state from the beginning of the 15th century. Finally, Kudasiewicz's *Próbki filozofii mowy* [1858] revisit the issues which consumed logicians in the first part of the 16th century.

The psychologistic period proves to be critical in yet another respect. In the first part of the 19th century, Latin was finally replaced by the Polish language. There was no realization yet that this switch would put the Polish research at risk of being separated from other centres of European logic. The works of Głogowczyk, Górski, Śmiglecki, Keckermann, Wierzchoński or Młodzianowski, written in Latin, became instantly known to the whole international community of logicians. Śniadecki, Dowgird and their followers writing solely in Polish could hardly see the translation of their works into foreign languages and dissemination of their ideas outside of Poland – due to nonscientific reasons (or they were translated much later). This risk is not fully materialized until the next period, when real achievements and the actual restructuring (algebraization) of logic take place. Some tried to remedy the situation by writing in languages more popular than Polish.

The years 1863-1916 mark the beginning of ALGEBRAISTIC PERIOD (19th to 20th century) – the sixth period in the history of Polish logic after ontologistic (14th to 15th centuries), grammaticalistic (15th to 16th century), epistemologistic (16th to 17th century), didacticistic (17th to 18th century) and psychologistic (18th to 19th century) – and the second – after the psychologistic – phase of development of modern logic in Poland.

4. Problems: controversies and settlements

There was no doubt that logic required reinvention during that period [Heryng 1896].[1] Such shortcomings of the old logic were pointed out:

[1] In this, and similar places, numbers represent the year of publication of a specific text containing the views of a given author, reported in the paragraph preceding the date of publication.

too narrow take on deduction [Łukasiewicz 1903], scientific barrenness of syllogistics [Janiszewski 1915; Abramowski 1915] and nonconcsious grammaticalism [Biegański 1903]. The point of dissent were the grounds on which new logic could be safely built. In the past, they were seen in rationalist psychology and epistemology; this search resulted in complementing the logic with methodology [Chwistek 1912]. Now attempts were made at steering away from grammaticalism, first of all through empirical psychology, which enabled the references to "the speech of experience", free from the limitations of grammar, or through algebra, which provided the tools for expressing thoughts independently from the bounds of ordinary language [Chwistek 1912]. Some were willing to carry out this reinvention through grammar and ontology – which were being reinvented at that time: grammar, just like psychology, succumbed to slogans of empiricism, and ontology yielded to minimalism.

None of the attempts were to the satisfaction of all the logicians; some of them [Gabryl 1912] were repudiated in the name of the independence of logic. Some futile attempts had to be abandoned; not without a mark, however. The notion of epistemologization of logic, most prevalent in the years 1848-1863, led to the development of a methodology, most pronounced in the years 1870-1880. The attempts at the psychologization of logic resulted in lasting achievements of "psycho-logic" in 1886-1899. Grammaticalization efforts underpinned the revival of semiotics in 1902-1916. Algebraization prompted an impressive progress in semiotics in that period. The effect of ontologization was the discovery and development of non-Aristotelian logic.

The enchantment with new horizons opening up before logic fostered an attitude of disregard for the entire output of logic to date. A voice of caution was heard against an absolutely negative assessment of old logic. It was accompanied by more and more intensely pursued research on the history of logic. Plato's views on logic were reconstructed in detail [Lutosławski 1897], Aristotle's position was reinterpreted [Gabryl 1897; Łukasiewicz 1910], the achievements of mediaeval logic were revisited [Zarański 1882; Czaykowski 1894-1895; Twardowski 1910c; Łukasiewicz 1911b]. Sometimes such research yielded new solutions [Łukasiewicz 1910]. They always meant keeping clear of unnecessary extremes, fostering a sense of continuity of the development of logic. It is in this light that extensive research on the history of logic in Poland was taken up [Struve 1870 and 1911], especially on their beginnings in the first part of the 15th century [Konstanty Michalski 1916].

Only very few contemporaries had a sufficiently clear understanding of the diversity of the views on how logic should be reconstructed, and

of the effects it might produce: the benefits that logic could reap from the confrontation between intellectualism and intuitionism, psychologism and formalism, or ontologistic undertones of certain forms of anti-psychologism [Biegański 1912]. Those discrepancies were most clearly reflected in the definitions of logic used at the time. Logic was then seen as a science of either principles governing knowledge [Straszewski 1872 and 1900; Mahrburg 1901; Stamm 1911] or reasoning [Kautny 1871; Raciborski 1886; Hoyer 1888; Biegański 1912; Rubczyński 1919], or language [Łukasiewicz 1912a; Molicki 1914] or proof [W. Kozłowski 1879], or finally, reality [Tyszyński 1860; Horodyski 1914].

4.1. Logic and epistemology. The development of methodology

If logic is a science describing the principles of knowledge, the principles of logic should be equivalent to the principles of epistemology [Stamm 1911]. The principles of logic can't be equivalent to the principles of epistemology, however, because the latter are related to the criteria of thruthfulness, and the former provide noncontradiction tests for the results of cognitive activities. Therefore, logic mustn't be confused with epistemology; they should be kept entirely separated from one another [Raciborski 1885b; Heinrich 1901 and 1907; Gabryl 1912]. Epistemology is not fit to be the foundation of logic. It is the obligation of logicians, nonetheless, to establish what rules must be observed – at the risk of falling prey to contradiction – regarding those cognitive activities exposed to this risk. This is the purpose of methodology.

One of the cognitive activities whose results are prone to falling prey to contradiction is, first of all, the process of reasoning.

Two viewpoints prevailed at that time as to what reasoning consists in. According to both those viewpoints, reasoning takes place when logical relations are acknowledged between certain experiential and semantic units [Borowski 1913]. While some philosophers believed that those units to be representations or expressions [Kautny 1871; Biegański 1903], others perceived them as thoughts [Twardowski 1901] or sentences [Łukasiewicz 1911a and 1912b]. The relations were understood accordingly: either – in the case of representations/expressions – as compatibility [Kautny 1871; Biegański 1897 and 1903], or – in case of thoughts/sentences – as implication [Twardowski 1901]. According to the law of compatibility, if two expressions are compatible (content-wise) with a third expression, then they are compatible (content-wise) with each other [Biegański 1903]. According to the laws of implication, if sentences are assumed to have truth values

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also in the interval between true and false, the truth value of an argument may never exceed the logical value of an implication [Łukasiewicz 1913].

It was also noted that the acknowledgement of the existence of logical relation was sometimes based on the detection of various forms of plausibility relationships [Łukasiewicz 1907]: co-existential, causal, teleological, genetic, analogous, or only motivational. Among them: co-existential (coexistence) and analogous relationships (similarity) are complex or mutual [Biegański 1909]; whereas causal (conditioning), teleological (destiny), genetic (precedence or manifestation) and motivational relationships (stimulation) are simple [Raciborski 1885a; Łukasiewicz 1907; Sękowski 1910; Sośnicki 1910; Zieleńczyk 1910; Kodisowa 1910; Borowski 1913]. As regards simple relationships, the most thorough research was devoted to conditionality: the cause-effect relationship. Initially, the prevalent position was that a specific real object (a thing, a phenomenon or an event) is the cause of another real object (effect) only if the latter IS [Gabryl 1902] or MAY BE [Niedźwiecki 1874] caused by the former, and is external [Gabryl 1902] and subsequent [Hoyer 1897; Gabryl 1902] in relation to the former. The essence of this capability (the way in which the effect is triggered) should be known in this case [Niedźwiecki 1874], external manifestation – must be spatial and temporal, whereas succession – permanent [Hoyer 1897] and immediate [Niedźwiecki 1874]. The requirement for a specific temporal and spatial relationship was later called into question [Łukasiewicz 1907], but it was acknowledged that the effect MUST BE triggered by a cause, yet a cause does not have to be triggered by the effect. An assumption was even put forward that conditioning was reducible to a relationship of following [Bandrowski 1904], or even identity or opposition [Borowski 1913]. This assumption was rejected, however, due to the diversity of the domains that could be in potential relationships with one another [Łukasiewicz 1907]: the cause and effect relationship takes place in the domain of objects (real), whereas the relationship of implication – in the domain of detached objects (abstract).

The relationship between reasoning and inference (deduction), proof finding (proving), explanation and verification were subjected to a detailed analysis. As regards the direction of reasoning in relation to the direction

of following these activities were identified as either deductive: inference and verification, or reductive: proof finding and explanation [Łukasiewicz 1910].

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Something is inferred from a sentence when this sentence is considered to be true and that another sentence follows it and that – on this basis – this second sentence (conclusion) is true. The direction of reasoning is here consistent with the direction of following [Twardowski 1901; Łukasiewicz 1911a and 1912b]. The direction of reasoning is also consistent with the direction of implication in the event of verification. A sentence (conjecture) is verified after it has been acknowledged that this sentence is followed by another sentence, that this second sentence is true and – on this basis – that the first sentence is probable. The difference between inference and verification lies in the fact that in the event of inference a given sentence is certain and in the event of verification – uncertain, and that reasoning is intended here to lend probability to this sentence [Łukasiewicz 1911a and 1912b]. The probability of the conjecture changes into certainty, which means that the conjecture is verified completely when all the consequences of this conjecture have been recognized as true [Ajdukiewicz 1913; W.M. Kozłowski 1916].

The contrary is with proving and explaining. A sentence is proven when it is acknowledged that this sentence is a consequence of another sentence (eligibility assumption) that this second sentence is true and – on this basis – that the first sentence is true [Zagórzański 1873; Twardowski 1901; Łukasiewicz 1911a and 1912b]. A sentence is explained, on the other hand, when it is acknowledged to be true, that it is a consequence of another sentence (explanatory assumption), and that this second sentence is probable [Łukasiewicz 1911a and 1912b]. The difference between explaining and proving operates in the same way as the difference between inference and verification – namely with the degree of certainty of a given sentence. The sentence being explained is certain, whereas the sentence being proven is uncertain [Łukasiewicz 1911a and 1912b].

The research on the various forms of reasoning led to a more precise identification of what proving and explaining are.

Proving was recognized as a specific instance of justification (or validation), comprising direct and indirect validation: proving (total) and probabilitization

(partial), based on drawing inference from a case (analogy). It was further assumed [Kotarbiński 1913] that a sentence is validated when it is considered to be validated by a certain state of affairs (in that: by a sentence whose subject or its mere utterance itself constitutes such a state of affairs), that this state of affairs or its sufficient condition occurs (actually takes place) and – on this basis – that this sentence is true. It was further assumed that a sentence (scientific proposition) has a complete proof when it can be deduced from a finite sequence of propositions – each of which is either an axiom or has a proof – by applying the principle of detachment and substitution [Sleszyński 1912; Hoborski 1918]. It may be so that a proof of a proposition may exist even if it is not implied by the assumed sequence of axioms. On the other hand, if a proposition has no proof, then it is either untrue or system of premises is incomplete [Ajdukiewicz 1919]. It was finally assumed that the probabilization of a sentence stating the coexistence of certain properties occurs when a compliance (similarity) of certain relationships between the properties of certain objects is acknowledged; that a certain sentence stating the coexistence of the properties under consideration is acknowledged as true under certain circumstances, and – on this basis – that the first sentence is probable. The higher the degree of probability, the greater the certainty of the probability principle [Biegański 1909].

Explaining could be recognized as a specific instance of justification (proper justification). A state of affairs (simple) is assumed to be explained when it is acknowledged that a certain state of affairs occurs (actually takes place); that this state of affairs is conditioned (also in the case of natural sentences – logically) by another state of affairs (the assumption of regularity) and that this other state of affairs is known [Heryng 1896; Hoyer 1897; Sękowski 1910; Borowski 1913]. Explaining thus conceived was then set against a description on the one hand, and a generalization (induction) on the other hand. According to a commonly held view, a state of affairs is considered to be described when its idiosyncratic [Sośnicki 1910] and essential components [Heryng 1896; Kodisowa 1910] are described, in other words, when a partial generalization is made [Heryng 1896]. This is how description came to explain complex states of affairs (systems), which consisted in determining their structure (description), and explaining (proper explanation) their constituents [Heryng 1896; Hoyer 1897]. It transpired on this occasion that the notion of reducing science to the so-called pure description, which meant refraining from explaining and assumption-making – which was so common at that time – was unacceptable for two reasons. Firstly – because a description is always incomplete, and secondly – because

a description is not revealing [Sękowski 1910]. The researcher's selection of essential components is always biased by personal preferences. The concept of pure description becomes the concept of replacing subjective elements of one order with subjective elements of another order [Zieleńczyk 1910]. If science is not to become a futile activity, it cannot repudiate all assumptions. Only nonconscious and superfluous assumptions should be repudiated [Sękowski 1910].

As regards the essence of generalization, there were two competing views. The first view said that induction was supposed to be the reverse of deduction [W. Kozłowski 1893; W.M. Kozłowski 1916]. Such an approach was intended to justify the problems with defining clear rules governing induction: unlike all simple activities, reverse activities are performed «fumbling around in the dark». The second view stated that induction was not the reverse of deduction; if it seemed so, it is by coincidence. Generally, the point of departure in deduction is not the same as the conclusion arrived at in induction [Gosiewski 1904]. Both these viewpoints did not contradict one another; the enthusiasts of the first view understood "deduction" very broadly [W.M. Kozłowski 1916], whereas the enthusiasts of the second view understood "induction" very narrowly – assuming [Gosiewski 1904] that the most probable direct implication of a sentence stating a certain state of affairs is a sentence stating the possibility of existence of such a state of affairs (the principle of induction).

The issue of justification brought thruthfulness under close examination. A belief grew that a distinction should be drawn between the definition of truth and the touchstones of truth [Łukasiewicz 1911c]. A sentence is true when it is sufficiently validated [W. Kozłowski 1898; Biegański 1910]; an insufficiently validated sentence is only probable [W. Kozłowski 1898]. This is the definition of thruthfulness; whereas a sentence – stating that another sentence is true or false – is in itself a sentence about a sentence [Biegański 1907]. A (perceptive) sentence is fully and directly validated when an object described by that the subject of that sentence has as a property assigned to it by the predicate [Kautny 1871; Łukasiewicz 1907 and 1910]. This is the most commonly given touchstone of thruthfulness. However, what some researchers believed that also a sentence expressing a thought consistent with the relationship between the objects described by that sentence is directly validated too [Gabryl 1900]; or even a sentence consistent with the principles stating the relationship between the elements of contemporary knowledge [Biegański 1910]. In the context of the latter approach, differentiation between indirect and direct justification became

superfluous, since it implied that an indirectly validated sentence is a sentence being a consequence of other sentences already recognized as true [Łukasiewicz 1901]. A difference of opinion arose regarding the question of whether truthfulness is an absolute property of sentences. Some thought that certain sentences may be undefined in terms of truthfulness and might become true or not at a certain point in time, and if they do – then they remain true or not forever [Kotarbiński 1913]. Others held that sentences are true when they remain true under any circumstances and at any time [Twardowski 1900]. It is impossible for a sentence to be true now if it was to be untrue when uttered at a certain point in time. Truths are not only eternal; they are also perennial [Leśniewski 1913a].

Investigation into the essence of explanations served as an inspiration to tackle the issue of the general construction of science. A view came to be held that science was an orderly set of propositions [Mahrburg 1897], linked by the cause and effect relationship [Łukasiewicz 1906 and 1911]. It also become clear that this set – in the case of empirical sciences (such that permit direct justification) – is broken down into a theoretical (constructive) part and empirical (reconstructive) part [Twardowski 1910a; Borowski 1913; Gawecki 1918]. The latter is a set of observational propositions being the implication of the former – incorporating the laws which enable the simplest and the most transparent arrangement of the entire set [Borowski 1913; Gawecki 1918]. At first, a scientific law was recognized to be a sentence depicting a regularity, that is, the existence of cause-effect relationship between the constituent parts within a domain of recurring phenomena [Korzybski 1870]. Later, the scientific law was seen as a simplified pattern of regularity relevant for a certain domain – with regularity understood as the occurrence of fixed relationships between the values which define phenomena from that domain [Gawecki 1918]. The laws constituting a theoretical part of an – empirical science are usually not fully justified [Łukasiewicz 1906], that is, they are usually only assumptions (hypotheses). A given set of assumptions is selected based on the scope it pertains to, along with transparency, simplicity [Twardowski 1907; Borowski 1913; Gawecki 1918]. The more phenomena a theory explains, and the less is left to be explained by auxiliary hypotheses, the better the theory [Twardowski 1907].

4.2. Logic and psychology. Achievements in «psycho-logic»

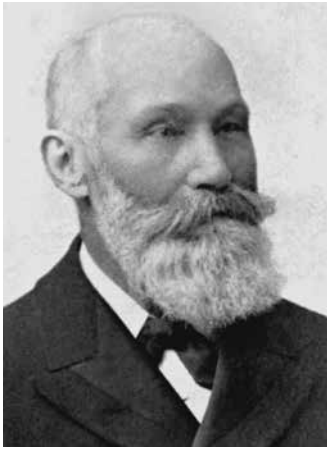
If reasoning is the subject of the study of logic, then the principles of logic should be equivalent to the principles of psychology [Struve 1863;

Ochorowicz 1872; Twardowski 1897; Biegański 1897 and 1903; Znamierowski 1912]. The best solution would be to replace logic to date – extensional logic (which is scope-related) – with intensional logic (which is content-related). Only the principles of intensional logic would be consistent with the actual course of reasoning [Biegański 1901 and 1903; W.M. Kozłowski 1916]. Developing intensional logic is more difficult than developing extensional logic, because intensional logic exhibits much greater complexity of interdependencies; the principles of such logic could not be synonymous with the principles of psychology, however, since the latter pertain only to the activity of the mind, whereas the former – to the products of some of those mental activities [Biegański 1912]. The principles of psychology are laws, while the principles of logic are rules. Psychology (empirical) is a descriptive science: its laws describe the course of mental activities. Logic is a legislative science: its rules describe the products of knowledge-creating activities [Molicki 1879; Gabryl 1899; Bandrowski 1904 and 1907; Łukasiewicz 1907; Twardowski 1911; Zawirski 1914]. The laws of psychology, as the propositions of empirical science, are only probable and variable (revocable) statements. The rules of logic, as the propositions of aprioristic science, are certain and irrevocable [Łukasiewicz 1907; W.M. Kozłowski 1916]. In view of the above logic should be kept entirely separate from psychology [Raciborski 1886; Gabryl 1911; Biegański 1912]. Psychology (not only old, rationalistic, but also new, empirical) is not the best fit for the foundation of logic; it is the laws of psychology that are the implications of the principles of logic [Rubczyński 1919]. There are certain areas of study which are a common concern for psychology and logic: these are concepts and judgements. The point at which psychology and logic overlap, referred to as «psycho-logic» [Stögbauer 1910], should provide the forum for psychologists and logicians to cooperate.

A clear distinction between action, content and object made at this point – both with regard to concepts (presentations in general) and judgments – had far-reaching consequences [Twardowski 1894]. It enabled a clear demarcation between presentations and judgments. Contrary to appearances, the essence of this difference does not lie in objects: the same object may pertain to both a presentation and a judgment. It is the relation to the object that should be looked at in this respect: in the essence of the action and the type of substance. A proposition is the essence of judgment: either recognition or rejection [Twardowski 1894; Jawicówka 1905]. The content of judgement – which is co-stated by this judgment – is the existence of recognized or refuted object; in other words: it is a conviction concerning the reality of

this object; its compatibility with the observed object [Twardowski 1894 and 1901]. The content of presentation – co-presented with the object – is the image of the object, its mental picture [Twardowski 1894]. The distinction between the action and the content of presentation has been used as yet another argument against equating the generality of certain concepts with the vagueness vested in the action, implicating indeterminacy of its content [Stögbauer 1910]. It shed a new light on the relationship of concepts and their image representations [Twardowski 1901].

It transpired, in the first place, that mental images themselves are not, as previously thought [Borzęcki 1862], the traces of sensory input (impressions or observations). They cannot be such traces, because there are also creations, besides observed images and reproduced images – whose objects are neither sensed nor perceived. Therefore, mental images had to be recognized as series of sensory impressions which are visually perceptible [Twardowski 1898]. As a result of in-depth discussion [Gabryl 1904], the concepts ceased to be equated with certain forms of images, namely with individual, generic [Borzęcki 1862] and specific images, which are blurred – they constitute amalgams of individual images. Mental images are describable; whereas concepts – only determinable [Raciborski 1886] in respect of substance (content) and scope [W. Kozłowski 1892]. Concepts (non-illustrative and non-perceptible presentations) are not images in themselves, but their substitutes: unrealized creative images [Twardowski 1898]. What brings together certain object's concepts and images is the image of a similar object included in the content of this object. The concept contains yet another component besides the "underlying image" (reproductive or creative). It is at least one [Twardowski 1903] judgement about the object of the underlying image. This judgement was initially construed [Twardowski 1898] as conceived (imagined) judgement, assigning certain properties to the object of the underlying image (conceived along within the concept), which cannot be merged into a conceived wholeness with other properties of the said subject (and, therefore, different from them). Later [Twardowski 1904] this judgment was recognized as a non-illustrative (in language) judgment concerning the absence of other (not conceived) properties.



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Some researchers went even as far as to claim that concepts and images have nothing in common, which means that underlying concepts are not their component elements [Biegański 1900]. It is not the image that is the content of given object's concept, but the totality of the object's idiosyncratic properties, selected (mentally detached) from its various images [Biegański 1912; Gabryl 1904], or the totality of judgments which express our experience [W.M. Kozłowski 1916]. Thus, the psychologistic equation of concepts with certain images was replaced with grammaticalistic equation of concepts and words. It underpinned to the need for drawing a distinction between purely logical content of the concept and its psychological content [Abramowski 1915]. The latter was even understood as a general set of properties assigned to objects falling within the scope of a given concept. In view of the above all the researchers were in agreement that the richer the psychological content, the poorer the logical content [Abramowski 1915].

4.3. Logic and grammar. Semiotics revisited

If logic deals with the language, then its rules should be equivalent to the rules of grammar [Struve 1870; Trentowski 1874a; Raciborski 1885b] and determinable based on speech analysis [Molicki 1879; Bandrowski 1904]. The logical principles of thinking cannot be held as tantamount with the grammatical façade of speech since thought and speech are not aligned too closely [Zagórzański 1873; Dębicki 1887; Świstun 1890; Nuckowski 1903; Appel 1909; Wize 1914]. The principles of logic have a general application, the rules of grammar have an application within the framework of a specific language spoken by a specific community [Dębicki 1887; Gabryl 1899]. The principles of logic are fixed, whereas the rules of grammar may vary even within the domain of a given language [Rozwadowski 1913]. Logic has to be strictly separated from grammar. Grammar is unfit for the foundation for logic; the rules of grammar are derived from the principles of logic [Zagórzański 1873]. Since logic emerged from grammar [Raciborski 1885b], the principles of logic bear all the hallmarks of the principles of grammar [Mahrburg 1902; Tatarkiewicz 1911; Zawirski 1914]. Therefore, knowledge of grammar may prove helpful in solving some logical problems [Rubczyński 1911], in particular those which fall today within the scope of semiotics.

This state of affairs brings about certain difficulties, however. Firstly, logic of language [Zagórzański 1873] is susceptible to a vicious circle: speech analysis is performed by means of speech [Hoyer 1897]. Secondly, speech is a tool which fulfils a number of functions [Bandrowski 1905; W.M. Kozłowski

1916]; some of them fall outside the bounds of logical analysis. Speech enables thinking [Biegański 1915] and communication – by expressing the experiences of the speaker and evoking emotions in the listener [Twardowski 1910b]; it facilitates memorizing and orientation also in extra-linguistic activities.

Speech understood as the set of words – although it can also be understood ability to speak, the act of speaking, or the manner of speaking (pronunciation) or even the object spoken about [Molicki 1879] – is the primary kind of language [Borzęcki 1862; Twardowski 1910b]. The other two kinds of language (distinguished based on the quality of its signs) – written language (letter writing and picture writing) and gesture (sign) language – basically reducible to spoken language. An indirect investigation of the spoken language is replaced with a direct investigation: the analysis of written language; the reason underlying this replacement is a fleeting character of speech [Molicki 1879].

Each form of language is a group of signs – not any signs, however. Signs constitute sensory tools – vehicles of indirect cognition [Kautny 1871; Gabryl 1899; Bandrowski 1905]. The relation through which one object is involved in the cognition of another object comes in various forms. It could be natural or arbitrary, it could be a relationship of similarity or a relationship of order. Therefore, signs could be primary or arbitrary, presentative or intermediary [Borzęcki 1862; Kautny 1871; Gabryl 1899 and 1903-1906; Biegański 1913 and 1915]. Only arbitrary signs, and nearly without exception – intermediary signs, are fit to combine into a set of expressions which is language.

The type of the objects signified determines if a given expression is a word or sentence [Kautny 1871]; and as regards words – if it is autological (that is, it carries independent meaning) or heterological (that is, it shares meaning with other words) [Kautny 1871; Twardowski 1901]. Four competing views were held as to what the meaning of a word is. According to the first view, a word signifies a specific presentation: an image or a concept, being a natural sign for a particular object [Borzęcki 1862; Kautny 1871; Rozwadowski 1903; Gabryl 1904; Struve 1907; Twardowski 1910b]. According to the second view, a word signifies a specific object – an object that is extralinguistic and extraintellectual at the same time: real [Kautny 1871; Bandrowski 1905 and 1907] or unreal. The latter could be either an intellectual construct – temporal, yet non-spatial [Wolski 1918b], or a detached construct – non-temporal and simultaneously non-spatial [Łukasiewicz 1907; Biegański 1913 and 1915]. According to the third view, a word only

signifies the essence of such objects [Molicki 1879]. And finally, according to the fourth view, a word signifies directly, that is, expresses the presentation – and indirectly signifies, that is indicates the object or the essence of the directly designated object – through the representation expressed by a given word [Kautny 1871; Gabryl 1899; Twardowski 1901; Nuckowski 1903; Biegański 1903, 1913 and 1915; Łukasiewicz 1907]. It paved the way for the separation of two functions of a word (undistinguishable to date): meaning (expressing) and signifying (indicating). It was simultaneously observed that a word could signify without denoting, which is the case with proper names [Czeżowski 1918a]. Words could mean also without signifying anything [Łukasiewicz 1907]. According to another proposition, a sentence could be approached as an independent constituent of speech. A word carries a meaning only if it occurs in a sentence: a word's meaning is not a specific representation, but the universum of sentences the word occurs in [Bandrowski 1905; Biegański 1913 and 1915; W.M. Kozłowski 1916]. Finally, the classification of expressions into meaning and non-meaning has being recognized as purely arbitrary and conventional [Chwistek 1917].

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Also the actual meaning of a sentence was an arena of competition between various views. Some believed that a sentence signifies a specific thought – a conviction (a thought in the psychological sense) or judgment (in the logical sense). Others were inclined to think that a sentence signifies a certain relationship between objects, in particular the endowment of an object – signified by a sentence subject – with certain properties expressed by the predicate [Ostrzeniewski 1890; Leśniewski 1911]. Yet others held that, as is the case with words, that distinction should be made between what sentences signify directly and signify indirectly. Sentences directly signify (express) thoughts and indirect indicate the relationships between objects [Bandrowski 1905; Łukasiewicz 1907; Zawirski 1914]. Therefore, what could be construed as the criterion of equisignificance between sentences could be both what is expressed and what is indicated. Two sentences are equisignificant when they express the same thought or indicate the same relationship between objects [Łukasiewicz 1910]. The following rule applies here no matter how this equisignificance is defined: the equisignificance of sentences implicates their equivalence – which means being mutual

consequences of those sentences; equisignificance is not a consequence of equivalence, however [Łukasiewicz 1910].

Despite those differences, there was certain unsteadiness about the usage of expressions "word" and "sentence". "Words" designated both the units of language – and their utterances – and presentations related to them; especially concepts. By way of analogy, a "sentence" designated both the utterances – word combinations [Twardowski 1901; Molicki 1914] – and the thoughts or judgments [Borzęcki 1862; Krupiński 1878; Świstun 1890] they represented. It was common practice even despite the realization of the differences between the grammatical structure of a sentence and the logical structure of a judgment [Świstun 1890]. Simultaneously, even though a view came to be held that presentations and thoughts are the equivalents of expressions, there were fewer and fewer claims that spoken language – as a set of expressions – has one mental equivalent, which is common to all people [Ostrzeniewski 1890].

It seemed that the influences of rationalist psychology were losing their hold on grammar as well.

As regards the types of sentences, the central focus of attention were sentences pertaining to existence. It was underpinned by a proposition put forward at that time, which said that each sentence could be reduced to a sentence about existence [Zawirski 1914]. The mere statement that an object exists was considered as tantamount assigning the property of existence to this object [Łukasiewicz 1907]. This stance was argued against by saying that it would have bizarre and hardly acceptable implications. The word "existence" does not signify anything, which means that each sentence about existence is non-signifying. It cannot be true as such – which means that it is false. Each sentence denying existence is contradictory, on the other hand, so it cannot be true as such, which means that it is false [Leśniewski 1911 and 1913]. If each sentence could be reduced to a sentence about existence (nonexistence) of a given object, then no sentence could be true, which means that it would be false [Leśniewski 1911].

Also the existing classification of sentences based on their modality was called into question. This division was previously based on the forms of attitude. It came into view, however, that this division was based on the overlapping of four types of sentence classifications, each of them governed by different foundations: stated and presented sentences, certain and probable sentences, obvious (directly) and non-obvious (indirectly obvious) as well as sentences expressing possibility, reality and necessity. One objective principle was put forward in lieu of the four subjective principles: regard for the type

of relationship between the elements of the sentence (agreement between the subject and predicate) or between sentences (the relationship of consequence). Such an understanding reduced the number of modalities to two: necessity and possibility [Biegański 1912], which are closely interlinked. "Something is necessary" means the same as "it is impossible to be otherwise (if it wasn't so, it would be a contradictory object)" [Łukasiewicz 1907; Biegański 1912]. It was easy to dissociate a metaphysical (real) necessity from the necessity thus logically conceived: if something is (actually) such, it is necessary for it to be so; if it is not such (really), it is impossible to be such [Kotarbiński 1912]. It minimized the risk of confusing logical and metaphysical necessity with psychological necessity (the highest degree of conviction).

The exact determination of how "necessity sentences" should be understood cast a new light on analytical sentences. Those sentences were either recognized as true based on the meaning [Biegański 1903], or as such sentences whose negation is internally contradictory or entails contradictory sentences [Wolfke 1905]. A set of analytical sentences would, therefore, encompass a set of either determinations (definitions) or necessity sentences. Only the analytical property of definitions could be claimed to be relative: what is analytical for one language user may be non-analytical for another language user [Biegański 1903].

The first signs of a new approach towards determination as such appeared. The division of definitions into verbal definitions and material definitions [Struve 1863] was recognized as groundless: there is no such verbal definition which would not indicate the properties of a given object [Molicki 1914]. The pool of accepted definitions, including only these essential ones, should be simultaneously expanded to include descriptive definitions [Mazurkiewicz 1918]. The existing logical division, in particular dichotomous division, was challenged as well. Only one element of this dichotomy is real, whereas the other is more of a random collection. Such a division does not prove very useful as a vehicle for the discovery of new things [Biegański 1903]. It may be used, however as a convenient test for the division that is already in place [Sośnicki 1911].

Declaratives, crucial for semiotics, were reinvestigated; interrogatives were subjected to examination for the first time (not in the context of logic, but didactics). A distinction was drawn between decision interrogatives (soliciting confirmation or negation) and complementation (requiring completion) [Twardowski 1901]. The next distinction was drawn between actual interrogatives and apparent interrogatives (indicatives). The former are those which permit confirmation or negation. The latter permit

neither confirmation nor negation [Leśniewski 1911]. Finally, answers themselves were divided into proper (in that: true and false) and improper, depending on whether or not they contain exactly what was asked about [Twardowski 1901].

4.4. Logic and algebra. Developments in logistics

If the principles of logic are the rules of proving, then they should be equivalent to the principles of algebra [Struve 1870; Trentowski 1874a; Porecki 1884; Raciborski 1885b; Stamm 1911; Ajdukiewicz 1911; Wolski 1918a]. Logic would then provide a framework for the interpretation of algebra, which is also interpreted by set theory [Stamm 1911; Janiszewski 1915] or probability theory [Wolski 1918a], with the following difference: algebraic formulae used in class theory for sets – and in probability theory for probability – in logic would apply respectively to concepts or judgments in logic [Piątkiewicz 1888; Stamm 1911; Janiszewski 1915], or to a degree of certainty [Wolski 1918a].

The slogan of algebraization of logic provoked even more heated arguments than earlier attempts at its epistemiologization, psychologization or grammaticalization. The advocates of logistics highlighted the invigorating impact of mathematics on logic, pointing to the major contribution that investigation into the basics of geometry had on the determination of the conditions of logical interdependence [Zaremba 1911]. What was also pointed out was the explorativeness, universality and strictness of logistics compared to traditional logic. Logistics is far more explorative, it brings progress [Raciborski 1885b] and extends the span of former logic [Piątkiewicz 1888] by, for example, providing the breeding ground for the theory of relationships, which is the foundation of methodology [Łukasiewicz 1910]. It is more universal, because it helped to create a more comprehensive theory of inference, and generalize the concept of "judgement" [Porecki 1901; Łukasiewicz 1910; Biegański 1912; Stamm 1913; W.M. Kozłowski 1916]. It is more strict – the introduction of transparent calculation liberated logic from digressive influences of other domains (epistemological, psychological *etc.*) and from the need for referring to the activities which are not fully conscious [Łukasiewicz 1910; Biegański 1912; W.M. Kozłowski 1916; Wolski 1918a].

The opponents of logistics claimed the contrary – that, compared to traditional logic, logistics is non-revealing, limited in scope and inferior in terms of strictness. It is non-revealing, because it had very little on «offer» to logic [Krupiński 1879], having failed to put forward a law that wouldn't be already known [Wolski 1918a]. It is limited because it failed to simplify

the rules of logic – against the expectations [Pawlicki 1895; Koch 1910] – and proved to be useless for exploring content relations [Gabryl 1912]. It is non-strict because it deviates from the widely recognized ways of expressing thoughts, reducing logical thinking to a mere calculus [Biegański 1903]. It quickly turned out that the said charges were: levelled by passive observers rather than active researchers; grounded in merely cursory familiarity with the subject matter, and fallacious inn most part. Some of the said opponents were forced to drop those charges after gaining more insight [Biegański 1912].

The situation of the researchers dealing with logistics and proclaiming the superiority of logistics over traditional logic was even more difficult. As long as they did not go beyond drafting the foundations of algebra of logic [Piątkiewicz 1888; Sleszyński 1893; Biegański 1903; Łukasiewicz 1910; Stamm 1911], the superiority of logic was just a belief without sufficient substantiation. Problems came up while delving deeply into the core of logistics and exploring the paradoxes which lie at its heart – first of all the paradox of classes not subordinated to themselves.

At first, there were attempts to play down the threat and demonstrate that the alleged paradoxes of logistics are, as a matter of fact, paralogisms. The same approach was used for semantic paradoxes – including the liar paradox [Zagórzański 1873; W.M. Kozłowski 1916]. The fallacy of the reasoning underpinning the classes paradox was explained in the following way. If a class is to be a set inclusive of all objects of a given type, then classes subordinated to themselves cannot be assumed to exist. If a class is to be a set inclusive of some of these objects, then it is impossible to divide all classes into classes subordinated and not subordinated to themselves. The principle of excluded middle has no application in this case [Smolka 1913].

Subsequent attempts were intended to overcome those paradoxes, not bypass them. The attempts proceeded in two directions. Some solutions were aimed at rejecting certain basic laws of logic, others – at changing the core formulations of the language of logic and imposing certain restrictions regarding their use. The first direction was followed by those willing to remove the law of non-contradiction [Łukasiewicz 1910] or the law of excluded middle [Leśniewski 1914], or the law of reducibility [Chwistek 1912] from the overall set of logical laws. This solution was preceded by a detailed analysis of the foundations of logic, which had two side effects of critical importance. Firstly, it led indirectly to the emergence of three-valued logic [Łukasiewicz 1910]. Secondly, it contributed in part to conducting a logical analysis of axiomatic deductive theories [Porecki 1899; Sleszyński 1912; Zaremba 1915-1918; Mazurkiewicz 1918; Hoborski 1918] and to

investigating the logical foundations of probability theory [Porecki 1887; Gosiewski 1904 and 1906; Łukasiewicz 1913] and axiomatic approach to class theory [Sierpiński 1912-1913; Czeżowski 1918b].

Attempts at eliminating paradoxes by way of concept analysis were aimed at proper definition of class [Smolka 1914]. As had been agreed on before, proper definitions of what "parthood" (being a part of) and "being less than" are – helps to evade the "paradox of infinite sets, because then there is no need to assume that a part is less than the whole" [Łukasiewicz 1907]. As for the "classes" it was established that each class could be defined by a characteristic relationship – the relationship between each member element of the class (that is, an object falling into the category of a determined class predicate) and the primary object (that is, an object falling into a determinant category) given earlier and thus different from the determined class predicate [Czeżowski 1914]. One restriction could be introduced to steer clear of paradoxes: a certain form of the vicious circle principle, prohibiting the determination of any object by reflexive properties – those which are equivalent to the properties falling into the category of determined class predicate [Czeżowski 1918b]. Another, more extreme solution – consisted in recognizing all theorems on the class of classes not subordinated to themselves as untrue – on the strength of the repudiation of the claim that if an object is subordinated to a class of a given type, then it means that it is a representative of this type. A similar effect would be achieved by conducting a proof of the claim that each class is subordinated to itself. Then the formulation "the class of classes not subordinated to themselves" would not refer to anything at all [Leśniewski 1914]. In the first case, the paradox-forming statement would change the meaning, whereas in the other case – it would lose any meaning at all.

This way of overcoming the paradoxes of logistics had its far-reaching implications for knowledge creation: a thorough analysis of the meaning of the term "class" sparked the development of mereology, which came to substantiate the claim that mathematics is a hypothetical-deductive system – without falling prey to internal contradictions, and without distinguishing an object from an individual set this object is a part of [Leśniewski 1916].

4.5. Logic and ontology. The discovery of non-Aristotelian logic

If the principles of logic were to apply to the whole reality, they would have to be equivalent to the principles of ontology. It is ontology that investigates the interrelationships between the entities which exist in reality,

whereas logic examines the relationships between the judgements pertaining to reality [Bandrowski 1904]. Speech analysis shall not replace the exploration of reality, logical categories are not exactly matched to ontological categories; logic should not, then, be mixed with ontology [Raciborski 1885b; Bandrowski 1905; Pawlicki 1909; Biegański 1912; Gabryl 1912]. It does not preclude, however, a conscious use of logical conceptual framework (grid) and its means of investigation for improving ontology and the entire philosophy. If philosophy – whose core (not preparatory) part is logic [Molicki 1879] – is to live up to the requirements of science, then it must be subject to a logical redefinition.

The prerequisite of such a redefinition is what logic requires from every science: language specification [Raciborski 1886]. It is achieved either by a clear definition of its expressions or by a proper use of these expressions. Expressions are clear if their content is unambiguous, internally non-contradictory and (in the case of those expressions designating real objects) encompasses the properties – or intrinsic features – of signified object [Twardowski 1901]. The clarity of linguistic expressions can "achieved by the analysis of the expressions in use – which is through logical analysis – or by the introduction of formulations with fixed, predefined meaning – which means through logical construct [Łukasiewicz 1907; Biegański 1912]. Expressions are used properly when they are understood within the meaning of signified objects, and relationships between expressions (sentence structure in particular) correspond to the relationships between objects. Its prerequisite is, of course, exploring the objects themselves and the relationships between them [Molicki 1879 and 1914]. Such a specification can be performed on an existing language (and any common everyday language). The "logization" of philosophy does not necessarily have to mean a total rejection of the philosophical language used to date [Molicki 1879].

Only the propositions expressed in a language thus clarified may be subject to the requirements of sufficient justification and mutual non-contradiction. Finding internal contradictions in the set theory brought to the agenda the need for examining the accuracy of language and legitimacy of the propositions put forward by logic. This investigation showed that proof finding is still required for such laws of logic as: the law of identity, the law of non-contradiction and the law of excluded middle; none of these laws is final [Łukasiewicz 1910]. It turned out that their necessity and constancy is limited to the adopted solution (construct); its change entails a change in principles [Biegański 1912]. It also transpired that the laws of logic are mutually independent: the relationship of consequence or exclusion – occurs neither between them, nor between their

negations [Łukasiewicz 1913]. At the same time, however, finding a strict (extra-experiential) proof of this independence and mutual consistency is nowhere to be found [Ajdukiewicz 1913].

All these laws require a proof – but factual evidence cannot be provided for any of them. A formal proof of the law of identity is only a properly determination of "sentence with a truth value" [Łukasiewicz 1910]. A practical "proof" is the fact that the law of identity (similarly to the principle of causality) is a prerequisite for prediction, which is the main purpose that science is to perform. Also a formal proof of the principle of non-contradiction should be sought after in the definition of the "object" – which is a thing for which it is impossible to have and not to have the same property. With such a definition, the law of non-contradiction stems from the principle of double negation. It can even be "proved" in a practical and ethical way based on the claim that it is a weapon against errors and lies [Łukasiewicz 1910].

Since there is no tangible evidence for the principle of non-contradiction, there are no material grounds for rejecting contradictory objects [Łukasiewicz 1910; Chwistek 1917]. An empty set serves as a good example. Such an object is used by logistics, which means that the principle of contradiction does not apply in its domain. "Existence" (in deductive sciences) is, therefore, not tantamount to "non-contradiction". There is another way to demonstrate this non-equivalence. The recognition of existence of two objects is tantamount to the recognition of the existence of each of them in isolation. However, the recognition of non-contradiction of two objects is not tantamount to the recognition of non-contradiction of each of them in isolation [Ajdukiewicz 1920]. Even though the principle of non-contradiction is dismissed, it is still possible to put forward true propositions, to reason correctly or even act effectively [Łukasiewicz 1910].

Logistics does not exclude contradictory objects, even though it should. To liberate a given science from such suspect entities it suffices to properly select syntactic conventions and definitions obligatory in the language of a given domain [Leśniewski 1912 and 1913c]. The same would have to be applied for the so-called general objects, provided that those objects – as having only the properties shared by all individual objects corresponding with them – they were to be contradictory [Leśniewski 1913c]. There was a difference in opinions on this issue. Some defended that stance, later referred to as "reism" [W. Kozłowski 1891; Leśniewski 1913c]. Others refused to recognize general objects as internally contradictory and were inclined to see them as incomplete objects – where the predication of

a property produces a sentence which is neither true nor false [Biegański 1903; Łukasiewicz 1910]. The principle of contradiction does not apply in relation to such subjects; likewise, the law of excluded middle does not apply to certain sentences about the future; such sentences can be neither true nor false [Kotarbiński 1912].

The most profound consequence of the said investigation was the following observation: a certain research trick – consisting in the exclusion of certain laws and contemplating the effect of this exclusion – could also be used for solving logical issues [Łukasiewicz 1910; Biegański 1912]. It coincided with certain breakthroughs in the research on probability. Probability was recognized as a property characterizing certain undefined sentences (*i.e.*, containing a free variable) – namely those which are neither true nor false. The measure of this probability was logical value, namely the fractions indicating the proportions between the truth-making substitutions and all substitutions [Łukasiewicz 1913; Wolski 1918a]. It fostered conditions for the development of logic different from the bivalent Aristotelian logic: the non-Aristotelian three-valued logic. This logic eventually came to be ontologically grounded in a certain form of indeterminism: certain events which are not variable values and which are not governed by any contemporary laws of logic; they cannot be predicted if unspecified sentences implicate only individual sentences, whose subjects could be the values of variables occurring in those unspecified sentences [Łukasiewicz 1912b].

This is how the two-value logic came to be complemented by the third value: possibility.

5. Textbooks

Introducing logic to grammar school curricula contributed markedly to the development of the study on logic and the expansion of the logical circles (passive – readers, and active – researchers). The timing of the phenomenon was different in various areas of the former Polish Commonwealth: first in Lesser Poland and in Ruthenia (then Galicia) (in 1855), then in Greater Poland, Prussia (in 1862) and Mazovia (in 1863 and resumed in 1871), the latest in Lithuania (1871). Not always and not everywhere, was logic taught in the Polish language; all the more important was the resumption of logic in the Polish language at the university level, at Szkoła Główna Warszawska (Main School of Warsaw) (1862-1869), at Jagiellonian University (since 1870) and Lvov University (since 1871).

Great educational and social hopes were pinned on this reintroduction of logic to the curriculum from its very outset. It was believed that

logic could help young minds shed irresponsible illusions – the legacy of previous generations, cultivate clear reasoning [Kaszewski 1861] and alertness to cognitive errors [Bobrzyński 1912]. It was hoped that it would eventually help to heal social relations and people themselves [Krupiński 1878].

The immediate consequence of bringing logic teaching back to the agenda were textbooks for secondary and higher education in the Polish language. Four textbooks were published in years 1870-1882 (including 1 university textbook), as many as 8 in 1884-1899 (including 2 university textbooks), and 14 in years 1900-1917 (including 3 university textbooks) – excluding re-editions. For illustration purposes, years 1848-1863 saw the publication of only 2 textbooks (including 1 university textbook) – both in the 60s.

Only several projects could honestly be called unsuccessful [Dzieduszycki 1895; Brzozowski 1905]. Most textbooks had some strengths, strengths outweighed weaknesses in few cases [Twardowski 1901; Biegański 1907 and 1916]. The strengths included: good use of the Polish language [Borzęcki 1862; Kautny 1871; Kremer 1878], simplicity of presentation [Struve 1863 and 1907; Pawlicki 1895; Pechnik 1897; Twardowski 1901; Biegański 1907 and 1916; Gabryl 1912], supported by clear diagrams [Zagórzański 1873; Kremer 1878], and aptly chosen examples [Zagórzański 1873]. Some textbooks were valuable for teachers and students thanks to the exercises they contained [W. Kozłowski 1891; Nuckowski 1903; Lutosławski 1906; Biegański 1907 and 1916; W.M. Kozłowski 1918]; other – because of the outlines of the history of logic [Borzęcki 1862; Struve 1863; Pawlicki 1895; Gabryl 1899; Mahrburg 1902; Biegański 1907; W.M. Kozłowski 1918]. The key weaknesses (rather exaggerated accusations levelled by the contemporaries) included – apart from the usual mistakes occurring here and there [Kremer 1876; W. Kozłowski 1891] – content overload [Kremer 1876; Nuckowski 1903] and the lack of transparency [W.M. Kozłowski 1916].

Various issues were the focus of attention of textbook authors – depending on their personal views and the prevailing trends. The textbooks capture the changing trends in research (presented with certain delay, of course). One example could be methodological issues, incorporated to a greater extent as late as in the years 1886-1899 and later. Only then, does inference [Zagórzański 1873; Pechnik 1897; Gabryl 1912], proving [Kremer 1878], verification [W. Kozłowski 1891; Straszewski 1905; Rubczyński 1912] and explaining [Twardowski 1901; Biegański 1907 and 1916] receive meticulous attention. This is when we see the publication of textbooks which are

attempts at customizing the lectures in logic to the requirements of individual domains: medicine [Biegański 1894], didactics [Baranowski 1895; Twardowski 1901; Wąsik 1918] and economics [Heryng 1896]. Any references to logistics are included in the textbooks relatively late [Lutosławski 1906; W.M. Kozłowski 1916].

6. Translations

An increase in the number of native logic textbooks – especially in the period of 1900-1917 – resulted in a decline in the number of foreign textbooks translated into Polish. If 5 out of 6 books on logic translated between 1870 and 1882 were textbooks, then only 3 out of 7 books translated between 1882 and 1899 were textbooks; none of 6 translations published in 1900-1917 was a textbook. Interestingly, almost all translations were published in Warsaw – a centre of a district with no outstanding achievements in logic at that time. What is more, new developments in the domain of logic on the domestic scene were not accompanied by a proliferation in translation – the number of translations remained more or less at the same level throughout 50 years.

Although many important contemporary works had not been translated, none of the translations was needless. Translations usually followed original publications quite soon. If we disregard those works held by their contemporaries as historically valuable (such as John Stuart Mill's *Logic* [Mill 1879], Arthur Schopenhauer's *On the Fourfold Root of the Principle of Sufficient Reason* [Schopenhauer 1908], all the more so René Descartes' *Discourse on Method* [Descartes 1637], Francis Bacon's *Novum organum* [Zarański 1882] or Aristotle's *Categories* [Gabryl 1897]) – the average translation time was just over 6 years. Louis Liard's *Logic*, written in 1884, was published in Polish as early as two years later [Liard 1886].

Franciszek Krupiński's translation of Alexander Bain's *Logic* of 1878 merits the highest commendation (English edition: 1870).

Although number of Polish works on logic translated into foreign languages was the same as the number of translations into Polish (if you take into account discursive essays by Porecki, this number was even higher), there were only three «proper» translations, all of them published relatively late. They included: German translations of Biegański's *Logika medycyny* [Biegański 1909] and Heryng's *Logika ekonomii* [Heryng 1914] and Russian translation of two Leśniewski's *Rozprawy logiczne* [1913]. Other works had been originally written with foreign audience in view; their Polish editions were nowhere (or very late) to be seen. Most of foreign works – over half

of them – were published in German; the remaining ones were in Russian, French or English. Foreigners with no command of Polish could read summaries of some of the works (by Lutosławski, Łukasiewicz, Hoborski and Konstanty Michalski) in French or German, published by *Bulletin International de l'Academie des Sciences de Cracovie*.

In view of the appearance of eminent *O treści i przedmiocie przedstawień* by Twardowski [1894] and *Logiczne podstawy rachunku prawdopodobieństwa* by Łukasiewicz [1913] (published besides the above mentioned works in German), it could be asserted that Polish research on logic was not completely absent abroad or, at least in German-speaking countries.

7. Vocabulary

In contrast to the vocabulary used in the past – erratic, very often subjective and odd – the language of Polish logic from the turn of 19th and 20th centuries was, in principle, generally fixed and widely accepted. In the past vocabulary tended to grew excessively, producing an overabundance of synonyms. A reverse phenomenon occurs right now: getting rid of superfluous vocabulary in the spirit in the name of the postulate that exactly one term should be assigned to a given notion.

At the beginning, and especially in 1870-1882, a tendency prevailed to retain strictly native Polish vocabulary. Over time the Polish logical vocabulary witnessed a dramatic shift: Polish native words started to be discarded and words of Polish origin was being slowly abandoned and Polish-sounding vocabulary originating from Greek or Latin started to be introduced. The language of logic has retained this shape and form until today.

Such a policy was not always justified. Sometimes expelled words not only better resonated with language intuition, but were also better matched than its eventually accepted equivalents.

3. Position of the Lvov-Warsaw School in the Polish culture

1. Phenomenon

What is the contribution of the Lvov-Warsaw School to the Polish culture?

Culture attaches the greatest value to things created for the first time.

What has been missing before?

There was no ACADEMIC ENVIRONMENT and no CONTINUITY.

The Lvov-Warsaw School established academic environment and ensured the continuity of the Polish contemporary philosophy.

What does it mean "to establish academic environment"?

To establish academic environment means: in the area of cooperation, to organize intellectual collaboration CENTRES; in the area of research, to provide an impetus for research which will produce creative RESULTES, in the area of education, to educate the PUBLIC, that is, the recipients of those results.

Those three things were non-existent in Poland at the end of the 19th century.

As a matter of fact, the Lvov-Warsaw School was not the first philosophy school in Poland. The Cracow Scholastic School developed in the 14th and 15th centuries, the Vilna Post-Scholastic School flourished between the 16th and 18th century. In the 19th century there were two trends in the Polish philosophy, which laid the ground for the Lvov-Warsaw School, namely the Vilna-Lvov empirical trend, with such eminent thinkers as Anioł Dowgird and Aleksander Raciborski and the Neo-Scholastic Cracow-Warsaw School, with Feliks Jaroński and Marian Morawski at the forefront.

The Vilna philosophy was ruined by the Russian administration in the 30s (and ceased to exist after Anioł Dowgird's death); the Cracow philosophy was marginalized by Austrian administration.

It is true that later there were some talented philosophers but no intellectual CENTRE developed around them; there was EXCLUSIVISM. Eminent as they were, they worked alone, and they had less in common with one another than with foreign philosophical centres.

The philosophers authored impressive publications, which constituted a successful RECEPTION of the ideas circulating around Europe at that time, lacking in own original study RESULTS. It was ASSIMILATIONSIM at the most.

Moreover, those publications were usually written in a hermetic language, incomprehensible not only for the general public, but even for the thinkers representing other orientations; which doomed such philosophy to ISOLATIONISM.

Polish philosophy ceased to be the Lvov-Warsaw School does a patchwork of PERIPHERIES, PERTINENCES of foreign philosophies.

A strange thing happened.

Until that time, at least over the last two centuries, the contacts between Poland and the rest of Europe or the world were unilateral: Poles only took, not giving much in return. The Poles went abroad in search of philosophical novelties.

Now, the flow of ideas has become bidirectional. The philosophers from abroad (such as Willard van Orman Quine who gained renown later) started to come to Poland to study. The works of Polish authors were read in search of inspiration; this trend continues more or less until today. Guido Küng and Peter Simons drew on Kazimierz Twardowski's theory of the object, Rudolf Carnap on Tadeusz Kotarbiński's reism; Richard Martin on Kazimierz Ajdukiewicz's disintensionalization method; Nicholas Rescher on Zygmunt Zawirski's quantum logic; Nelson Goodman on Stanisław Leśniewski's logical constructions – to name just a few.

2. Ideals

How did Twardowski manage to create his own philosophical Lvov-Warsaw School?

In 1930, in the year of his retirement, Twardowski's students prepared a medal in his honour. On the reverse side there was the following inscription: "*Discipulorum amor et pietas*" ("Love and piety of your disciples"). On receipt of the medal on 11th January 1931 Twardowski commented this inscription as follows:

> When I ask myself what I have done to deserve this love […] and attachment of my students, the answer seems to be clear. Those feelings blossomed in your hearts because you felt that I have tried relentlessly to instil in your souls the best part of my soul: sincere love for work, deep appreciation of truth and vigorous pursuit of justice. Shared respect for work, truth and justice understood as the essence of life, as my scientific and social vocation has tied us with a bond which is strong and unbreakable; it has united us in mutual love. This love rests a firm foundation; it shall never falter [Twardowski 1931: 454].

Well, what does it mean? "I tried […] to instil […] the best part of my soul"? The briefest explanation of these words is provided by Tadeusz Czeżowski.

> Twardowski's school was tough; more than one rose in rebellion. But those who refused to break down and get discouraged, those who successfully passed all the trials – those remained loyal to the master for life [Czeżowski 1938: 11].

To be more precise: the representatives of the Lvov-Warsaw School remained faithful to Twardowski's pedagogic, theoretical, and moral ideals.

Twardowski's pedagogic, theoretical, and moral ideals were the ideals of erudition, competence and cooperation.

Firstly, knowledge must be VAST: a philosopher you must stay abreast of the current developments in philosophy and be well versed in its history as well. Secondly, the knowledge of your domain of philosophical specialization must be THOROUGH: a philosopher must have in-depth familiarity with at least one non-philosophical discipline. Thirdly, a philosopher must be able to co-operate in research: no valuable results can be achieved without an internal and external interchange – within the discipline of philosophy and across other disciplines (with mathematicians, physicians, biologists, *etc.*).

Twardowski's theoretical, scientific ideals were a postulate of clarity and precision of expression, formality and materiality of argumentation, and consistency in eliminating pseudo-problems. Firstly, let your thoughts and your language be clear and precise. Secondly, accept only those views which are sufficiently justified; reject those short of these requirements.

Twardowski's social ideals were faith in intellectual and moral mission of philosophy. A philosopher as the scientist should set his sight on TRUTH. A philosopher as the citizen must carefully protect freedom – and more than that.

Roman Ingarden, an otherwise philosophical opponent of the Lvov-Warsaw School, aptly puts it as follows:

> Twardowski managed […] to develop – in the generation of Polish philosophers, younger than himself, and in the general public – a vivid conviction that philosophy could be exercised in an intellectually and morally responsible way, and that such an exercise of philosophy may and must have a profound impact on human life [Ingarden 1938: 29].

The key to Twardowski's success was his ability to inspire responsibility in his students – responsibility for words and actions: for WHAT is being said, HOW it is being said, WHY something is being said in a certain way and HOW, WHAT and WHY something is being done in a certain way.

The Lvov-Warsaw School challenged the stereotype of philosophy taking roots in Poland at the end of the 19th century: that philosophy is a domain of esoteric knowledge, and a philosopher is an alchemist of the word. Twardowski is given credit for this. Władysław Witwicki recalls that when Twardowski started his lectures at the Lvov University in the autumn of 1895:

> Wild rumours started to circulate in the city – that everything said during his lectures and classes is understandable. There is no beating around the bush, there is no insider jargon. Each and every word and issue is explained, no matter how difficult or unpopular it might be. It attracted bigger and bigger crowds. Some people came over out of curiosity – wondering if philosophical issues could be grasped by non-specialist, and if philosophical issues could be presented clearly by specialists. Both turned out to be true. It is the first time in history when philosophy receives so huge attention in Poland – elsewhere than in the church. The biggest halls were bursting at the seams; a new one had to be built to accommodate the crowds [Witwicki 1938: 269].

There is a good deal of exaggeration in this statement, because, for example, Józef Gołuchowski's lectures at the Vilna University courted similar popularity at the beginning of the 19th century. The reasons for their popularity were quite different, however: short-lived political allusions – soon recognized as non-compliant with the party line by Nikolay Novosiltsev.

The Lvov-Warsaw School attracted two types of audience for it – and for philosophy in general: professionals and amateurs. It drew professionals, because it created a suitable style of thinking: standards of precision in sciences, humanities, and even in theology. It drew amateurs, because it developed a general philosophical and logical culture.

This is how the national mentality and culture have changed.

Exemplary textbooks written by the representatives of the Lvov-Warsaw contributed substantially to this transformation.

3. Position

The Lvov-Warsaw School established academic environment and ensured the continuity of the contemporary Polish philosophy.

Jan Łukasiewicz

What does "ensuring continuity" mean in this case?

To ensure continuity of an academic environment is to instigate in its representatives the ability to three things: assimilation of tradition, that is the incorporation of the output of the predecessors; autoreproduction – that is regeneration of the research teams; and, finally, immunization to destruction, that is self-defence against the risks from the outside.

Although a number of prominent Polish philosophers were active in times of Twardowski's School, none of them managed to

secure thus conceived continuity for himself. Wincenty Lutosławski's outlived his own ideas. Leon Chwistek's ideas expired with their author and several his disciples, who were killed by both the occupants during World War II. The philosophical ideas of Stanisław Ignacy Witkiewicz had never been taken seriously by anyone. Henryk Elzenberg's ideas had been completely «dormant» until recently. Roman Ingarden's dazzlingly magnificent ideas were at best iterated without too much of an understanding. And so on, and so forth.

Sometimes, the Lvov-Warsaw School is – as is the case with every analytical orientation in general – thought to have a somewhat dismissive or even contemptuous attitude towards tradition. It is true, some of the school members displayed certain resentment, in particular if some historians of philosophy evinced on a predilection to absurdly reduce philosophy to its history.

However, the followers of Twardowski chiefly had a matter-of-fact attitude to tradition – explicative and interpretative rather than collectible and historical in character.

A typical representative of the school is a compliant critic of tradition, observant of the rule thus formulated by Kotarbiński:

> Try to clarify intentions of a given author to such a degree which is much more higher than the degree reached by this author himself [Kotarbiński 1958b: 28].

The Lvov-Warsaw School was not only able to regenerate, but to expand, or even dominate the Polish philosophical scene in the first part of the 20th century, holding sway over institutional, personal, problem – and publishing-related spheres. Offices, people, publishing houses and issues have been «taken» by the School.

Four facts should be pointed out as regards institutional domination.

Firstly, the representatives of the School were seen at philosophical chairs of all state-run universities: in Lvov – Twardowski, then Ajdukiewicz; in Warsaw – Jan Łukasiewicz, Kotarbiński, Leśniewski and Władysław Tatarkiewicz; in Vilna – Czeżowski; in Poznań and Cracow – Zawirski. Even after World War II – except for the times of the worst intellectual terror of communism – the School representatives headed the departments at nearly all universities (in a long or short run).

Władysław Witwicki

Władysław Tatarkiewicz

Secondly, the first philosophical seminar and the first psychological laboratory were launched in Poland by the School founder (in 1897 and 1901, respectively).

Thirdly, Twardowski initiated the *Ruch Filozoficzny* quarterly in 1911 – issued until today (not without a fair share of obstacles); he cooperated closely with the first journal in the field, *Przegląd Filozoficzny*, founded, *i.a.*, on his initiative in 1897 and edited since 1916 by his students (in the following order: Łukasiewicz, Marian Borowski and Tatarkiewicz).

Fourthly, the School representatives presided over several philosophical societies in Poland: the position of President of the Polish Philosophical Society in Lvov (nationwide after World War II) was held by the School representatives until the death of Klemens Szaniawski in 1990; local societies in Cracow (Zygmunt Zawirski), Warsaw (Tadeusz Kotarbiński) and Vilna (Tadeusz Czeżowski) likewise.

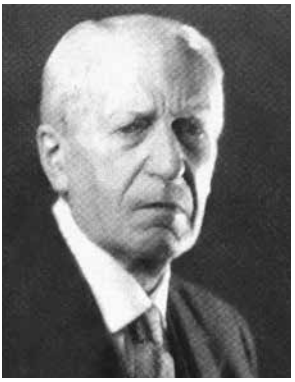
As regards personal domination, suffice it to say that in 1938 – the year of Twardowski's death – the Lvov-Warsaw School had 80 members and saw the graduation of three times as many students as in 1918. The School's status in the field of logic goes without saying: most of active practitioners of this discipline in Poland were Twardowski's disciples or their students. Thanks to the School logicians systematically grew in number. In 1842-1854, ten authors published their works on logic; in 1870-1882 – as many as fifteen; in 1884-1899 – this number grew to thirty, to reach sixty in 1900-1917.

Logic neatly illustrates the domination of logic in the publishing department. The growth rate of the publications on logic from mid-19th century on is the following: from one publication per year between 1842-1864, to three publications per year in the period between 1870-1882, and four publications per year in years 1884-1899, up to thirteen publications between 1900 and 1917 – a time when most of the authors were from the Lvov-Warsaw School.

As regards problem domination, the Lvov-Warsaw School started to explore most of the philosophy areas popular at that time (only some of those areas were researched before). The School was the first Polish academic circle to break the ground in brand new fields of philosophy in centuries.

The Lvov-Warsaw School faced two kinds of destruction: physical destruction during World War II and intellectual destruction after the war. The German and Russian occupants decimated philosophical circles in Poland. During the occupation, dozens of Polish philosophers were killed – most of

them from the School. School representatives were soldiers in the September Campaign, lecturers at underground universities, and when necessary – Warsaw Uprising insurgents – who gave their lives for the cause.[2]



Tadeusz Czeżowski

An intellectual occupation of Poland came in the wake of the war from the East, when a foreign totalitarian ideology settled in. I am deeply convinced that the Communist aberration in science did not last long in Poland, and had always been kept under the supervision of the opposition created by the Lvov-Warsaw School. What is more, the pressure of the Lvov-Warsaw School tradition helped to quickly "civilize" the pseudo-philosophy propagated by the state; it never evolved into as grotesque forms as in other countries of the post-war Russian Empire.

To the best of my knowledge, none of the philosophers admitting to academic affiliation with the Lvov-Warsaw School yielded to the insane communist directive of partyism; at least none of those who had direct contact with Twardowski. Witwicki wrote about him in 1938:

> No political party could say: he is our man. But every educated Pole can and has to [Witwicki 1938: 276].

4. Results

If the School limited itself to organizing the centres of intellectual research loyal to the ideals of its founding father and devoted to educating the public, then it would go down in history as yet another philosophical sect.

A considerable achievement of the School – as an intellectual tradition, not a philosophical sect – is that the research of its representatives produced lasting and original results. The founder of the School himself, Twardowski, is an excellent example. Ingarden puts it aptly:

> Twardowski was never late in real life and in his research: he was no imitator or follower; he was a pioneer in many areas [Ingarden 1938: 24].

So many so original and so critical research results have been produced by the School that each and every selection from among those results will

[2] Two volumes of devoted to philosopher-insurgents [Jadacki & Markiewicz 1995-1996] have been published.

be a manifestation of the sin of subjectivity so heavily stigmatized at the School itself. I would like to present thirteen such results, arranged in order of seniority, not priority (may it be no unlucky number, against the superstitions) – for illustration purposes.

Example 1: the theory of object put forward by Twardowski: distinguishing the act from the content and the object of presentation.

I would like to quote the author himself – one of his most exquisite examples illustrating of how philosophical prose can be put to good analytical work.

> Colloquially speaking, the painter paints a picture or a landscape. The same action of the painter is directed to two objects; but produces one result, however. When the painter finishes the picture, *resp.* the landscape, what stands before his eyes is both the picture and the landscape. The picture has been painted, not etched in stone or drawn in pencil, *etc.*; it is a real picture, a product of the act of painting. The landscape is painted; it is no real landscape at all, but a «painted» one. Both painted picture and painted landscape are only one thing in reality: painted picture represents the landscape, which means it is a painted landscape; painted landscape is an image of the landscape.
>
> The word "painted" performs a double role here. It refers to the picture, it determines it: defines the painting's property of being a painting, not a drawing or etching, wood engraving or lithograph, *etc.* If we think of a landscape that it is painted, then the word "painted" is used in a modifying way, because the painted landscape is not a landscape, but the surface of canvas tampered with by the painter who follows certain principles governing the application of coats of paint and perspective: painted landscape is not a landscape, but a picture. […] The […] same *mutatis mutandis* pertains to the word «presented» in its reference to the content and the object of presentation [Twardowski 1894: 11].

Example 2: three-valued logic, discovered by Jan Łukasiewicz.

The line of reasoning which led to this discovery is as follows.

Let us consider a sentence: "I will finish reading this text in 10 minutes".

Is it true now that you will finish reading this text in 10 minutes? But what does this question actually mean? It means more or less the same as: now the situation is such that you will finished reading this text in 10 minutes. And, eventually, does the cause exist now which will lead to your finishing the reading of this text in 10 minutes?

Let us put this question in more general terms. Is entire reality predetermined?

A defender of free will and – even more generally speaking – an indeterminist would reply: NO! What fails to deliver here is the principle of two-valued logic, according to which – at this particular moment – it is true that you will finish reading this article in 10 minutes or it true that you will not

finish reading this article in 10 minutes. Generally speaking: not each and every sentence is either true or false; there exist "indeterminate" sentences too. You can finish reading this article in 10 minutes – then the sentence will be true; you can also stop reading this article in less than 10 minutes – then the sentence will be false. For the time being this event pertains to the future; to the future which is still indeterminate: you haven't decided yet what you will do.

A sentence "You will finish reading this article in 10 minutes" is now only a possibility; just as a sentence "You will not finish reading this article in 10 minutes" is.

What is more: the events which have no implication in the present have ceased to be real; NOT ENTIRE PAST LASTS FOREVER!

And here comes one of the most awe-inspiring fragments in the history of Polish and world philosophy. Łukasiewicz says:

> There are heavy moments of suffering and even heavier moments of guilt in everybody's life. We would love to erase them not only from our memory, but also from reality. We have the right to believe that once all the effects of those dreadful moments are put to rest, be it even on our own death, then they shall be relegated from reality to the realm of possibility. Time brings healing and forgiveness [Łukasiewicz 1922/1923: 126].

Example 3: the analysis of the psychological principle of contradiction performed by Witwicki.

We believe that democracy is the best possible system. What would be our stance if we were faced with a contradictory opinion: stating that democracy is not the best of systems?

Two viewpoints, two attitudes are viable.

We can either repudiate or adopt this contradictory judgement – but without much conviction or sincerity; this shall be the attitude of vigilance. We can also assume an opposite attitude – that of playfulness, which permits contradictory judgments in the set of our convictions.

The psychological principle of contradiction is in such circumstances suspended.

Example 4: cyclism (the doctrine of eternal return of worlds) by Zawirski.

Determinism claims that the current state of the world is pre-conditioned by a prior state. Causalism claims that every change is the result of a prior change.

Detectability of determinacy and causality relationships is predicated on the accuracy of the cyclism hypothesis which holds that certain states (or changes) are repetitive (at least on a local level).

But what does "repetitive" mean?

Many people claim that the similarity of these two states suffices. A deeper look into the matter shows that they must be exactly identical, not similar.

The hypothesis of cyclical returns of the world's states, found in a pre-scientific form in Eastern mythologies, is thus founded in determinism and casualism, otherwise both those viewpoints would be left hanging in a vacuum.

Example 5: reism by Kotarbiński.

It is one of the boldest and the most radical metaphysical propositions which does not smack of absurdity at first glance. It says: Only things exist. Even the world – as a whole – is a thing.

What is a thing, then?

A thing is an object existing in time and space, which is resistant (puts up resistance). If we agree that everything that exists is resistant and that it exists in time and space, then we could say briefly that a thing is something that is resistant. And if we agree that there is nothing which would be resistant, and would not be somewhere and sometime, we could then say in brief words that a thing is something which is resistant.

And nothing else exists. What is it that does not exist?

The following do not exist: properties or relations; events and states of affairs; sets (in a distributive sense) – not to mention abstract concepts such as goodness, beauty or truths in general.

All those alleged ontological categories can be reduced to the category of things.

Example 6: the analysis of the source of spiritual suffering conducted by Tatarkiewicz.

The suffering of the spirit is different from the suffering of the body; spiritual suffering may pertain to the past and future good and bad thing.

Such suffering can be caused by a memory of something bad happening or something good being lost; or by fear of a danger that is looming, or by (too long) waiting for something good, or by anxiety about the future which is unknown, or by helplessness. Tatarkiewicz writes:

> Hopelessness overwhelms those who have lost what is dearest to them, and also those who seem to have lost little in reality except for hope [Tatarkiewicz 1947: 125].

Three out of six already mentioned achievements of the Lvov-Warsaw School could be described as attempts at removing certain restrictions: restrictions regarding developments in logic to date (Łukasiewicz), restrictions regarding deterministic-causal metaphysics (Zawirski) and restrictions regarding multi-categorical language of ontology (Kotarbiński).

The desire to break free from other philosophical restrictions underpinned also other result which will be discussed later.

Example 7: mereology by Leśniewski, which is about the liberation from logical antinomies.

Mereology is a theory of parthood. It is not easy to talk about it using common language, because parthood is characterized by axioms in mereology. The phrase "is a part of" is legitimate if the following four sentences are true:

(1) if Warsaw area is a part of the Mazovia area, and the Mazovia area is a part of Poland, then the Warsaw area is a part of Poland;

(2) if the Warsaw area is a part of the capital of Poland area, and the capital of Poland is part of the Warsaw area, then the Warsaw area is synonymous with the area of the capital of Poland;

(3) if the Warsaw area is a part of the Mazovia area, then the Mazovia area is an individuum;

(4) if there exist areas of Polish provinces, then there is exactly one class of such areas, which is the area of Poland.

Note: the area of Poland is a class of province areas, because each part of each province is a part of Poland, and each part of Poland (*e.g.* the Warsaw area) has a certain part in common (overlapping) with another province (*e.g.* the province of Warsaw), that is – to put it playfully – there are no «gaps» in this area.

Example 8: a logical theory of sense formulated by Czeżowski, which was intended to liberate philosophy from ontologically suspect entities (psychological, objective, *etc.*).

This theory asserts – logically speaking – that the connotation of a name is a product of the names superordinate to this particular name (the connotation of a sentence is the conjunction of its consequences). By way of analogy, the denotation of a name is the sum of (all) the names subordinate to this particular name (the denotation of a sentence would be an alternative of its reason).

So, this is a dual theory, which implies, interestingly, that connotation and denotation are identical.

Example 9: categorial grammar discovered by Ajdukiewicz:

The point is to liberate philosophy from the constraints of traditional linguistic grammar. Let us take a look at the statement: "Kotarbiński greatly appreciated Leśniewski". Traditional grammar distinguished the following sentence parts: subject, adverbial, predicate and object, describing its constituents as the following parts of speech: noun, adverb, verb and noun again.

Maria Ossowska

It came to be seen that syntactic positions and semantic categories could be described using two pairs of basic concepts: operator-*operandum* and name-sentence along with functor, which is reductible to the latter.

For example, in our sample sentence "greatly appreciated" – sentence-creating functor from two name arguments, occupies the position of the main operator, whose first *operandum* is the name "Kotarbiński", and the second *operandum* – "Leśniewski". In the functor itself "greatly appreciated" the position of the main operator is occupied by "greatly" – which is the functor-creating functor from the functor argument, and the sole *operandum* is "appreciated", which is a sentence functor derived from two name arguments.

This subtle description appeared to be able to cope with an extremely difficult semantic phenomenon, which is intentionalism.

The point was that the fact that Ptolemy believed that the Earth was the centre of the Universe and the fact that the Earth was travelling on the third longest heliocentric orbit, does not imply that Ptolemy believed that the planet travelling on the third longest heliocentric orbit was the centre of the Universe. In fact, Ptolemy could not believe in anything like that because he believed that the Sun revolved around the Earth, and not *vice versa*.

Stanisław Ossowski

Example 10 – a hypothesis (speaking in jest) which uses a non-definable term "nabiał" ["dairy"] to describe morality (dairy products refer to products ranging from milk through cheese to eggs, which cannot be expressed in a single word), formulated by Maria Ossowska. The idea behind the theory was to dispense with the illusions as to the possibility of creating a uniform ethical system.

It is impossible to provide a classic (analytical) definition of "morality", because moral phenomena do not constitute a uniform class: it is not possible to provide essential properties which would be assigned to all moral

phenomena and only to them; likewise, no such property can be assigned to dairy products such as milk, cheese and… eggs.

Moral phenomena constitute a conglomeration, and so does ethics. It includes: axiology – a theory of value; felicitology – a theory of happiness; perfectionistics – personality model theory: and then ethics in a strict sense of the word – which is the theory of human coexistence.

Therefore, the construction of an ethical system should be preceded by meticulous semantic analyses. And Ossowska conducted many such analyses – very precise and strikingly insightful.

Example 11: a description of isolationism in science provided by Stanisław Ossowski: the intention was to dispense with the conviction that isolationism is inevitable in philosophy, at least in humanities.

There are two forms of isolationism.

The first form is a derivative of the approach to scientific legacy and could be referred to as "diachronic isolationism". It has three manifestations: creating a new, allegedly non-translatable language; using this language to address certain issues which have already been addressed (in a different language); finally, discovering solutions which have already been discovered.

The other form of isolationism could be described as "synchronic isolationism". This is isolationism characteristic of the schools of thought and scientific sects: in the former the master and the disciple relationship prevails, whereas in the latter – that between the prophet and the follower; standpoints can be evaluated from the perspective of orthodoxy-heresy (or else loyalism-revisionism). What brings them together is a set of inherent principia (non-verifiable core principles), hypotheses and preferences pertaining to subject matter, symbolism, methods and ways of presenting research.

Example 12: a semantic conception of truth, put forward by Alfred Tarski, intended to free philosophy from the reigns of semantic paradoxes.

So, an adequate definition of truth should meet two criteria. The first says that truth is formulated in metalanguage – which is the language used for describing sentences, not the states of affairs captured in those sentences. The second criterion of truth is that it implicates sentences: "The sentence *Snow is white* is true

Alfred Tarski

Izydora Dąmbska

always and only if snow is white" – and the like. An adequate definition of truth is predicated on the notion of fulfilment and its simplified version goes as follows: A given sentence is true in a specific domain (composed of a set of certain objects and relationships occurring between them) when it is fulfilled by every sequence of objects from this domain.

In order to embrace the essence fully, let us consider – with a pinch of salt – a domain encompassing a group of philosophers and a single relation between them, for example a relation of contempt. Let us check if the following sentence demonstrates fulfilment in its domain: "Everybody holds somebody in contempt". Apparently yes, since for every philosopher there will be another philosopher who holds the first one in contempt. Does the following sentence demonstrate fulfilment: "Somebody holds everyone in contempt"? I don't think so; no philosopher would think contemptuously at least about himself.

Example 13 – the last one: the analysis of anti-irrationality by Izydora Dąmbska: intended to shake off conceptual chaos created by the controversy of rationalism-irrationalism; it proved to be of prime importance over time as the Lvov-Warsaw School came to be described (after Ajdukiewicz) as a representation of anti-irrationalism.

The elimination of this conceptual chaos requires distinguishing at least four kinds of irrationalism: logical, epistemological, metaphysical and psychological.

Logical irrationality is based on accepting logically impossible sentences, that is sentences which are internally contradictory or basically insoluble (internally contradictory sentences are excluded in science, because they could justify each and every sentence according to the rules of logic). Epistemological irrationality consists is recognizing a scientifically justifiable course of cognition which would ensure the legitimacy of logical irrationalism. Metaphysical irrationalism claims that reality is in itself irrational. Finally, psychological irrationalism is rooted in the belief in logically irrational sentences, legitimized by epistemological irrationalism or motivated by pragmatic considerations.

Let us conclude discussing the Lvov-Warsaw School, it's representatives and achievements with a fragment of a poem by Cyprian Kamil Norwid:

What have you done to Athens, Socrates,
That the people erected a gold statue to you
Having first poisoned you? … […]
No matter in what urn you will rest?
Where? when? in what sense and faith?
For they will open your tomb again,
They will praise your deeds differently,
They will be ashamed of poured tears today,
They will pour tears of greater praise for you
Those who could not see a human in you…

Why this quote from the poet?

Because justice is yet to be done to Twardowski and his School. As Norwid put it, we need to "open the tomb again" and revisit the tradition of the Lvov-Warsaw School.

4. The philosophical environment of Vilna in the years 1920-1945

1. Prologue

One of the Vilna philosophers, Bogumił Jasinowski, wrote in the 1930s:

> It is an unquestionable fact that the past two centuries in the history of Poland saw the former Eastern Borderlands […] coming under the spotlight and attracting interest across the entire country. Hence – in the collective memory of the Nation – the 17th and partly 18th centuries are inextricably connected with this area [Jasinowski 1936: 214].

The same happens half a century later with philosophical tradition, which is a key component of this collective memory. After the Lvov renaissance and the establishment of the Lvov-Warsaw School, Polish philosophy starts to be auto-identified with Vilna.

After the defeat of the November Uprising, the Tsarist authorities quickly dealt with the Vilna academic circle. The University was closed down in 1832, whereas Theological Academy – tolerated and a little longer by the Russian administration – in 1842. The death of Anioł Dowgird which occurred in 1835 simultaneously marked the conclusion of the 19th century Vilna philosophy.

It came back to life only after the University resumed its operation in 1919.

2. Institutions and Organizations

2.1. University

Philosophy at the Stefan Batory (Stephen Báthory) University was linked primarily with the Faculty of Humanities. Four chairs of philosophy were set up initially, with two of them having a relatively short life span: Władysław Horodyski's chair – one year (1919-1920), and Włodzimierz Szyłkarski's chair – two years (1919-1921). Eventually, the Vilna University was home to two chairs of philosophy. One of them was presided over by, respectively: Władysław Tatarkiewicz in 1919-1921 and Tadeusz Czeżowski in 1923-1939. In the years 1921-1927 an assistant Benedykt Woyczyński was employed, and in 1936-1939 – Henryk Elzenberg, assistant professor. Wincenty Lutosławski worked for the second chair in 1919-1929, and was replaced in 1931-1939 by Jasinowski.

Philosophy was also developed at other chairs at the Faculty of Humanities: the Chair of Education, run in 1920-1932 (and actually as late as until 1938) by Marian Massonius, and in 1938-1939 by Ludwik Chmaj;

Vilnian philosophers (1937). On the foreground from the left: Maria Rzeuska (1). Sitting from the left: Bogumił Jasinowski (2) and Marian Massonius (6). Standing from the left: Tadeusz Czeżowski (8)

at the Chair of World Literature in 1919-1931, when it was run by Marian Zdziechowski; at the Chair of Polish Literature in 1932-1939, when it was run by Manfred Kridl; finally, at the Chair of Psychology, headed in 1933-1935 by Rev. Mieczysław Dybowski, and in 1936-1939 – by Bohdan Zawadzki, with lectures by visiting professor Stefan Błachowski from Poznań – serving as a semblance of the chair.

In addition to the Faculty of Humanities, philosophy was also taught at the Faculties of Theology, Law, and – for a time – Medicine.

The Faculty of Theology included two Chairs of Christian Philosophy. One was headed by Rev. Stanisław Domińczak in 1925-1927 and by Rev. Władysław Suszyński[3] in 1928-1939. The second was run by Rev. Michał Klepacz in the years 1936-1939. Moreover, philosophy was the subject of academic interest of Rev. Leon Puciata from the Chair of Dogmatism in the interwar period; with classes delivered by Rev. Antoni Korcik in 1933-1939, and Rev. Władysław Urmanowicz in 1930-1939.

The Chair of Theory and Philosophy of Law was a part of the Faculty of Law, headed in 1921-1929 by Jerzy Lande, and by Wiktor Sukiennicki (under the supervision of Bronisław Wróblewski) in 1929-1939.

[3] After the war, Rev. Władysław Suszyński was the administrator of the Archdiocese of Białystok; there is an epitaph at the altar of the Madonna of Ostra Brama in the Białystok Procathedral and a commemorative plaque to the left of the main portal outside.

The Chair of Theory and Philosophy of Medicine at the Faculty of Medicine was presided over in 1922-1930 by Stanisław Trzebiński.

The second academic stronghold of philosophy – of no less importance than institutional departments – were philosophical and pedagogical seminars. The Philosophical Seminar was run by, respectively: Szyłkarski, Tatarkiewicz and Czeżowski[4] since 1923. The Pedagogy Seminar was conducted between the world wars period by Massonius.

Philosophical issues were also discussed during the meetings of the Polish Literature Seminar, headed by Manfred Kridl. Besides the departments and seminars – also the Philosophical Circle of the Stefan Batory University Students, founded in 1920 by Woyczyński, played a key integrative role. The Society had more than a dozen active members originating from various university faculties and held regular – except for years 1921-1923 – meetings every two weeks, attended by not only students, but also lecturers.[5]

2.2. Organizations

Philosophy was the subject of interest of two non-university organizations operating in Vilna.

The first one was the Department of Philosophy, History and Law and Social Sciences of the Society of Friends of Science in Vilna, in operation since 1922.

The second organization – the Vilna Philosophical Society, whose origins are traced back to 1925 – was formed in 1928. As many as 53 meetings of the Society were held[6] until the outbreak of the war. Two ventures were additionally associated with the Society. The first one is a publishing house which issued two monographs: *Jak powstało zagadnienie przyczynowości* by Czeżowski [1933] and *Wyraz i życie psychiczne* by Mieczysław Wallis-Walfisz [1939]. The second venture was the Social Philosophical Congress held on 2-4 July 1937 with *ca.* 30 participants in attendance, including guests from Cracow, Lvov and Warsaw.

Two more collective achievements of the Vilna philosophers are worth mentioning. Firstly, a note on the Polish philosophy was compiled under the supervision of Wincenty Lutosławski to be included in the 12th edition of Friedrich Ueberweg's *Grundriss der Geschichte der Philosophie* [1928]; secondly,

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[4] Seminar rooms (meeting room, library, reading room and two study rooms) were located on the second floor of the former Jesuit monastery in the Maciej Sarbiewski Courtyard.

[5] Reportedly, the records of the meetings of 1920-1939 are preserved in the *Chronicle*.

[6] It seems that records of meetings of the Vilna Philosophical Society and the *Congress Diary* seem to have survived (*cf.* below).

the 1930s saw the commencement of the work on a philosophical dictionary (under the supervision of Czeżowski).

3. Audience

Philosophy was studied in Vilna by a number of talented people, among others by Juliusz Wirski, a poet, with his wife Helena; (briefly) by Stanisław Ossowski, a sociologist, and Maria Znamierowska-Prüfferowa, an ethnographer.

The following doctoral dissertations appeared: in 1925 *O rozwoju poglądu Platona na duszę* by Woyczyński, a dissertation by Michał Kapp in 1927 and by Stefan Burhardt in 1928; as well as *Teorie terminów ogólnych a uzasadnienie przyczyn substancji duchowej u Berkeleya*[7] by Wiesława Walicka-Woyczyńska, who came to be known as sister Benedykta, a Franciscan nun from Laski near Warsaw.

In the 1930s, parallel studies (philosophy and law) were pursued by Sawa Frydman (*vel* Czesław Nowiński), Jan Rutski and Józef Zajkowski.

Clandestine students of Tadeusz Czeżowski during World War II included: Maria Renata Mayenowa and Edward Csató, later theoreticians of literature, and Barbara Skarga, a philosopher; one of Henryk Elzenberg's clandestine students was Ludwik Fryde, a theoretician of literature.

There were also «extraordinary» students besides the «regular» and clandestine ones – such as Rev. Julian Eydziatowicz, a parish priest from Kalwaria near Vilna who attended classes at the age of over 60 out of pure «love of wisdom». It was they who shaped the philosophical climate of the city near Wilia river.

4. Climate

Three things defined the philosophical and cultural climate of Vilna in 1922-1945, namely the attitude of residents to the university, the relations between the professors, and the attitude of young people to studying.

This is how Władysław Tatarkiewicz recalls this period years later:

> It started with the grand opening of the University, and a ceremonial procession through the city. Vilna never forgot its tradition, and appreciated it even more since it was deprived of a university for almost a hundred years [Tatarkiewicz 1979: 148].

The line-up of lecturers – along with Teresa Tatarkiewiczowa – "received warm support from local people who offered their help to the newly founded school" [Tatarkiewiczowa 1979: 66]. The professors, mostly coming

[7] The manuscript was kept in the records of the Stefan Batory University before the war.

from outside of Vilna – which suffered an intellectual havoc wrought by the Tsarist administration – quickly «assimilated» with the local society. This assimilation process was further enhanced by the meetings held at the dwellings of famous Vilna residents: Teresa Jeleńska, known as "the Pope", and countess Janina Umiastowska.

The circle of lecturers integrated promptly. Władysław Tatarkiewicz wrote:

> We lived close to one another, we spent more time together than at any other university. I cherished the memories of our meetings and trips half a century later [Tatarkiewicz 1979: 148].

The Professors Club was home to friendly meetings, Rev. Julian Eydziatowicz's house in Trynopol – to gatherings around Christmas time, and the house of Marian Zdziechowski and his wife – to «tea meetings» (attended also by students). We went on tours around Vilna: Ponary Mountains, Troki, Werki, Green Lakes…

It was the students who exerted the most profound impact on the atmosphere of Vilna.

> Young people were eager to learn and respected the University. What seemed to be extraordinary was that ties were established instantly with the former Śniadecki's University, as if awakened from almost a century-long sleep [Czeżowski 1977: 435].

This is how Tadeusz Czeżowski explained this phenomenon:

> During the oppression suffered at the hands of the Russian Empire, the Vilna community cherished the memory of Filomates and Filaretes as part of the family tradition. Those memories immediately translated into new academic relationships at the newly revived University, lending it a special friendly atmosphere [Czeżowski 1948b: 39].

It comes as no surprise that even for such a *trubatoris chori* as Wincenty Lutosławski the Vilna period came to be a time when his "outlook on the world took the final shape" [Lutosławski 1933: 329]. Even such a misanthrope as Henryk Elzenberg, after the years of war spent in Vilna, said:

> Getting to know both the horror and its parallel moral beauty of the Vilna residents, flowing in a narrow and pure stream – was worth it [Elzenberg 1945a].

The realization of the continuity of this tradition – despite a century-long disruption – was further reinforced in the students by the Stefan Batory University professors. Marian Massonius drew on Jan Śniadecki, Jerzy Lande

and Bogumił Jasinowski on Hieronim Stroynowski, Bronisław Wróblewski on Joachim Lelewel, Wincenty Lutosławski and Manfred Kridl on Andrzej Towiański, Rev. Michał Klepacz on Anioł Dowgird… And Władysław and Teresa Tatarkiewicz managed during their short stay in Vilna to put in order the collection of several hundred philosophical manuscripts, stolen by the Tsarist authorities from the monasteries scattered around various parts of Poland during the times of partitions.[8]

Soon, a new tradition began to emerge: the flow of ideas between «the living».

5. Problems and ideas

5.1. Centre

The tone of the Vilna philosophy in the years 1920-1945 was set by Marian Zdziechowski, Marian Massonius, Wincenty Lutosławski, Henryk Elzenberg, Tadeusz Czeżowski and Jan Rutski.

The first three of them represented the generation of the January Uprising, the next two represented the following generation, the last one was born in 20th century. The academic activity of Jan Rutski, Henryk Elzenberg and Tadeusz Czeżowski started in the Vilna period; it was peak time for Wincenty Lutosławski and closing time for Marian Massonius and Marian Zdziechowski.

This Grand Six was a collection of various personalities: two of them were opposites: Wincenty Lutosławski – a rather wild visionary; Tadeusz Czeżowski – a restrained and analytical realist; Marian Zdziechowski, Marian Massonius, Henryk Elzenberg and Jan Rutski were in-between the two extremes – in order from the wildest to the most analytical. All six attested to Marian Massonius' hypothesis on two elements in (or dimensions of) the Polish intellectual mindset. The western («Polish») element came to the fore in Tadeusz Czeżowski:

> Polish mind […] is sober and cautious […], prefers clarity and ease of proving to audacity and alleged depth of ideas [Massonius 1902: 264].

The eastern («Lithuanian») element was predominant in Wincenty Lutosławski – and manifested as a tendency to grapple with "detached issues", "investigation into the nature of things" and the "mysteries of life".

Philosophy was given various priorities in their academic lives. Henryk Elzenberg and Tadeusz Czeżowski were almost exclusively devoted to philosophy; they were the only *tout court* philosophers out of the Great Six

[8] W. Tatarkiewicz seminars were delivered on the Castle Hill and at the Rossa Cementery.

Philosophers. The primary area of interest of Marian Zdziechowski was literary theory, Marian Massonius – pedagogy, Wincenty Lutosławski – ideology, and Jan Rutski was a statistician.

Marian Zdziechowski, Marian Massonius, Tadeusz Czeżowski and Jan Rutski lived in Vilna for over 20 years (for Rutski spent his whole adult life there); Wincenty Lutosławski and Henryk Elzenberg – about half as much.

Wincenty Lutosławski eventually left Vilna in 1931 and returned two years later with a set of lectures, attended – contrary to his expectation – "by three hundred people […], who kept on listening for three consecutive days, seven hours a day" [Lutosławski 1933: 346]. Henryk Elzenberg came to Vilna three years before the war, but his Vilna oeuvre (published mostly only after the war ended) was significant and had a major impact on the scientific circles of Vilna.

If the entire Great Six Philosophers was to set the tone the Vilna philosophy in those days, then Wincenty Lutosławski accounted for its popularity and Henryk Elzenberg – depth.

5.1.1. Marian Zdziechowski

Marian Zdziechowski's general philosophical standpoint – irrationalism – was characterized by two ideas: ontological pessimism and ethical heroism.

The world is full of physical suffering and moral evil: they simply constitute its essence. The recognition of suffering and evil is in no way tantamount to their acceptance: pessimism does not implicate apathy.

Marian Zdziechowski

Man yearns for Eternal Good, and it is this yearning that inspires him to fight his battle against evil – "to the last drop of blood"; even if there is "no hope of winning" [Zdziechowski 1937: 239]. The realization of the repugnant character of the world flies in the face of faith, "God's hunger" [Zdziechowski 1937: 351]; yet it does not eradicate this faith, this "hunger". On the contrary: knowledge, *i.e.* the realization of harsh reality and humility which is coupled with knowledge and faith – namely the realization that "there are things which are more important than me" [Zdziechowski 1932: 31] – make this fight against suffering and evil a regular battle, not a whim of a beauty-craving spirit.

And Marian Zdziechowski called for such a regular battle against the greatest misfortunes of his times: communism and chauvinism. He defined communism as the underpinning of democracy pushed to the extreme of absurdity, and chauvinism – as the underpinning of patriotism pushed to the extreme of absurdity. Both communism and chauvinism pose a threat to traditional European culture. Both are meant to «beastify» man. This is why we should, according to Zdziechowski – drawing moral strength from tradition – counter the postulate of «beastification» of man with the postulate of «deification» [Zdziechowski 1925: 31].

5.1.2. Marian Massonius

Marian Massonius also warned against playing down the threat posed by communism. He also pointed out that the purpose of communism was to destroy social structures in the countries under communist regime; in particular the replacing of ruling classes with «the class of commisioner», and then the atomization and ruthless subordination of the rest of the society to this «class».

The key element of the strategy aimed at achieving this end was fighting against religion as a world-view (faith) and as «office» (church) – using any means. That is why Massonius' postulate of «deification» takes the form of the postulate of the revival of religiousness.

It was no easy task according to Massonius. First of all, he realized that communist ideologists were formidable enemies, "the most clever people in Russia" [Massonius 1921: 42]. Secondly, religion is in itself a problem-ridden area. One of its perennial problems is how to reconcile God's omniscience and omnipotence with His omnibenevolence and omnidetermination of the world. When faced with this mistery, human mind must choose between accepting God's impotence and blaspheming about His moral cruelty. Does determinism hold and God is INCAPABLE of preventing evil, or perhaps it is indeterminism that holds, and God REFUSES to prevent evil?

Marian Massonius

Only irrationalism seemed viable to Marian Massonius, which was in keeping with Marian Zdziechowski's outlook. Faith should be separated from knowledge – to be more

precise – from its «rational» components, since the belief that faith is exhausted by «the rational» is ill-grounded; not all of our scientific views are justified: at least some truths – what is more, primary truths – are grounded in faith only.

5.1.3. Wincenty Lutosławski

Wincenty Lutosławski demonstrated an activist attitude similar to Marian Zdziechowski and Marian Massonius. His activism was stripped of any «heroic» dimension – which manifested as a pessimistic diagnosis of the reality for Zdziechowski and Massonius. It is no coincidence that Wincenty Lutosławski's autobiography (written after leaving Vilna) was entitled: *Jeden łatwy żywot* [Lutosławski 1933].

There is no denying the great amount of suffering and evil in the world, but "you can always do something for others, no matter how difficult your personal plight is" [Lutosławski 1922: 251]. Every «decent» man must not only refrain from doing evil, but – first of all – start doing good. And only such a man can do good who is able to "build up the power of his will" and "stay true to himself". Being true to oneself means the compatibility of one's actions with one's thoughts and ideas. Having a strong willpower, which means having "control over one's actions requires having control over one's thoughts and ideas, and a clear understanding of what one wants to achieve" [Lutosławski 1923: 127]. Therefore, the precondition of wealth increase and, in particular, of being of assistance to others, is "self-development" [Lutosławski 1923: VII] and striving for self-control. Weakness should be wrestled with "not after it has overcome us, but when we feel at the top of our strength" [Lutosławski 1923: 27].

Wincenty Lutosławski appreciated the threat posed by communism, as Marian Zdziechowski and Marian Massonius did. Unlike Zdziechowski, Lutosławski did not perceive communism as a «distortion» of democracy, but as its «continuation», and that was the point of departure for his investigation of this socially detrimental utopia.

The communist utopia is based on three assumptions: firstly, that people are equal, secondly that one can be free without owning any property, and, thirdly, that the only «fair» source of wealth is work. Those three assumptions underlying anthropological egalitarianism, «abstract» liberalism and economic «praxism» are blatantly wrong.

First of all, "people are not, and can never be equal" [Lutosławski 1926: 35] and «equalizing wealth distribution» is never permanent: sooner or later new inequalities are bound to arise.

> Social revolutions change people who possess wealth – the wealthy sometimes become paupers, paupers sometimes become wealthy – be it by fair or foul means; yet inequality stays put and increases [Lutosławski 1926: 37].

Secondly, the most absolute guarantee of personal freedom is the right of ownership.

> Man only feel free if he owns and disposes of property [Lutosławski 1926: 39].

Thirdly, there are four fair sources of wealth: "organizational talent and inventiveness, besides work and capital" [Lutosławski 1926: 57].

If democracy is based on misguided assumptions, then the "democratic craze" which threatens with "the collapse of the civilization" [Lutosławski 1926: 84], must be put to a halt.

It is aristocracy that is an alternative to democracy according to Wincenty Lutosławski.

> Political rights should be based on moral and intellectual qualifications: […] the state can be well-governed only by the most apt and the wisest citizens, not by the favourites of ignorant mob [Lutosławski 1926: 239].

5.1.4. Tadeusz Czeżowski

Marian Zdziechowski, Marian Massonius, and Wincenty Lutosławski, exercised «synthetic» philosophy. If they conducted the analyses of WHAT THERE IS, these were a pretext for synthetic visions of WHAT THERE IS TO BE. Their focus was – using precise language – not so much on reporting how things are, as on convincing others that things should be in keeping with their «desired» idea; evocative – not precise – language seemed to be the most suitable for this purpose. In their approach philosophy was a world view, not a science.

Things are entirely different in Tadeusz Czeżowski. In his lecture *O filozofii* delivered right after assuming the post at the Vilna University Czeżowski declared in no uncertain terms: "Philosophy – within the meaning that is of interest to us – is a SCIENCE" [Czeżowski 1923: 1]. And further:

> Like any other scientific investigation, philosophy disallows the use of terms having not clear and exact meanings, and making judgements having insufficient justification […].The postulate of term monosemy is usually linked with the postulate of proper problem formulation […]. The problems pretending to be philosophical at first glance [most often – after they have been formulated properly] lose

their all meaning, because this meaning lies in the primary inexactness of terms [Czeżowski 1923: 5].

The most natural area of application of analytical method are strictly logical issues, which was the key area of interest of Tadeusz Czeżowski during the Vilna period. His logical investigation was focused in particular on the classical and modal calculus, and some issues related to semantics and methodology. The result of his work was a handbook on logic at the university level, excellent in terms of the presentation of subject matter and didactics.

Tadeusz Czeżowski made a major contribution to philosophy in the strict sense of the term – in particular ontology and ethics.

In the field of ontology, the focus of Czeżowski's analyses was on one of its chief issues – namely the concept of the "cause". Those analyses led to the identification of seven «objects» known as the "cause of something": a «natural» cause (*i.e.* conditions sufficient for the occurrence of something), a «logical» cause (*i.e.* the reasons of a sentence stating the occurrence of something), a «teleological» cause (*i.e.* the purpose of an action which is manifested, expressed, or which results in something), an «archetypical» cause (*i.e.* substance or element from which something is created), a «hypothetical» cause (*i.e.* «hidden» forces which «drive» something), a «substantial» cause (*i.e.* a thing which triggers something) and, finally, a «phenomenalistic» cause (*i.e.* a phenomenon which implies an effect).

It is only those terminological distinctions that provide a proper framework for defining the issue of causality – namely as an amalgam of many questions.

Ethics-related problems became a primary area of Czeżowski's interest as late as during the war – which is no coincidence.

Before the war, Czeżowski analysed the concept of "good" (setting it apart from the concept of the "criterion of good") as the sole subject matter of axiology. According to Czeżowski, the primary context of good was as follows: "It is good that is so-and-so"; hence his conclusion that good is a FACT, and, as an OBJECT OF JUDGEMENT – like existence, necessity, and possibility – can be only stated, not represented.

Later, during the war, Czeżowski analysed such ideas as "happiness", "fear" and "bravery" in beautiful philosophical miniatures.

He understood happiness as a state characterized by a positive emotional experience triggered by the acquisition of the desired good. Happiness thus defined was contrasted with happiness viewed as the materialization of a possibility – one from many antagonistic possibilities – that is to our benefit.

Czeżowski saw yet another solution to the problem of evil in the world – other than the alternative of optimism (advocated by Wincenty Lutosławski) and pessimism (advocated by Marian Zdziechowski). Happiness cannot be achieved by getting hold of a specific good; there is good which goes far beyond this specific good: it is the understanding that we are a part of the «wholeness of being». Czeżowski called it "contemplationism" and deemed it to be more legitimate than other solutions.

One of the factors disturbing happiness is anxiety – an active sensation which encompasses the image of a future object of negative value (for example imminent harm or death). Purpose-determined anxiety was contrasted with cause-determined fear (evoked by a sudden fall or loud thunder) – a passive sensation, primeval compared to anxiety. He demonized none of them, however. He wrote:

> Fear and anxiety constitute powerful driving forces behind human behaviour. They are not that powerful enough, however, to go beyond the control of other, opposite motives. The road to bringing them under control goes through developing personal ethics as the source of bravery [Czeżowski 1945: 265].

Tadeusz Czeżowski assigned bravery the role that Marian Zdziechowski assigned to heroism. He defined it in a similar fashion. According to Czeżowski bravery is a mental disposition which consists of three components: intellectual, volitional and moral. In order to be demonstrate bravery in one's actions, you have to go beyond evaluating its purpose and the magnitude of obstacles, and be willing to pursue the goal sustainably. This is merely courage. It takes a morally valuable goal: the most apt goal – for courage to turn into bravery. It comes as no surprise that during the war – when so much courage was demonstrated on both sides – Czeżowski announced a progressive decline of the ideal of bravery.

One of the repercussions of this decline was that it was "easier to lie now than it used to be in the past". The dissipation of the «appeal» of truthfulness principle (attested by pre-war investigations conducted by Stefan Błachowski) was attributed to two more processes: the mythologization of reality (related to the superiority of the expressive function of language over its semantic function) and the mitigation of the sanctions for lying.

5.1.5. Henryk Elzenberg

Henryk Elzenberg «officially» distanced himself from the traditions of the Lvov-Warsaw School, represented in Vilna by Tadeusz Czeżowski. Elzenberg showed much more affinity with Czeżowski in the mode of

Henryk Elzenberg

exercising philosophy than to other older representatives of the Great Six Philosophers, however; he also excelled in subtle analytical work carried out almost exclusively in the field of axiology.

The analysis of the concepts of "sense" and "value" provide the examples of such analytical work.

Elzenberg distinguished three interpretations of sense – alluding, as a matter of fact, *expressis verbis* to Tadeusz Czeżowski: logical sense (related to the meaning of a given expression), theological (related to the justification of something – for instance a certain system of parts – which refers to a purpose) and theological (related to the mere existence of something, *e.g.* life or the world, which is justified by a value). Elzenberg specified the concept of value by drawing two distinctions within objects designated by it. He distinguished between final values and derivative values (only precondition for the former) and between positive values (vested in objects insofar as they are the way they should be) and negative values (vested in subjects insofar as they are the way they should NOT be).

Despite certain methodological affinity, Henryk Elzenberg, unlike «pure» – "bureaucratic", as he called them – analysts [Elzenberg 1963: 359], eagerly ventured into the «territories» of mysticism which were forbidden and inaccessible to precise reconstruction. Both these could be reconciled by the axiologism professed by Henryk Elzenberg: the ideal should be "inferred from the idea of what there should be, what is good and beautiful, regardless of its actual relation to what there is" [Elzenberg 1942: 337].

In the controversy between rationalism and irrationalism, Henryk Elzenberg tended to opt for the latter. A consistent rationalist must advocate the principle of good maximization in ethics. According to this principle, a duty is "such an act whose performance brings more good to the world […] than any other act capable of being performed at the same time" [Elzenberg 1943: 31]. Henryk Elzenberg contrasts the good «maximization» principle with the good «intensification» principle. It is man's obligation to crave for not the highest *quantum* of good, but the highest good.

> The most noble craving is that which is oriented on the most intensive value [Elzenberg 1939: 47].

It is perfectionism with a tinge of egoism: each of us is privileged because each of us decides what the "most intensive value" is: which good is "loved most dearly" [Elzenberg 1939: 40]. It is also perfectionism with an eudaimonistic tinge: people «love» most dearly that good which promises happiness". There is nothing reprehensible with that – provided that this happiness is experienced as a "momentary realization of something eternal".

By acknowledging (with certain reservations) irrationalism and permitting (at least for «testing" purposes») «metempiricism» – that is the possibility of an extra-sensory experience – Elzenberg evolved consciously towards *sui generis* of mysticism. It is no coincidence that he distinguishes the values which determine the morality of the motivation underlying a certain action into external values (applicable within a community) and internal values («self-acknolwedged»), with the former referred to as cultural and the latter – as "religious".

5.1.6. Jan Rutski

Jan Rutski's chief area of achievement was methodology. He advocated *expressis verbis* Czeżowski's methodological ideals – the ideals of the Lvov-Warsaw School. This is what he wrote:

> A clear formulation of a problem is one of the most important stages in the academic work. All too often do we encounter a situation in which a problem had been resolved before it was formulated precisely. Such a solution is usually insufficient. However, the mere existence of such a provisional answer takes the appearance of being solved and is a psychological obstacle on the path towards the realization of the essence of the problem [Rutski 1934: 7].

In order to avoid this pitfall, one should "carry out the analysis of BASIC CONCEPTS" [Rutski 1931: 95] which come into play in a given case.

Some of the problems which Jan Rutski tried to "formulate precisely" were the issues related to dependence, regularity, causality and explaining.

An accurate formulation of the issue of dependence requires a distinction between natural and «collective» dependence. Thus:

> [Natural dependence is] such a relationship between two properties which share more or fewer elements from their sets of determinants); or when the same relationship occurs between the elements of the sets which determine both these properties; or if one of those properties is contained in the set which determines the other property [Rutski 1931: 110-111].

According to Jan Rutski, collective dependence is such a relationship between property *A* and *B* in which:

> The occurrence of property *A* influences the probability of the occurrence of property *B*, which means that property *A* influences the probability of the occurrence of property *B*; therefore, property *A* results in a more frequent (or more seldom – when the relationship is negative) occurrence of property *B* – compared with those cases where property *A* does not occur [Rutski 1931: 119].

The ontological ground of this differentiation was metaphysical «particularism» and (conservative) anti-determinism.

> Only individual natural objects exist in empirical reality; sets of objects do not exist as such. A set is merely a mental construct. […] Collective properties […] can be also considered as artificial creations [Rutski 1931: 97].

As regards the principle of determinism, "it does not seem to be […] applicable". Since:

> If we assume that acting entities have free will, then clinging to determinism is pointless when it comes to explaining, for example, the stability in the number of suicides [Rutski 1934: 44].

An accurate formulation of the concept of causality requires setting it apart from «law». A regularity (constancy) is indicated when all the observed objects share a certain specific property. A «law» is indicated when this-and-this implies this-and-this.

Finally, the formulation of the problem of explaining requires drawing a distinction between causal interpretation (explanation), inductive interpretation (generalization) and symptomatological interpretation (understanding). To explain the occurrence of something – means to indicate a specific relationship that must take place between specific properties. To generalize something – means to predict a future event based on a specific event taking place and a certain regularity which applies. To understand something – means to detect an event indicated by a symptom. Object *A* is the symptom of object *B* when a statement by person *O* that *A* exists in a closer detailed perspective, better available to *O*, is the motive for *O* to state that *B* exists in another, more distant, better available and, simultaneously, more important detailed perspective. By "detailed perspective of *O*" Rutski understood the scope of cognition available to *O*, determined (freely) by a specific set of conditions. This perspective was opposed with "general perspective of *O*", which is the "sphere of its actual and possible scope of cognition, in which it is deemed entitled to assert [*scil.* state] or reject sentences" [Rutski 1936: 386].

These apparatus helped to provide simple criteria of the fallacy of symptomatological interpretation: this interpretation is fallacious when it is either metaphysical (when a more distant detailed perspective goes beyond the general perspective), or tautological (when a more distant detailed perspective fits within the closer perspective). Those vehicles helped to present the clash between behaviorism and introspectionism as differences in the general perspective.

5.2. Pertinence

Marian Zdziechowski, Marian Massonius, Wincenty Lutosławski, Henryk Elzenberg, Tadeusz Czeżowski and Jan Rutski were the CENTRE of the interwar philosophical movement in Vilna. Other representatives of the movement teamed with them – and adopted the solutions put forward by the Great Six Philosophers on the one hand, while providing their own creative input on the other hand.

The most interesting concepts were contributed by Jerzy Lande, Stefan Błachowski, Bogumił Jasinowski, Manfred Kridl, Józef Zajkowski and Ludwik Fryde. They formed a kind of the Small Six Philosophers of the philosophical Vilna in 1920-1945.

Jerzy Lande's contribution pertained to axiology.

One of the things he recommended was drawing a distinction between all kinds of norm-forming (legal, moral, and aesthetic) viewed as a real psychological process – from norm-forming as the ideal logical «process» (creation?). According to Lande, these concepts tend to be confused due to a more general fallacy, which consisted in confusing ethical phenomena with normative facts. The fact that a given person is convinced that they should not lie is an ethical phenomenon, *i.e.*, an experience "whose mental content is a legal or moral norm" [Lande 1925: 152]. The fact that a given person should not lie is a normative fact (the existence of a custom, declaration of an act, God's commandment, court sentence, *etc.*), that is a "perfectly captured mental content" [Lande 1925: 152] of such an experience, and a link justifying a certain (positive) standard.

Stefan Błachowski contributed to putting a few epistemological issues in order.

He objected namely to equating consciousness with a certain sort of memory and, in particular, with "indeterminate sensation" [Błachowski 1913: 487-488] of what (had been) forgotten.

Bogumił Jasinowski made an interesting contribution to the philosophy of culture.

He identified the elements which determine the difference between Eastern European and Western European civilizations – considering, for example, religious agnosticism (a belief that God is basically transcendental), axiological fatalism (a belief that evil cannot be wiped out from the world, and good and holiness are closer to ugliness than to beauty), psychological schizothemia (a tendency to go from one extreme to another), sociological «totalism» (restricting the freedom of the individual in the name of the good of the community) and political statism (subordinating all social structures, including the Church, to the state) – as a specific features of Eastern European civilization.

In particular, the psychological schizothemia of the East and – to be more precise – of the «Russian soul» stands in contrast with an inherently Western integrative slant: an inclination towards reconciling the extremes. An example of such an «integration process» is the simultaneous «scientization» of philosophy, and the «philosophization» of science. The scientization of science is manifested by «philosophemata» (individual philosophical systems) come to be replaced by more and more universal theories. The philosophization of science is demonstrated by the fact that even mathematical study of nature, among others, starts to be haunted by «historism» and it is no longer inappropriate to speak in the context of the rule of science of «styles» specific to its historical phases.

What proved to be important for aesthetics was a transparent definition of a "literary work of art", provided by Manfred Kridl.

He recognized a literary work of art as such that refers to a fictional world – a work in which the key function of language is to create a world – not to communicate thoughts, as is the case with scientific or colloquial language. He also formulated an anti-psychological postulate in order to the theory of literature should investigate its objects – *scil.* literary works of art – with the use of an integrally literary method (as Czeżowski put it), which means that it should consider all the properties and components of a given work of art "from the literary point of view" [Kridl 1936: 151] – only in relation to its entirety.

Józef Zajkowski made a certain step forward in the field of semiotics.

An advocate of the postulate of reducing all meaningful sentences to sentences about things, he differentiated between understanding somebody (*scil.* man) and understanding something (words in particular), and provided a reistic explication of both the types of understanding. Zajkowski claimed that "to understand somebody means as much as to predict how this person would behave" [Zajkowski 1936: 22], whereas "to understand the sense, content, and meaning of an object is to understand what these

objects indicate" [Zajkowski 1936: 40]. He also consciously accepted one of the controversial consequences of reism, namely that:

> The meaning of words is different each and every time, depending on who says about what, when and under what circumstances [Zajkowski 1936: 33].

Communication is possible, but not due to IDENTITY – because identity never takes place – but due to SIMILARITY of these individual senses. Thus, expecting its «completeness» is pointless.

Eventually, what also carries significance for methodology is setting a clear line between philosophy (and theory, in more general terms) and ideology by Ludwik Fryde.

He grounded this delimitation in the fact that philosophy regards «theoretical» sentences as appropriate whereas ideology – «ideological» sentences. Theoretical sentences are pragmatically determined – *i.e.* relative to the sender, the receiver, and conditions of utterance – prohibitions and imperatives. They usually come in the form of concise – and, thus, metaphysical – slogans whose «truthfulness» boils down to their efficiency.

Fryde also employed a distinction between the empirical meaning of expressions (what they represent) and their psychological meaning (what they express) for the purpose of capturing the essence of the milestones in the history of literature (he justified the position of Adam Mickiewicz in Polish poetry by the fact that the author of *Ballads and Romances* managed to break down the primacy of the presentation function over expressive function).

6.Epilogue

6.1. Two *crescendos*

The philosophical work dynamics in Vilna was not evenly distributed between the world wars. There were two *crescendos*.

The first *crescendo* occurred in 1923-1927. The city was home to the highest number of scientists interested in philosophical issues (as many as 10 in 1926) and they published the highest amount of dissertations related directly to philosophy (5 in 1923 only).

The second *crescendo* started in 1936 and lasted – strikingly – for most part of the war. In the three-year period of 1936-1939 as many philosophical dissertations were published (*i.e.*, 15) as in the entire previous decade. Never have there been so many philosophers in Vilna as in the first months of the war.

The Vilna philosophers scattered around, but the local philosophical circle grew in number at the beginning of the war, admitting – for a short

or long run – the refugees from Warsaw, among others Ludwik Fryde, Janina Hosiassonówna-Lindenbaumowa, Adolf Lindenbaum, Antoni Pański, Stanisław Krystyn Zaremba.

Polish philosophy – and the entire Polish science – got deprived of official institutions and organizations at that time. Marian Zdziechowski forecast it a year before:

> A black cloud, thick with thunders, is rushing to us from the nearby East […]; what shall happen […] when we find ourselves one day in the grip of red terror [Zdziechowski 1939: 231]?

The grip was two-coloured: red and brown.

6.2. Disaster

On 15 December 1939, a few months after Vilna was handed over by the Russian invaders to Lithuanian authorities, the Poles – including the philosophers – were driven out from the University; the philosophical work in the city continued, however.

The Philosophical Seminar held their clandestine meetings: first (since January 1940) at Maria Renata Mayenowa's apartment, and then (since June 1941) – at Jadwiga and Wiktor Kordowicz's apartment.

Clandestine meetings of the Vilna Philosophical Society were also held in as many as 150 private homes (in 143 according to the testimony of Tadeusz Czeżowski; over 165 according to Henryk Elzenberg).

No publishing was allowed in the country, but numerous dissertations were written for prospective publication after the war or – where possible – for printing abroad.

The German invasion in 1941 brought the second wave of repressions – also physical ones. Following the subsequent takeover of Vilna by the Russians in 1944, Moscow decided to drive those survivors expelled from the University out from the city in 1939. The idea was – like a hundred years earlier – to deprive the Vilna Poles of the cultural elite, which would facilitate the russification and lithuanization process, as it unfortunately transpired years later.

The objective was accomplished. Out of the 34 people associated with philosophy who found themselves in Vilna at the beginning of the war, half of whom were subjected to persecution (prisons, camps, exile)[9] as many as

[9] Barbara Skarga spent ten years (1944-1954) in exile. Henryk Elzenberg recalled shortly after the expulsion from Vilna that Tadeusz Czeżowski "trained a perfect disciple during the war, an epistemologist. […] Unfortunately, he has been chopping wood in Kaluga since last summer". Unfortunately, it is unclear who was this "perfect disciple" of Czeżowski.

9 people vanished into thin air, were shot or died after being released from «places of isolation»; 3 people died of natural causes, and the same number voluntarily chose emigration.

The rest of the people fell victims to the so-called repatriations.

Polish philosophy at the Wilia ceased to exist again.

7. Annex. Leading representatives of the Vilna philosophical environment

• Michał Ambros

* 26.11.1891, Chlebowiec near Lvov – † 2.07.1984. Vilna University (below: VU) librarian (1928-1939), member of the Vilna Philosophical Society (below: VPhS).

• Stefan Błachowski

* 19.05.1889, Opawa – † 31.01.1962, Warsaw. Psychologist, guest lecturer at VU (1925-1933).

• Stefan Burhardt

* 18.12.1899, Vilna – † 6.12.1991, Toruń. Librarian in VU (1927-1934) and the State Wróblewskis' Library in Vilna (1934-1939).

• Ludwik Chmaj

* 15.02.1888, Głogów near Rzeszów – † 23.10.1959, Warsaw. Philosopher, lecturer of VU (1938-1939).

• Edward Csató

* 15.12.1915, Olszanica – † 27.04.1968, Toruń. Literary theoreticion, Tadeusz Czeżowski's student – during the war.

• Tadeusz Czeżowski

* 26.06.1889, Vienna – † 28.02.1981 Toruń. Philosopher, lecturer at USB (1923-1939), member of VPhS.

• Rev. Stanisław Domińczak

* 15.06.1880, Zdołbunów near Dubionka – † 5.09.1936, Paris. Philosopher, lecturer at USB (1925-1928).

• Rev. Mieczysław Dybowski

* 2.02.1885, Kamieniec Podolski – † 7.08.1975, Wągrowiec. Psychologist, lecturer at USB (1933-1935).

• Henryk Elzenberg

* 18.09.1887, Warsaw – † 6.04.1967, Toruń. Philosopher, lecturer at USB (1930-1939).

• Rev. Julian Eydziatowicz

* 1857, Grodno (?) – † 21.09.1939, Vilna. Parish priest in Vilna Kalwaria, student of philosophy at VU.

• Ludwik Fryde

* 6.04.1912, Łódź – † (after?) 20.03.1942, Zdzięcioł (or Nowogródek?). Literary theoretician, Henryk Elzenberg's student – during the war.

• Sawa Frydman (Seweryn Friedmann, Czesław Nowiński)

* 26.05.1907, Dzisna – † 10.05.1981, Warsaw. Jurisprudentist, lecturer at USB (1934-1939), member of VPhS.

• Roman Gierczyński

* 23.05.1880, Bochnia – † November (?) 1939, Korolewo near Sępólno. Teacher of the propaedeutics of philosophy in Vilna Sigismund Augustus Gymnasium (*ca.* 1920).

• Edward Hofman [Hoffman, Hoffmann]

* 1879 – † 15.02.1941, Vilna. Director of one of Vilna gymnasia, member of VPhS.

• Władysław Horodyski

* 30.01.1885, Przemyśl – † 28.01.1920, Vilna. Philosopher, lecturer at VU (1919-1920).

• Janina Hosiassonówna-Lindenbaumowa

* 6.12.1899, Warsaw – † April (?) 1942, Vilna. Philosopher, she stayed in Vilna during the war.

• Bogumił Jasinowski

* 26.03.1883, Warsaw – † 1969, Santiago de Chile. Philosopher, lecturer at USB (1931-1939).

• Michał Kapp

* (?) – † 12.08.1941, Vilna. Teacher of the propaedeutics of philosophy in Vilna gymnasia, member of VPhS.

• Rev. Michał Klepacz

* 23.07.1893, Warsaw – † 27.01.1967, Łódź. Theologian, lecturer at VU (1937-1939).

• Rev. Antoni Korcik

* 28.05.1892, Krasnystaw near Lublin – † 24.10.1969, Lublin. Philosopher, lecturer at UV (1933-1939).

• Manfred Kridl

* 11.10.1882, Lvov – † 4.02.1957, New York. Literary theoretician, lecturer of VU (1932-1939).

• Jerzy Lande

* 13.11.1886, Dorpat – † 10.12.1954, Cracow. Jurisprudentist, lecturer of VU (1921-1929).

• Adolf Lindenbaum

* 12.06.1904, Lvov – † after September(?) 1941, Ponary. Logician, he stayed in Vilna during the war.

• Wincenty Lutosławski

* 6.06.1863, Warsaw – † 17.04.1954, Cracow. Philosopher, lecturer at VU (1919-1928).

• Adam Gracjan Łysakowski

* 18.12.1895, Stanisławów – † 30.09.1952, Warsaw. Librarian at VU (1925-1929, 1930-1937), director of University Library (1937-1939), member of VPhS.

• Marian Massonius

* 1.01.1862, Kursk – † 20.07.1945, Vilna. Philosopher, lecturer of VU (1920-1939).

• Maria Renata Mayenowa

* 2.06.1910, Białystok – † 7.05.1988, Warsaw. Literary theoretician, Tadeusz Czeżowski's student – during the war.

• Stanisław Ossowski

* 22.05.1897, Lipno near Dobrzyń – † 7.11.1963, Warsaw. Student of philosophy at VU and teacher in Sigismund Augustus Gymnasium in Vilna (1919-1920).

• Antoni Pański

* 8.10.1894, Łódź – † April (?) 1942, Vilna. Statistician, he stayed in Vilna during the war.

• Rev. Leon Puciata

* 8.07.1884, Vilna – † 12.07.1944, Vilna. Theologian, lecturer at VU (1920-1939).

• Jan Rutski

* 1903, Vilna (?) – † after September (?) 1939. Statistician, employée of the Vilna Institute for Eastern Europe Research (1934-1939).

• Barbara Skarga

* 25.10.1919, Warsaw – † 18.09.2009, Olsztyn. Philosopher, Tadeusz Czeżowski's student – during the war.

• Wiktor Sukiennicki

* 25.07.1901, Aleksota near Kowno – † 10.04.1983, Stanford (USA). Jurisprudentist, lecturer at VA (1929-1939).

• Rev. Władysław Suszyński

* 22.01.1989, Janów near Sokółka – † 27.10.1968, Warsaw. Philsopher, lecturer at VU (1928-1939).

• Zygmunt Szulczyński

* 1897 – † 1967, Olsztyn (?). Member of VPhS.

• Włodzimierz Szyłkarski

* 15.01.1884, Birże – † 20.08.1960, Bonn. Philosopher, lecturer of VU (1919-1920).

• Władysław Tatarkiewicz

* 3.04.1886, Warsaw – † 4.04.1980, Warsaw. Philosopher, lecturer at VU (1919-1921).

• Józef Trzebiński

* 1.03.1867, Kozuby near Turek – † 31.08.1941, Vilna. Botanist, lecturer at VU (1923-1937), member of VPhS.

• Stanisław Trzebiński

* 14.09.1861, Popowce – † 25.06.1939, Vilna. Historian of medicine, lecturer at VU (1922-1939).

• Rev. Walenty Urmanowicz

* 27.02.1898, Nowa Wilejka – † 9.07.1969, Kołobrzeg. Philosopher, lecturer at VU(1930-1939).

• Wiesława Walicka-Woyczyńska [sister Benedykta]

* 16.02.1901, Kazań – † 26.05.1975, Warsaw. Philosopher, assistent at VU (1923-1933), teacher of propaedeutics of philosophy in Vilna gymnasia (1928-1931), member of VPhS.

• Benedykt Woyczyński

* 1895, Petersburg – † 5-35.1927, Vilna. Philosopher, assistent at VU (1921-1927).

• Bronisław Wróblewski

* 13.11.1888, Twer – † 26.08. 1941, Vilna. Jurisprudentist, lecturer at VU (1921-1939).

• Józef Zajkowski

* 16.07.1907, Starosielce near Białystok – † Winter (?) 1945, Germany (?). Jurisprudentist, lecturer at VU, member of VPhS.

• Stanisław Krystyn Zaremba

* 15.08.1903, Cracow – † 14.01.1990, Aberystwyth (Wales). Mathematician, he stayed in Vilna during the war.

• Bohdan Zawadzki

* 10.03.1902, Turbów near Berdyczów – † 22.09.1966, New York. Psychologist, lecturer at VU (1935-1939).

• Marian Zdziechowski

* 30.04.1861, Nowosiółki near Haków – † 5.10.1938, Vilna. Literary theoretician, lecturer at VU (1919-1932).

5. Polish philosophy in the years 1969-1989[10]

1. Time frame

This overview of a part of the 700-year history of the Polish philosophy covers two decades between 1969 and 1989. Thus set time frame is no coincidence.

The beginning of this period naturally marks a watershed in the history of the Polish philosophy of the 20th century: this time sees the departure of a generation of the finest pre-war Polish philosophers. Some died in the 1970s, others in the early 1980s, but most of them suspended all philosophical activity during this period, for instance: Kazimierz Ajdukiewicz (d. 1963), Roman Ingarden (d. 1970), Maria Ossowska (d. 1974), Andrzej Mostowski (d. 1975), Władysław Tatarkiewicz (d. 1980), Bolesław Sobociński (d. 1980), Tadeusz Czeżowski (d. 1981), Maria Kokoszyńska-Lutmanowa (d. 1981), Tadeusz Kotarbiński (d. 1981), Izydora Dąmbska (d. 1983), Alfred Tarski (d. 1983) and Bolesław Gawecki (d. 1984).

Roman Ingarden

Janina Kotarbińska

It should be noted that some of the philosophers published a kind of philosophical testament before they died. Ingarden, known for his intellectual conservatism, published a work devoted to responsibility [Ingarden 1983]. In her last book, Ossowska, the great lady of the Polish philosophy, discussed chivalric code [Ossowska 1973], having presented in her previous book a structured study of moral norms – for the first time in the history of meta-ethics [Ossowska 1970]. Perfection was the focus of attention of the book published in the 1970s by Władysław Tatarkiewicz [1976], an outstanding historian of philosophy, who was simultaneously putting finishing touches to the epilogue to his famous history of aesthetics. The essay on truth in science was the last work written by Czeżowski. A «practicality» handbook is the compilation of the last reflections of Kotarbiński, the father of praxeology [Kotarbiński 1972]. Janina Kotarbińska should be included in the list as well; in the period in question,

[10] The text is co-authored by M. Przełęcki.

Maria
Kokoszyńska-Lutmanowa

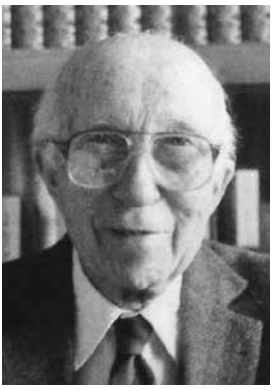
she published an insightful study on occasional expressions. The majority of those philosophers represented the Lvov-Warsaw School, founded by Kazimierz Twardowski, the key player of the pre-war Polish philosophy, which was analytical in its take on philosophical problems – similar to that of logical empiricism, yet free from its most radical assumptions. All the mentioned thinkers exerted a decisive influence on the Polish post–war philosophy, and their works – often read and reissued – found themselves on the compulsory reading list for philosophy students. However, the next generations gradually came to be heard in 1970s, which means that continuity was maintained in the development of the Polish philosophy of the period.

2. Analytical and non-analytical tendency

Two trends are seen in contemporary Polish philosophy: "analytical", and non-analytical trend, called pejoratively "synthetic philosophy" by Józef Maria Bocheński.

Some areas of the analytical trend overlap in many respects with Anglo-Saxon analytical philosophy, but it evidently refers to the tradition of the Lvov-Warsaw School whose most distinctive feature was – despite diversified individual interests and tastes of its representatives – an attitude of overall anti-irrationalism. No matter the subject of the investigation pursued by the School's representatives, all of them tried to observe the norms of rational philosophical discourse (based on the scientific reasoning model). This is why special attention was given to the concepts they used, the propositions and philosophical arguments they put forward: some in a more formal fashion (Łukasiewicz), others quite informally (Tatarkiewicz).

Bolesław Sobociński



Stefan Swieżawski

As far as non-analytical trends are concerned, it might be difficult to fit them all into one category, as they represent diversified and many a time entirely separate ways of exercising philosophy. Most of them stand apart from the analytical approach by questioning the validity of scientific reasoning as the model for philosophical investigation, and refer to specific philosophical methods – such as phenomenology and hermeneutics [Siemek 1982]. Those approaches, grounded in many respects in our own tradition, remained under a strong influence of some of the «trendy» tendencies in philosophy, known under an unfortunate name of "continental".

Jerzy Kalinowski

Roman Suszko

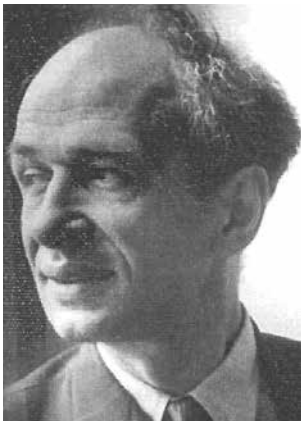
We shall not introduce those diversified TRENDS in Polish philosophy in 1969-1989: our intention is to provide the general outlines of the main features of the specific DOMAINS of philosophy exercised in Poland during that period of time.

3. Logic

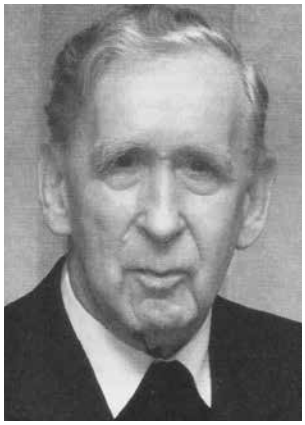
Let us begin with logic – a discipline that has always occupied a privileged position in modern Polish philosophy. It is true that since World War II, and present days in particular, logic has lost its predominant position it held between the world wars. It can be attributed to both external and internal factors. The very process of development of this branch of philosophy can be indicated as one of internal factors. A sudden and dramatic flourishing of mathematical logic over the past decades resulted in its separation from philosophy. This highly specialized and complex investigation evolved into one of the basic disciplines of mathematics rather than philosophy, and has become an area of expertize of mathematicians rather than philosophers.

Karol Wojtyła
(John Paul II, pope)

The study of logic pursued by philosophers is usually focused on logical systems representing the "philosophical logic". However, what also merits attention is certain achievements of the Polish philosophers in the field of mathematical logic in the period under discussion. Most of them fit within the framework of metalogic. Various systems of classical [Wójcicki 1988] and non-classical logic [Rasiowa 1974] are subjected to unified algebraic analysis. Some metalogical issues related to predicate logic, *e.g.* the issue of coherence [Pogorzelski 1969; Borkowski 1970], also come under in-depth study. Polish philosophers are interested in the types of logic widely discussed abroad and in the those representing the tradition of distinctly domestic origin. The first type of issues includes, for instance, the study of systems of deontic logic, related primarily to its most widely known paradoxes and the ways of their elimination [Ziemba 1969 and 1983; Ziemba & Ziembiński 1973; Kalinowski 1972; Suchoń 1983]; in recent years Polish philosophers created and investigated other systems as well – *e.g.*, modal logic [Perzanowski 1989], relevant logic [Tokarz 1980], temporal logic, which is the logic of change [Kiczuk 1984], erotetic logic [Wejland 1977; Kubiński 1971; Leszko 1980 and 1983] and formal theories such as the decision theory [Szaniawski 1973] and inductive logic [Mortimer 1982]. As regards inherently Polish systems of logic, investigations concerned the calculus by Łukasiewicz [Wójcicki & Malinowski, ed. 1977], Leśniewski's systems [Srzednicki, Rickey & Czelakowski, ed. 1984] and non-Fregean logic [Suszko 1973; Omyła 1986]. What is worth mentioning is several attempts at developing a logical theory of properties [Żabski 1988], indeterminate notions [Orłowska 1973], expressions which "lose their meaning" [Piróg-Rzepecka 1977], or the logic of rejection (Łukasiewicz), a counterbalance to the standard logic of acceptance [Wybraniec-Skardowska & Bryll 1969].



Zygmunt Ziembiński



Mieczysław A. Krąpiec

Although logic in Poland no longer occupies such a prestigious position as in the interwar period, it still greatly affects other areas of philosophy, in particular semiotics

and methodology, which are recognized as the fields of broadly defined logic in the Polish tradition. This explains their relatively high level in logic.

Andrzej Grzegorczyk

Jerzy Pelc

4. Semiotics

Semiotics studies cover a wide range of problems, and are carried out on different levels: syntactic, semantic and pragmatic. They also differ in the overall methods of study.

A formal approach gave rise to the formal theories of languages, whose formalization is considered to be more or less standardized [Stanosz & Nowaczyk 1976; Hiż 1978; Nowakowska 1980].

Natural language was the key area of study and the role of pragmatics in developing its semiotic theory was the most hotly debated issue. Pragmatics is credited with essential role by some researchers: according to the functional concept of meaning [Pelc 1971], all syntactic and semantic functions should be relativized in the pragmatic context. Others [Stanosz 1985] propose an intralinguistic theory of meaning, disregarding all pragmatic aspects (one could say – in the zero pragmatic context). Yet others [Koj 1971] try to reconstruct the entire semantics using pragmatic apparatus.

Apart from the general controversy concerning the position of pragmatics in semantics, Polish scientists analyse purely pragmatic concepts, especially the concept of assertion [Majdański 1974; Patryas 1987]. The logical theory of beliefs characterizes and systematizes different types of beliefs corresponding to different types of cognition [Marciszewski 1972].

Another thorny issue is the role of logic in the semiotic theory of natural language, in particular the question of the significance of logical constants in this language. It is Ajdukiewicz who provokes a discussion on this with his concept of the meaning of implication. The period in question sees also the development of categorial grammar [Wybraniec-Skardowska 1985; Marciszewski, Buszkowski & Benthem, ed. 1988]. What also captures the attention of Polish semioticians is the role of models in linguistics as well as the semantics of fictional discourse. Philosophy oriented on linguistics

Tadeusz Pawłowski

[Wierzbicka 1969; Grodziński 1979; Gawroński 1984] is represented as well. Notice is given to the fact that certain philosophical questions could be investigated more thoroughly by translating them from the language of philosophy into the language of linguistics [Rosnerowa 1975].

5. Methodology, philosophy of science and epistemology

From among the disciplines of logic in a broader sense, it is methodology (or "the philosophy of science" – as it is customarily called in the Anglo-Saxon philosophy) that seems to be attracting the most attention of the Polish philosophers. It used to be the area of specialization of the Lvov-Warsaw School; now it resonates closely with the works conducted abroad; its current status in Poland perfectly reflects the main trends and the greatest controversies which arise in the field world-wide. It takes on various forms, depending on who works on it – logicians, epistemologists or researchers who pursue the so-called exact sciences.

Logical methodology offers insight – with maximum formal precision and maximum simplification at the same time – into the structure of scientific theories, most often using the conceptual frameworks of the model theory [Przełęcki 1969; Nowaczyk 1985]. Its representatives assume that only thorough investigation into the adequacy of the formal model provide the grounds for evaluating the philosophical premises it carries [Wójcicki 1974; Przełęcki, Szaniawski & Wójcicki, ed. 1976; Przełęcki & Wójcicki, ed. 1976]. Far less exact methodological analyses performed by epistemologists and scientists appear to be much closer to the everyday academic practice. The latter in particular try to first of all detect the presuppositions which operate in scientific practice. Heated discussions look at the hypotheses based on which nature is described by means of the language of mathematics and has its separate elementary level, and based on which the procedures of idealization and unification apply to it [Heller, Michalik & Życiński, ed. 1990].

Attention should be drawn to the fact that all the issues of prime importance in the period under discussion are reflected in the Polish philosophy of science – along with all the key solutions.

Some of the above discussions refer to the dispute between positivist and anti-positivist vision of science and to the related opposition between

realistic and instrumentalistic interpretation of scientific theories [Mejbaum 1983]. Reductionism is under ongoing investigation [Majewski 1974]: an extreme standpoint – according to which all empirical knowledge can be reduced to the laws of physics, or, in other words, that there is no such phenomenon which could be adequately described without reference to these laws – is rejected in favour of an idea according to which there are phenomena in every empirical science which can be explained exclusively by the laws of physics; there are also such empirical interpretations of mathematical equations which do not refer to physical quantities.

Klemens Szaniawski

Bogusław Wolniewicz

The most considerable controversies pertain to the development of science and the dynamics of theory creation [Tuchańska 1982], with distinguishing between the contexts of scientific justification and discovery, or internal and external factors which drive the development of science, with meaning variation and the opposition between continuity and disproportion in replacing one scientific theory with another, with the role of adequacy principle in physical theories, *etc.* Polish authors proposed various solutions to these issues; some are more or less «traditional» [Krajewski 1977; Pietruska-Madej 1980], others are more or less «revolutionary» [Zamiara 1974]. One of those concepts emphasizes the importance of idealization in science and the differentiation between material and immaterial factors in scientific laws [Patryas 1979; Nowak (the younger) 1980; Tuchańska 1980].

Methodological programs came into existence and went in competition with both the theory of idealization and formal methodology [Misiek 1979]. Epistemology referred to as "historical" is a carefully developed holistic conception according to which various knowledge systems – some of them incompatible with one another – can function in the awareness of a given society [Kmita 1980]. This is why every solution to an epistemological problem, for example, the issue of the importance of knowledge, should

be preceded with developing a general theory of culture [Kmita 1985]. Methodological principles applicable in science are in particular relative, given the changeable ideals of scientific reasoning. Some specialists try to fully reconstruct the methods of justification used in contemporary science [Such 1975].

Apart from the general methodology of science, important progress was made in some of its branches – the methodology of mathematics [Lubomirski 1983], physics [Rayski 1978; Giedymin 1982; Kałuszyńska 1983; Tempczyk 1986], chemistry [Pietruska-Madej 1975], biology [Lenartowicz 1975], linguistics [Grucza 1983], history [Schaff 1970; Topolski 1973], sociology [Nowak (the elder) 1976], jurisprudence [Ziembiński 1972; Woleński 1972 and 1980b], and even political sciences [Srzednicki 1976].

Meta-philosophy [Kraszewski 1972; Kalinowski 1981] is one of the key areas of focus in methodological study. In particular the successors of Łukasiewicz analyse the possibility of reinterpreting classical philosophical problems using the language of contemporary logic and the distinctive features of methodologies in various philosophical disciplines [Perzanowski & Woleński, ed. 1988]. Some philosophers defend the thesis according to which the philosophy of science can be pursued on condition that paraphrase method put forward by Ajdukiewicz is applied.

What should also be given attention is certain methodology ideas pertaining to the humanities. Three different social science concepts clash with one another: formalistic is preferred by the logicians [Szaniawski, ed. 1977]; empirical follows the model of natural sciences [Malewski 1975; Sułek 1979]; humanistic is based on a distinctly humanistic interpretation [Kmita 1971; Mokrzycki 1970 and 1980; Z. Krasnodębski 1986]. Some researchers [Pawłowski 1978] analyse the operations of concept creation in humanities and social sciences, in particular explication and the so-called persuasive definition. Also praxeology should be named at this point

Leon Koj

Witold Marciszewski

– thus termed by its founder Tadeusz Kotarbiński – which generalizes methodology to some extent, and which refers to the methods used for any domains of human activity, one of them being mental activity. This period witnesses the publication of a number of crucial works in the field [Piłejko 1976; Frąckiewicz 1980; Pszczołowski 1982; Rudniański 1976; Gasparski & Pszczołowski, ed. 1983].

The borderline between the philosophy of science [Krajewski, ed. 1982; Nowaczyk, ed. 1987], the science of science [Walentynowicz, ed. 1982] and epistemology seems blurred. Some analyses conducted by the philosophers of science address general epistemological questions such as rationality, which is investigated in depth by Polish philosophers [Gogacz 1969; Skolimowski 1979; Skarga 1983; Motycka 1986] and whose analysis raises the question about the boundaries of science as such, especially the boundaries of empirical sciences, which encompasses also the problem of moral experience [Styczeń 1972].

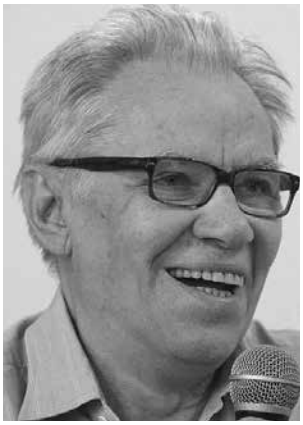
What also comes to the fore is the issue of truth and some related cognitive values – whose investigation is linked with the analyses of different concepts of truth and the defence of the classical concept [Chwedeńczuk 1984]. Two other epistemological questions – which have been investigated in recent years – should be brought up at this point, namely the evaluation of the role of a personal subject in reasoning [Rainko 1981], and the analysis of so-called common sense, which highlights its heterogeneous nature and logically problematic status [Teresa Hołówka 1986; Marody 1987]. Also the publication of original textbooks on epistemology [Stępień 1971; Jadacki 1985], which – as is the case with the works of Tadeusz Kotarbiński or Roman Ingarden – explore the foundations of epistemology [Ingarden 1971] can also be considered as a certain contribution to this discipline.

Józef Tischner

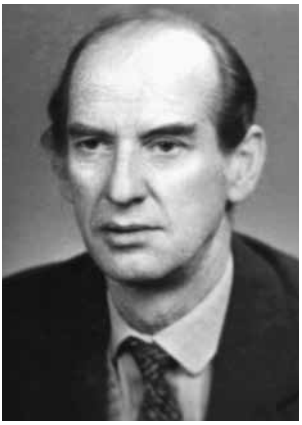
Antoni B. Stępień

6. Ontology

Ontological publications from the two decades: 1969-1989



Ryszard Wójcicki



Jerzy Kmita

– are characterized by a versatility of theoretical approaches and philosophical standpoints which are adopted.

To put it simply, there are three general types of ontological theories proposed by the Polish philosophers: formal, scientific, and metaphysical. Some logicians grant the status of formal ontology to various modal systems [Perzanowski & Woleński, ed. 1988], yet it is the ontology of situations which seems to be the most original type [Wolniewicz 1985]; it is understood by its author as the reconstruction and generalization of the ontology of Wittgenstein's *Tractatus* [Wittgenstein 1922]. It defines situations as fragments of reality which verify sentences and impose the following conditions: the minimum situation verifying a given sentence is identical with its semantic correlate, *i.e.*, with the situation presented by the sentence; if two sentences are exactly equivalent, then their semantic correlates are identical; the conjunction correlate is the mereological sum of the correlates of its constituent sentences. The most intriguing proposition of this ontology states that a false sentence also relates to a certain semantic correlate, mainly to a non-existent situation.

Scientific ontologies are theories aimed at characterizing and structuring ontological framework presupposed by contemporary science – physics, in particular. The most transparent ontology is that of point eventism [Augustynek 1970, 1975 and 1979]. Other ontological frameworks of the physical world have been put forward and discussed as well. What is worth noting is the attempt at defining the criteria of the existence of objects – addressed by empirical theories [Czarnocka 1986], and the analyses of the nature of fictional objects [Paśniczek 1984].

The representatives of specific sort of ontologies are «metaphysical» ones, which are based on particular philosophical principles whose main types – proposed by Ingarden's disciples [Stępień 1976] – could be described as "phenomenological" (in a very broad sense of the term).

7. Anthropology and axiology, ethics and aesthetics

Ingarden can be also seen as one of the forerunners of "philosophical anthropology" pursued in Poland and known as being «burdened with values». Values play key role in anthropological concepts; hence the close links between philosophical anthropology and general axiology.

The greatest difference between specific anthropological concepts proposed by the Polish philosophers in the period under investigation lies in separate value systems. One of the said differences, discussed within the framework of the so-called problem of humanism, separates anthropological «humanist» or «anthropocentric» concepts [Cackowski 1981; Kuczyński 1981] from the concepts defined as «theistic» or «theocentric» [Granat 1976; Gogacz 1985]. According to an evocative description provided by Leszek Kołakowski, humanistic concepts reflect the Promethean vision of man, whereas theistic – Manichean vision. (Kołakowski himself highlights considerable social risks inherent in the Promethean attitude.) The philosophical thought focused on technical civilization [Szymański 1988] falls within the anthropological trend. It brings up the question of how to protect people from automatization, how to help them regain emotional balance in their lives, and what is the «historiosophical» mechanism which would explain the history of civilization [Bańka 1976 and 1986-1987]. These trends of philosophical thought are related to a greater or lesser extent to anthropology and broadly perceived ethics.

Ethics is a domain of axiology which has always occupied a privileged position in the Polish philosophy. Prominent representatives of the Lvov-Warsaw School such as Maria Ossowska, Tadeusz Czeżowski and Władysław Tatarkiewicz should be mentioned at this point. What cannot go unnoticed in the time period under discussion is a dramatic shift in theory compared with the pre-war times. After twenty years of the domination of meta-ethics the post-war period sees the problems of normative ethics coming to the force [H. Jankowski 1977; Szczepański 1978; Grzegorczyk 1986; Szawarski, ed. 1987]. Traditional moral systems enjoy a renaissance of interest, in particular the system of «uncodified» morality [Kałuszyński 1980]. Of course meta-ethics is not thrown into oblivion [Fritzhand 1982;

Barbara Stanosz

Adam Nowaczyk

Michał Heller

Styczeń 1984], yet it seems to be more biased to cognitivism in all its forms – in opposition to previous emotive tendencies.

It appears, nevertheless, that moral philosophy is centred on normative issues – generally speaking on the dilemmas of life in a modern world – and on the current situation of Poland and, in particular, on the risks Poland is faced with.

What falls within the first category is moral problems brought by the development of contemporary science – the achievements and perspectives of biology, medicine and technology – in the field of genetic engineering and transplants, for example. These issues have been investigated from the angles of various philosophical standpoints [Sokołowska & Hołówka, Jacek & Ostrowska, ed. 1976; Tokarczyk 1984; Szawarski, ed. 1987].

The second category encompasses the problems pertaining to the elimination of social conflicts and the ways of obtaining social consent. The investigation of these problems and their discussions revolve around a number of key ideas such as dialogue, tolerance and *non-violence*.

The «philosophy of dialogue» or else the «philosophy of meeting» is vaguely framed by many philosophers [Nowicki, ed. 1984; Bukowski 1987; Tischner 1982 *etc.*]. The issues of negative cooperation [Rudniański 1983] – in the language of praxeology – are investigated much more thoroughly. The dispute over tolerance – both in everyday life and in science – concerned the actual meaning of the term "tolerance" and its necessary restrictions [Promieńska 1987]. The issue is closely connected with the idea of abstention from violence – which is why attempts are made at its explication within the framework of the moral strategy of *non-violence* [Grzegorczyk 1979].

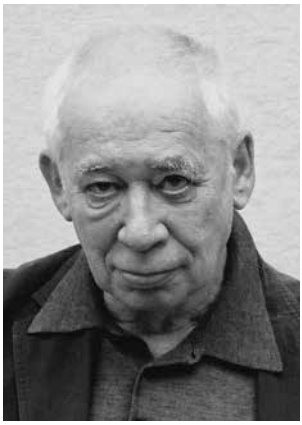
As a rule, the works of contemporary Polish moralists offer a wide variety of ethical points of view. We have the supporters of ethical relativism, advocating the utilitarian principle of equal consideration of interests [Jacek Hołówka 1981]. An independent (from philosophical assumptions) ethical system presented by Tadeusz Kotarbiński at the end of the 1930s comes

under criticism [Styczeń 1980]. Interestingly, we can observe a huge surge in the popularity of personalism, initially originating from a Catholic ideology which highlights the dignity of man [Gogacz 1974; from a quite different point of view – Jaroszewski 1980], and from the activism intrinsic to the communist ideology, which stresses the so-called dignity of work [Szewczyk 1971; Lipiec 1972; Kuczyński 1976; Cackowski 1979; from a quite different point of view – Wojtyła 1969; Tischner 1981 and 1985]. The issue of dignity is subjected to more analytical study – along with the issue of authority [Bocheński 1974]. A hypothesis is put forward, among others, that the best way to capture human nature is to analyse the effects of human actions, which is favoured by the supporters of both the trends [Krąpiec 1974; from a quite different point of view – Nowicki 1974].

Elżbieta Pietruska-Madej

A similar variety of interests, investigation methods and obtained results is found in another area of axiology, namely in aesthetics. Some of the works of Tatarkiewicz, including his monumental *Historia estetyki* provides solid grounds for future investigation [Tatarkiewicz 1970]. The same applies to the intellectual oeuvre of Ingarden [1985].

Certain general aesthetic concepts emerge in the period in question – such as the concept of empirically-oriented aesthetics [Gołaszewska 1986], with the chief importance of the category of aesthetic situation [Gołaszewska 1986]; this conception says that aesthetic value is the function of an aesthetic object and the experience of the recipient [Gołaszewska 1970]. Other concepts are aimed at capturing other dimensions of aesthetic phenomena, such as the methods of their identification and interpretation [Ławniczak 1975 and 1983], as well as explanation [Kostyrko 1975 and 1977]. The eternal conflict between subjectivism and objectivism flares up again, with the objective standpoint defended by Władysław Stróżewski [1983] for example, and aesthetically judgements – by Tadeusz Pawłowski [1987]. A distinction is being drawn between particular meanings of these terms; original solutions are



Jan Woleński

Marek Siemek

being put forward regarding this fundamental aesthetic issue. The Polish philosophers are also interested in the issues connected with the emergence of certain types of avant-garde art («new arts», «anti-arts», «happening», *etc.*). Some of the publications of the period show a trend towards expanding the framework of traditional aesthetic categories – to embrace the aesthetic phenomena never encountered before [Morawski 1985; Gołaszewska 1984; Pawłowski 1988]. The peak of this trend coincides with the emergence of the aesthetics of reality [Gołaszewska 1984], or else a kind of pan-aesthetics which claims that the entire nature should be perceived an object of aesthetic investigation.

8. The history of philosophy

History of philosophy is one of the most of commonly practiced philosophy-related disciplines in Poland. In 1969-1989 the number of publications on the history of philosophy (*ca.* 400, a third of this number was devoted to the history of Polish philosophy) nearly reached the number of other philosophical publications (more than 500). (Of course reprints and translations of foreign authors are disregarded in both groups.)

The reasons are diverse, both external and internal.

One of the external factors seems to have its source in the times following World War II (to be more precise, in the 1950s), that is, in the time of ideological rigorism, when it was not easy to present the philosophical public with any views which were clearly incompatible with the communist (perhaps with the exception of the beliefs stemming from the catholic doctrine). Therefore, it was more convenient to work on the history of philosophy than on philosophy itself, which left its mark on the periods of time to come.

Among internal factors favourable to historical studies, we should point out one which is relatively recent, that is the «hermeneutic» concept of philosophy, which provoked a barrage of criticism from its opponents. This concept claimed that historical studies – which consist in the interpretation of the existing philosophical texts – represent a specific way of pursuing philosophy as such [Tischner 1975; Krzysztof Michalski 1978]. Since every vision of the world is complementary to another vision, a philosopher

should think «dialogically», that is build a bridge between his point of view and that of other people.

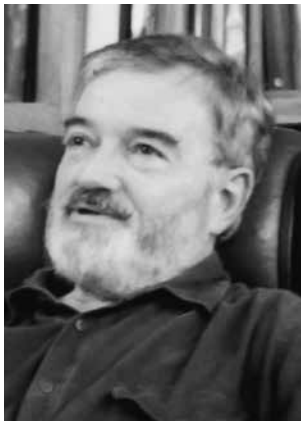
Historical studies on tradition were predominant – with various, often conflicting viewpoints in their background: catholic [Swieżawski 1975-1987; Kuksewicz 1973; Bejze, ed. 1976; Bocheński 1978] and communist [Kołakowski 1978; Sikora 1982; Kuderowicz 1985].

Much attention was paid to Polish philosophy. Many detailed texts emerged [Domański *et al.* ed. 1978-1980; Ogonowski & Walicki, ed. 1983-1989], including those devoted to the history of Polish medieval philosophy [Kuksewicz, ed. 1975-1988] and the Polish thought of the 19th century [Walicki & Skarga, ed. 1973-1977].

The philosophical analysis of the Warsaw-Lvov School grew to become of momentous importance [Woleński 1985]. The publication of the School's monograph in Poland at the end of the period under discussion – as well as the publication of works complementary to the said monography [Hempoliński, ed. 1987] – is a sign of the time in every respect, since an extensive book addressing the same subject matter was also published abroad at the beginning of that period [Skolimowski 1967].

9. Final remarks

The most conspicuous feature of the Polish philosophy of 1969-1989 is its diversity. The works published at that time present extremely different PERSPECTIVES on the general philosophical *credo*, the subject of investigation and various research methodologies – as well as totally contrasting DIAGNOSES, it they could be put this way. It was related without a doubt to the fact that the ideological pressure exerted on the philosophical circles by the political circles was almost completely relieved at that time, although certain «preferences» remained to be seen. The communist tradition promoted by less oppressive regime could be simply ignored; those referring



Leszek Nowak

Józef Życiński

Jacek Paśniczek

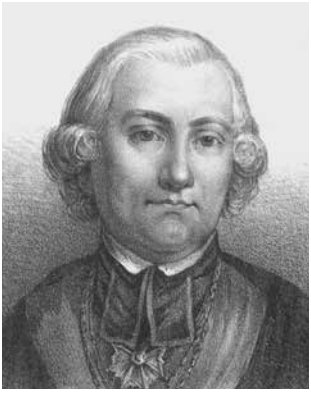
for various reasons to this tradition were free to interpret it without laying themselves open to be labelled "revisionists" (as had been the case before). A similar evolution is observed in other philosophical traditions in Poland, from which the concept of «orthodoxy» was finally erased. This «ideological» liberalism entailed other effects, paradoxically unwelcome by philosophy. Separate philosophical trends began to coexist in parallel without straying into their respective «territories» (perhaps with the exception of axiology) and dodging any public discussion or polemics, which would otherwise offer an opportunity for criticizing the view of the opponents and for defending one's own position. Such a «peaceful coexistence» of different philosophical schools was the result of indifference rather than tolerance and sometimes – even sheer ignorance.

It should be emphasized that two separate styles of reflection still coexist in contemporary Polish philosophy. One represents what can be called "literary philosophy", strongly represented in Poland. The representatives of the other style are more inclined to what could be called "logical analysis". Sometimes, the same issue – *e.g.* theodicy – is the subject of interest of philosophers representing both the styles [*cf.* Kołakowski 1973 and 1983, as well as Kasia 1977 from one side, and Nieznański 1980, from another].

These are two extremes which continue to be the hallmarks of the most recent Polish philosophy.

Part 2
CORYPHEE

1. Hugo Kołłątaj



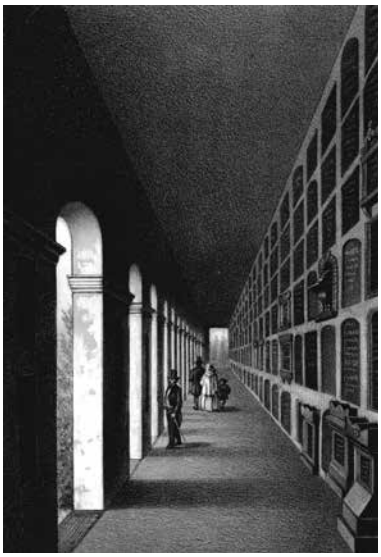
Misuse of a given word must always be the effect
of bad comprehension or bad knowledge of the words
with which we want to express our thoughts.

[Kołłątaj 1809: 169]

1. Life

Hugo Kołłątaj (1.04.1750, Dederkały Wielkie near Krzemieniec, Volhynia – 28.02.1812, Warsaw) was born into the landowning family of arms-bearing Kotwica's from the Grand Duchy of Lithuania and using the count appellation Sztumberg (indicative of their probably German origin). His family moved to Niecisławice near Sandomierz when he was a child. He studied at the University of Cracow (1761-1768), where he was probably granted doctorate in philosophy; then he took up study in Vienna, Naples and Rome, completed (according to some sources) with the award of a doctorate in theology and canonical law. He became a priest and a canon priest in Cracow (1775) and got deprived of canonry after the fall of the Kościuszko Uprising, which was given back to him again in the times of the Duchy of Warsaw.

Initially, Kołłątaj's main area of public activity was the reform of education. He implemented a thorough reform of the Cracow University (1777-1780) as one of the initiators and the most active members of the National Education Commission (1773-1794). After the Cracow University was turned into the Main Crown School, Kołłątaj took the post of its Vice-Chancellor (1783-1786). Later, he participated in organizing the Gymnasium in Volhynia (1805), turned into the Krzemieniec Lyceum.



The Powązki Columbarium, Warsaw – a place of Kołłątaj's burial (a view dated from the 19th century)

At the end of his life, he was granted full membership in the Warsaw Society of Friends of Science (1809).

Another domain of Kołłątaj's public activity was politics. He held particularly important public offices: the Referendary of Lithuania (since 1786), the Crown Deputy Chancellor (1791-1794) and the Minister of the Treasury in the Supreme National Council during the Kościuszko Uprising (1794), which he co-organized.

In Warsaw (where he moved in 1779), he attracted a group of publicists (including Franciszek Salezy Jezierski, Franciszek Zabłocki and Franciszek Ksawery Dmochowski), referred to by its opponents as "Kuźnica Kołłątajowska" ["Kołłątaj's Forge"] (1789-1792). He was the chief co-author of the *Constitution of May 3rd* (1791).

Kołłątaj cooperated with the informal Patriotic Party (1788-1792). He initiated the first political party in the Polish Commonwealth – the Assembly of Friends of the Government Constitution (1791). After the collapse of the Commonwealth, he joined the secret Society of Polish Republicans (1793-1801) and cooperated with the Duchy Government Commission of the Duchy of Warsaw (1807).

Kołłątaj was forced to leave Poland three times: for the first time when he fled to Saxony and stayed in Leipzig and Dresden after the victory of the Targowica Confederation (1792); for the second time he tried to enter Hungary after the Russians took hold of Prague (1794), but was arrested in Jarosław and kept in prison (in the fortress of Josephstadt in Bohemia (1795-1798), and then in Olomouc in Moravia (1798-1802); for the third time – following the French victories in the war with Prussia the Russians – he was deported from the Polish territories by the Russians and imprisoned in Moscow (1807-1809).

Kołłątaj died as a result of arthritis, progressively developing during in imprisonment in Austria. He was buried in the Powązki Columbarium, Warsaw.

He received the two highest Polish orders: the Order of Saint Stanislaus (1786) and the Order of White Eagle (1791).

2. Writings

Hugo Kołłątaj's main physical work is unfinished *Porządek fizyczno-moralny* [Kołłątaj 1810] and related (unpublished during his lifetime) *Pomysły* to the work *Porządek fizyczno-moralny* [Kołłątaj 1802a], and the fragments of the French version of *Les droits et les devoir de l'homme* [Kołłątaj 1812]. Minor philosophical statements are also contained other Kołłątaj's texts: educational, political and historical – both those published such as *Ratio studiorum pro Facultate Philosophica Universitatis Cracoviensis* [Kołłątaj 1778] and *Prawo polityczne narodu polskiego* [Kołłątaj 1790], as well as works (manuscripts) unpublished during his lifetime, *e.g.*: *Rozbiór krytyczny zasad historii początkowej wszystkich ludów* [Kołłątaj 1802b].

3. Views

The focus of Kołłątaj's philosophical interest was on ethics and the philosophy of law. He touched upon ontological and epistemological issues only insofar as their solutions constituted the horizon of practical philosophy. He wrote:

> True philosophy is the resultant of all arts and sciences abilities; it begins where they end and cannot be understood as anything other than the fruit of the ultimate maturity of the human mind [Kołłątaj 1802b: 587].

Kołłątaj considered logic and metaphysics to be the main domains of philosophy.

> In logic, we first investigate how ideas are formed in our minds, which means how we arrive at the cognition of objects; secondly – how we judge objects and thirdly – how we communicate our knowledge to others [Kołłątaj 1802a: 439].
>
> A professor of logic will use the power of reasoning and analysis, thus acting in line with good and decent thinking, feeding the mind throughout the entire process of cognition with the most fundamental laws to provide him with guidance, to sweep away superstition and other obstacles on the road to decent thinking, to act with ease in every art and ability, and to lay the foundations for a good taste.
>
> In metaphysics, which embraces the elements of ontology, psychology and natural theology, elucidates those general truths which give ground for all sciences [Kołłątaj 1778: 186].

3.1. Analytical method

Kołłątaj recommended and used the analytical method for both scientific study and the presentation of its results and teaching philosophy.

3.1.1. Analysis in scientific study

Analytical method in scientific study consists in using simple, indisputable and widely known facts as its point of departure.

> Analytical method must be applied in all the study of our subject matter, which means we must start with investigating the things we know to explore the things we do not know; this is the most reliable method that shall never lead us astray – if followed closely. In effect our study should start with the most common objects which are known to all and which are beyond any doubt.
>
> […] When we gradually come to studying things that we do not yet know, it is necessary that our discovery is based on the senses, not imagination [Kołłątaj 1812: 23].

Sometimes these simple facts must be extracted from the tangle of ideas and doctrines.

> To keep away from errors and easy speculation, [in historical research] analytical course has to be taken and pursued doggedly. This course of analysis dismisses any prior systems; we must wait with patience for what will emerge after time-consuming disentanglement of this intricate and jumbled items of information [Kołłątaj 1802b: 73].

3.1.2. Analysis in the presentation of results

In presenting the results of studies, the analytical method requires, *i.a.*, the use of appropriate language.

> The greater our desire to clearly elucidate ideas through speech, the greater the attention we should give to words which are the sole interpreters of our thoughts. All the words, be them simple or complex, have been introduced into the speech for a purpose. Each represents a different mental image; only inattention mistakes one for another. The misuse of words must always be the result of misunderstanding or poor command of the language we want to use to convey our thoughts; and if it is easy to lose our way with the language we are best familiar with, the greater the chances of the same happening with the words taken from foreign speech, all the more if we adapt and use them without consideration [Kołłątaj 1809: 169].

Some of the mistakes caused by the misuse of the language include reification, personification, and substantialization.

> The abuse [of philosophical terms and – more broadly speaking – scientific terms] usually occurs while explaining an abstract overall and general concept; when we envisage, assume, suppose something – then to convey more that the name

encompasses – means to say as much as if nothing was said; what happens many a time then is that we reify something that is not an object; we personify something that is not a person; we call "substance" something that is only a quality or property; we create a being out of an overall term referring to an endless number of separate beings; we create many terms out of a single being or a thing – by way of pure abstraction [Kołłątaj 1812: 138].

Philosophy absorbs what is the plague of the language of politics: persuasiveness, in particular the negative charge carried by its expressions.

No words are unpleasant or unfair in their nature; any dispute in the law as to words and names is due to non-enlightenment [Kołłątaj 1790: 296].

Kołłątaj held that poor language is one of the principal causes of errors in philosophy, hence his postulation for the reform of the language.

When we think about the misfortunes brought upon the most famous nations by the mere pseudoscientific jargon used by metaphysics to clarify its vague speculations, and which is so often abused by attributing meanings to accepted words – the following would be with benefit to the entire humanity (1) a good scientific dictionary, strong philosophical and cognitive grammar – to attribute single meanings to words and to sentences […]; (2) a world-wide society for all nations, which would purge and amend the scientific jargon and make sure that it stays unspoilt or unobscured by new terms […]; (3) […] the boundaries of speculative philosophy – [which] should surrender all presumptions, hypotheses, suppositions, false opinions, images, […] [and] refrain from creating systems for itself without restricting itself to introducing general ideas and well perceived specific ideas, and without deducing general truths from specific truths [Kołłątaj 1812: 137-138].

3.1.3. Analysis in lectures

Analytical method in lecturing should consist in starting with simple things, which are easy to formulate clearly and precisely, only then to proceed gradually to more complex matters.

In […] the exercise of free philosophy, we should always seek the guidance of the most deep-seated sense of truth, not that of envy or a firmly rooted superstition. […] In teaching, there should be no option other than analysis, which is best-suited to entice students to learn with diligence. We should therefore choose these authors who take simple elements as their point of departure and proceed to more in-depth recesses of knowledge. This is the method of lecturing we should seek in authors, so that it would be a guide in explication – well-known to the teacher; extraordinary issues pertaining to particular disciplines shall come second to a clear and accurate definition of the matter [Kołłątaj 1778: 185].

3.1.4. Speculation

Kołłątaj contrasted analysis with speculation, namely creating systems based on poorly or ill-grounded hypotheses which are figments of imagination.

> [In research] I shall use […] a method free from any abstract speculations, because it is my intention to make this work accessible to all readers [Kołłątaj 1812: 9].
>
> It is better to confess to knowing less than to be lead astray by imagination, be it one's own or others' [Kołłątaj 1812: 16].
>
> Every supposition regarding physical objects and – all the more – metaphysical subtleties, is a common figment of imagination. But explicating the effects which support such a supposition, introducing countless observations referable to this single cause, lends it certainty and justification [Kołłątaj 1972: 194].
>
> There is no need to seek insight into the secrets of nature; all that we want to study is clear, obvious and tangible. What is more, […] it had been all known before we started our investigation. What we are left to do is to give thorough consideration to what we know, apply it in our investigation, draw correct conclusions – and we shall find what we have been looking for, or – as a matter of fact – what had already known before the study started [Kołłątaj 1812: 24].

Traditional scholastic disputes were an area of philosophical speculation, which Kołłątaj criticized fiercely.

> Where there is truth and clarity, there is no room for dispute; only imagination and ignorance invites such verbal fencing [*i.e.*,] endless arguments and academic disputes which are a clear proof of the lack of knowledge and madness [Kołłątaj 1810: 35-36].

> If possible, disputes should steer clear of those deplorable off-track scholastic ramblings, which the fruit of deficiency in education; answers should be devoid of unproductive distinction, but given in a clear and polished fashion [Kołłątaj 1778: 193].

3.2. Ontology

Kołłątaj's ontological views were as follows.

3.2.1. The laws of nature

The Universe – which is the entirety of existing objects – is governed by laws. The laws state fixed and necessary relationships between objects – namely regularities.

> All beings we come to know through senses are governed by permanent, unchangeable and necessary laws [Kołłątaj 1812: 13].

3.2.2. The principle of causality

One of the fundamental laws – is the principle of causality. It states that every being has a cause, and that this cause is different from its effect.

Since the world exists, its cause must exist as well.

> We reject coincidence as the most bizarre and absurd idea in the world [Kołłątaj 1812: 94].
>
> No being, all the more so the entire world, could not have come to life at the whim of fate; when everything we perceive with our senses remains to be perceived by way of its cause and its permanent, unchangeable and necessary laws [Kołłątaj 1810: 21].
>
> [These are] truths about [the cause]: first – that there is no effect without a cause, *i.e.* without a force which calls for the effect; second – nothing can be created out of nothing. These statements are self-explanatory and give rise to irrefutable truths.
>
> Firstly, since there is no effect without a cause, and since we can perceive the causes of particular effects, then there is no doubt that – considering this overall effect we call "the world" and that those physical laws which are overall effects, […] must have one cause, namely one force that had thrown everything into being in a permanent, unchangeable and necessary manner. The existence of this cause, namely force, arises out of consideration for those general effects referred to as "physical laws", or in this one massive effect referred to as "the world".
>
> Secondly, the world and its parts could not have been created out of nothing; it must have been, therefore, created due to that one and appropriate cause.
>
> Thirdly, all the effects could not have been the causes of one another and could not have imposed upon one another any laws which govern their existence.
>
> These three statements encapsulate the entire knowledge about the primary cause [Kołłątaj 1810: 163].

3.2.3. Primary Cause

This Primary Cause may be called "Nature" and identified with the Supreme Being (God). Likewise, the world – the effect of the operations of the Primary Cause – can be referred to as "Matter". Nothing is known, however, about the Primary Cause except that its existence is necessary (*i.e.*, on the ground of the principle of causality), since we recognize the existence of Matter, which is its effect.

> "Nature" shall be named the one and necessary cause which calls all beings into existence, and the "the law of nature" – the mode of their existence in a form we perceive through the senses [Kołłątaj 1812: 14-15].
>
> The word "nature" is nothing but a mental image of the cause of all the effects in general or in particular – the cause that has called all beings into existence and subjected them to permanent, unchangeable and necessary laws [Kołłątaj 1810: 21-22].
>
> Whether it is called by the name: the "Supreme Being", "omnipotent intelligence", "universal providence" or "God" – it does not matter [Kołłątaj 1812: 13].

The difference between nature and matter lies in the fact that we tend to envisage nature as the cause and matter as its effect, without being drawn into murky speculation which obscure rather than give insight, since the essence of nature and matter is not known to us [Kołłątaj 1812: 15].

"Matter" is nothing but a mental expression, divorced by way of ABSTRACTION from sensory images we project with regard to various objects [Kołłątaj 1802b: 603].

Is it not enough to know that the creative force of the world should exist, because we see that the world exists? What is this cause, then? Where does it lie? How and when did it create the world – shall not be stated based on hypotheses, because we know nothing without assuming any of them [Kołłątaj 1812: 103].

3.2.4. Materialism

A materialist could say, however, that only Matter, or the world, exists – since forever. Kołłątaj observes that this world is subject to laws pertaining to the regularities which are external to the world. These regularities could not have had their cause in the world which they govern; hence, materialism thus conceived is untenable.

Who created matter with its mechanical and physical laws […] [?] […] Materialists – in an attempt at dodging this question – only say that matter, since it is eternal, has never required any creative power, since it has always existed in itself. It only required the creation of forms and division into various qualities and properties inherent to particular entities; and here is the effect: a thing more difficult to comprehend than we imagine. Experience shows that matter is totally passive in relation to its mechanical and physical laws (see Leibniz, *Theodicy*, vol. III, part III, p. 1094 [Francofurti 1745]). […] Who […] will deny that a passive existence could have created its own causative being, but must have been created by another external cause [Kołłątaj 1812: 95]?

[According to materialists,] it is impossible […] to conceive the creation of all things out of nothing: *ex nihil nihil fut*. […] This axiom of materialists cannot be defied and we accept it without reservation; we challenge them to this end on the causative power, since everything that has been created by its cause, has not been created from nothingness, because the cause which created it is not nothingness; on the contrary – it should be superior to its effect, capable of causing it and imposing mechanical laws of existence upon it [Kołłątaj 1812: 96].

3.3. Epistemology

3.3.1. Impression

The only source of knowledge are impressions (sensations), *i.e.* sensory images being the effect of operation of external circumstances upon the senses. The content of impression of a given object is the existence of this object and its properties.

What is beyond the grasp of the senses should be construed as being beyond the reach of cognition and, in consequence, we must admit to the lack of knowledge. Actual cognition is the conviction that we cannot be in the know of everything. In consequence, we do not acknowledge hypotheses in our investigation [Kołłątaj 1812: 24].

An impression is only an image of various changes which we experience as a result of causes within us or outside of us [Kołłątaj 1812: 26].

What does our impression consist in? We capture the impression through its effects. What is the inner cause which creates this impression? We have no idea [Kołłątaj 1812: 27].

The primary […] image of «isness» is the existence of a thing. It embraces not only the thing in existence, but also its superficial form, internal content, property and the difference [Kołłątaj 1802a: 244].

3.3.2. Concept and understanding

A concept is an impression that has been recalled. To understand an object – means to cultivate (realize) the concept of this object. A person having the understanding of a given object is said to know this object. This ability – or the power – to understand is called the "reason".

When man imagines a thing the way he perceives it with one of his senses, he is said to have embraced (that is to have comprehended) it well. […] When the thought discerns and contends on the thing according to how the thing affects the sense, how it was imagined in the thought – we call it "understanding", which is agreement between the concept and reason. The concept differs from understanding in that, firstly – it starts with the effect of the object on one of the senses, of the sense on the thought; secondly – on the contrary – it starts from the workings of the thought, proceeds to the analysis of the workings of the sense and ends up with the contemplation of the object. […] According to the above, understanding is the experiencing of the concept [Kołłątaj 1802a: 238].

The power of understanding, which is the way in which man reconciles the concept with the mind is what we call "reason" – since this most bizarre action of human thought is like a judgement between its perception, image and concept; it differs from in the same way in which action itself differs from the result of the action [Kołłątaj 1802a: 240].

When [man] embraces and understands a thing, we say that he knows it [Kołłątaj 1802a: 241].

3.3.3 Soul

The object of images – impressions, concepts, *etc.* – is sometimes referred to as the "soul". Since the Primary Cause exists necessarily, because the world exists, which is effect of its operation, so does necessarily the soul exist, which is the subject of cognitive activities – because these activities are effected. What is the soul, then, and what is it like – is only a matter for speculation.

What does our sensation rely upon, we understand from the effects; what this cause actually is that we do not know [Kołłątaj 1810: 41].

Apart from the senses, not only the entire world, but also our own self remains to be unknown to us [Kołłątaj 1812: 30].

What is the reason underlying the sensation, or rather the power within us which senses and drives our organic machinery? Is it matter or a being different from matter? Is it a part of us or a separate being? The solution to those issues is the domain of logic and metaphysics [Kołłątaj 1810: 42].

It is not our body with its nervous system that is capable of sensing, but the causative force which drives all the actions by means of organs in our body, and experiencing different sensations in itself [Kołłątaj 1812: 28].

Without knowing what this active force was in itself […], attempts were made at naming it based on its effects. It was observed that we are alive as long as we breathe. This is why this force was called the "spirit" [Kołłątaj 1812: 28], "soul", or "thought" [Kołłątaj 1812: 19].

3.3.4. Self-evidence and fallacy

Cognition – which is self-evident in character – it is true cognition. Fallacious cognition is an image incompatible with reality.

Self-evidence is nothing but perennial knowledge of things which everybody can rely upon due to the uniform application of the powers of perception, comprehension and reasoning [Kołłątaj 1802a: 242].

Fallacy that we are misled into by others and from which they themselves steered clear away – is called "falshood". This word could be a mental image, running counter to the truth; we might be led into falsehood either by delusion or deception.

We are deluded when those who guide us to cognition take a road that will never bring us to intended destination. We are deceived when we search for a thing using appropriate ways and means – in line with our nature – and when someone else, having won our trust, misguides us so that we use wrong and false ways and means [Kołłątaj 1802a: 255].

That there is no escape from mistake is a different thing.

It is a road of mistakes and errors that leads man to the discovery of truth [Kołłątaj 1802a: 209].

3.3.5. Knowledge and faith

Knowledge should be kept separate from assumptions and faith.

The foundation of knowledge is sensory experience. Assumption is only a matter of guessing.

Assumptions (hypotheses) are statements which we guess are true – but without certainty [Kołłątaj 1810: 18].

The foundation of faith, on the other hand, is authority. Religious faith is a specific kind of faith, in which revelation performs the role of authority.

Philosophy is a matter of knowledge – not assumptions and faith, in particular religious faith. Hence, philosophy must be kept separate from religion.

> Many people identify "faith" with "religion" as one word. […] If those [words] are not applied to revelation, faith is nothing but making your reason follow whoever's authority and assurance. […] Faith differs from experience in that experience does not rest upon authority, but relies on the senses [Kołłątaj 1790: 294].
>
> Faith is the act of one's reason made to follow another's authority; […] religion is the act of a heart more deeply obliged to another […] Revelational religion is nothing but an obligation imposed on man by faith. Hence, for religion to oblige anyone's heart – revelation must come first – so that the authority of the revealing one makes one's reason follow a faith, so that the faith makes one's heart follow a religion [Kołłątaj 1790: 295].
>
> Let us draw a real line between philosophy and faith. If revelation tells us more than we can understand, it is the responsibility of revelation to prove and demonstrate the authenticity of what it presents as faith. It is always detrimental to truth, however, if the two subjects are to be confused. Philosophy requires our reason be convicted, revelation requires dogmas be believed in; we do not have to believe in what is to be known, as knowledge stems directly from reason, whereas what we have to believe pertains only to our faith; if we want to accept it for the sake of the authority of the one who reveals a thing that is unknown to us and beyond our comprehension: *fides non habet meritum ubi humana ratio prodest experimentum* [faith does not matter if reason offers a proof based on experience]. So, a philosopher acting in good faith should: (1) relinquish all general assumptions, refrain from reifying or personifying his conjectures produced by imagination, restricting himself only to the results which stem from observing the facts of nature; (2) be wary of interfering with the subjects of revelation, which are beyond the reach of reason [Kołłątaj 1812: 124].

3.3.6. Scepticism and atheism

Scepticism is a disposition which is justified with respect to all that is a matter of guessing.

> He who accepts the phenomena or facts of nature without assuming any categorical position about their cause is a SCEPTIC; he doubts to be instructed or to learn what he cannot find out. To doubt is not the equivalent of to negate – it means to suspend one's judgement due to the lack of sufficient evidence [Kołłątaj 1812: 126].

Sceptics are sometimes unjustly accused of atheism. He is not an atheist who questions the existence of the Prime Cause, if it is not identified with religion's God, or he who misconceives the Supreme Being.

What else can a philosopher acting in good faith do in order to speak his mind on this crucial matter? Nothing, because there is nothing left to be said. […] Once all the imagined views and hypotheses have been cast away, once the line between philosophy and revelation has been drawn I am inclined to suppose that there are no true ATHEISTS, because ATHEISM would be nothing more than the negation of the name. Who negates an unknown cause credited with the creation of the world should present me with a cause that is known, attacking not the name thrown upon my cause that is unknown – but the name in itself. Such a person cannot be called an "atheist", because he would be a philosopher representing the school of thought of MATERIALISTS, which means he would be a systemic philosopher who had arrived at a hypothesis about the creation of the universe – attributing the work to matter or atoms cognizant of mechanical laws – which govern the arrangement of atoms so that they form the universe. Whether he tells me that matter or atoms are eternal, or whether he goes on to explicate a similar thing – he shall speak from his imagination, since we know as philosophers when and how the whole universe was formed, and if we want to contemplate the facts of nature, only causes and effects are to be found. The concept of eternity is blurred and abstract concept of a world whose neither beginning nor end is known to us; the concept of matter is also abstract; it is a collective of properties shared by all bodies. We know neither eternity nor its nature except for our imagination [Kołłątaj 1912: 125-126].

There is an infinitum of very dangerous fallacies and extravagant ideas related to the Supreme Being, since this delicate issue is beyond the reach of exploration. The greater our intention to penetrate it, the greater the risk of falling into fallacy. However, even the most absurd fallacies and errors are not cogent enough an argument to accuse anyone of atheism [1812: 130].

3.4. Ethics

3.4.1. Speculative and analytical ethics

Most of existing ethical systems were speculative in nature according to Kołłątaj. A certain hierarchy of ethical values was upheld – with the highest good at the top – which served as a reference for evaluating the morality of human deeds. This or any other hierarchy was justified by arguing it was innate, or a matter of instinct, or a product of common consent.

This justification is unacceptable because it justifies one hypothesis using other hypotheses.

[Philosophers] in the past based moral philosophy on searching for the supreme good; […] envisaging this good in a variety of forms, they derived moral rules based on the conjectures they found to be the best choice. The good of man was divided into the good of the body and good of the mind; it was concluded that health, strength, prudence, philosophy, virtue, honesty, delight and other similar states transient in their nature were taken as the highest good and, simultaneously, as the tenets of morality […]. It suffices to get insight into Cicero's writings […] But when it comes to providing proof for the laws, Cicero makes no mention of

anything other than innate image, instinct and the consent of the nations. And when an innate image cannot be accepted, when instinct produces a deranged image without any meaning, when the consent of the people attests to a commonly-held fallacy traced back to one source, hence Cicero – who was familiar with all the views of all ancient philosophers – is for moral science who Ptolemy was in astronomy; that is – that he explained the laws and effects using false presumptions [Kołłątaj 1810: 9-11].

Kołłątaj proposes to replace speculative ethics with analytical ethics. The point of departure of analytical ethics are the laws of nature which are easy to pin down. They have their consequence in moral laws, defining the rights and obligations of people. The rights and obligations define, on the other hand, the rules of "good conduct".

Our rights and duties stem directly from […] [the idea of nature] [Kołłątaj 1812: 12].

Logic encompasses the principles of good thinking, by way of analogy – moral philosophy encompasses the principles of good conduct; it offers remedy to human will, the way logic does to reason. […] Moral teaching must be derived from nature, strength and the sense, and must address various needs it encounters everywhere – as well as entitlements and obligations of people of various ranks – which are naturally implied by the previous [….] Hence, a professor delivering a course on moral philosophy should adhere rigorously to this method of lecture, and apply the following: "Necessity created entitlement. Every entitlement corresponds to appropriate duties" as his guiding principle and motto, to be followed in all study – so that all the rules of good conduct derived from the bowels of human nature could be the strongest lure for virtue [Kołłątaj 1778: 186-187].

[Only thus] can true morality of man be defined, which should be the guide to all human action [Kołłątaj 1812: 10].

Kołłątaj also holds that such analytical ethics is *implicite* in the Gospel.

Faith in the teachings of Christ is no bundle of insoluble mysteries; its mysteries are like a seal which gives solemnity to the entire law of Gospel. Whoever wants to analyse it in more depth, he will learn that the Gospel is the collection of laws which inspire human heart to abide by the laws of nature; enticing people to observe these eternal laws, showing the ways which either protect people from trespassing them or save human frailty in those who trespassed [Kołłątaj 1790: 297].

3.4.2. Laws

Although both the laws of nature and moral laws grounded in them and referred to as "laws" differ materially – not only in that the former pertain to physical aspect, whereas the latter to the moral aspect of human life.

Physical laws refer to our existence and our physical functions; moral laws refer to our moral actions [Kołłątaj 1812: 19].

There are many […] physical laws we share with other beings; there are such laws which are only inherent to us – like conveying thoughts to others through articulated sounds, namely the ability to speak [Kołłątaj 1812: 17].

As a matter of fact, both the laws of nature (laws of physics) and the moral laws (*resp.* rights) are permanent and necessary.

We are by nature subjected to moral laws, which bind us in the same scope as the laws of physics do, which means that such obligation is permanent, unchangeable and necessary [Kołłątaj 1812: 18].

We are unable to break natural laws without annihilating our being in the process; whether or not we apply moral laws – is a matter of our choice.

The difference between a law of nature […] and a positive law […], *i.e.*, which is entitlement and obligation, [consists in the fact that] the laws of nature function in us – but without us; these are skills, strengths, innate principles that cannot be set aside unless we want to ruin our personality – in whole or in part. Entitlements […] are our exclusive privileges bestowed on us by the law […] of nature and it is a matter of choice whether we exercise them or not [Kołłątaj 1812: 20].

While looking at the relationship between the laws of physics and moral laws, Kołłątaj simultaneously analysed in depth the concept of moral law. He used two methods for this purpose: "etymological" and "contextual". Through the application of these two methods, Kołłątaj managed to discern many of meanings of the term of the Polish word "prawo" (its English equivalents are: law/right/entitlement).

A law […] is, as far as the literal meaning of the word is concerned, exactly the same as a rule […] translated into a mental image, which is supposed to stand for any thing or issue that must be a given way rather than another, that is to say that it cannot be well or nearly, but only the way the law requires. […] In some Slavic dialects – oddly in Ruthenian – the word "law" ["правo"] is equivalent to "well", as if we wanted to say: this thing is well, or the way it should be – according to its rule. […] Law with respect to things is nothing but an act which is unchangeable and necessary, and which governs which way a thing or a deed must be rather than another – to be construed as legal – that is good [Kołłątaj 1810: 157-158].

The [Polish] word "prawo" has multiple meanings with respect to a thing, all based on the first one. To begin with: it means an act that is a regulation imposed by the lawmaker. Secondly: it means an entitlement – when we say that we have the right to one thing or another, even if we do not possess it. Thirdly: it means ownership of one thing or another or – by the same token – when it transpires that we

legally own it. Fourthly: it means grace, bestowal, privilege – when we say that we possess, according to the law, dignity or property, or when we say: this municipality claims the right of the sword [ius gladii], right of coinage, *etc.* Fifthly: when construed as a legal act it has multiple meanings: natural law that is physical or moral […] [*etc.*]. Sixthly: it may be construed as the study of law, court proceedings and so on. Seventhly: as a branch of science is divided by theologians into natural and enacted […] [*etc.*] [Kołłątaj 1810: 159].

3.4.3. Rights and responsibilities

Kołłątaj claims that acts subject to moral judgement ("moral issues") are actions related to our natural rights (*scil.* entitlements) and responsibilities (*scil.* obligations).

Only such action can be called "moral" that is related to our entitlements and obligations, and that is the product of our volition, choice and consent [Kołłątaj 1810: 80].

What we call […] a "natural right […] of man" is a free and independent power bestowed on him man by the law of nature […] to conquer, own, dispose of and use everything that is required to live and to enjoy life, a power that is bestowed on condition that all the duties it implise are met. […] What we call "natural responsibility of man" are the conditions connected to his right that must be considered and fulfilled if they are to be enjoyed to the full [Kołłątaj 1812: 42].

Kołłątaj held that the following relationship occurs between rights and responsibilities: every right is linked with a responsibility.

Entitlement is what is guaranteed to us by law; obligation is a condition that must be fulfilled to ensure that we can enjoy what we are entitled to [Kołłątaj 1810: 175].

Entitlement should be never separated from obligation – not even through a mental image – they must be deemed to be inextricable to keep the risk of error at bay, since it is unacceptable to grant one entitlement to everybody without obliging everybody to respect the entitlements of each and every one [Kołłątaj 1810: 59].

3.4.4. Virtue and wickedness

It goes without saying that according to Kołłątaj moral good and evil – that is virtue and wickedness (sin) – are the derivatives of the natural rights and responsibilities of man. A virtuous deed is one conforms to those rights and responsibilities, whereas a wicked deed – one that runs counter to them.

Virtue is only a moral deed in compliance with the natural laws and responsibilities as a result of their due observance; sin is a moral deed in which

NATURAL LAWS AND OBLIGATIONS ARE NOT OBSERVED, BUT ON THE CONTRARY – ABANDONED OR VIOLATED [Kołłątaj 1812: 80].

An example of a virtuous deed is a fair deed (that which is in compliance with the right of ownership), charitable deeds (in compliance with the obligation to help others) and heroic deeds (whose performance is an obligation that is not direct, but which is implied by the general norm of doing good).

JUSTICE IS NOTHING BUT AN IDEA WHICH THAT HAS BEEN DEVELOPED ABOUT A RESPONSIBILITY WHICH IMPOSES A STRICT COMPLIANCE WITH THE RIGHT OF OWNERSHIP, WHETHER IT PERTAINS TO A PERSON OR A THING [Kołłątaj 1812: 82].

HUMANITY AND CHARITY […] IS AN IDEA THAT HAS BEEN DEVELOPED ABOUT A RESPONSIBILITY TO HELP ONE OTHER IN NEED. We are obviously entitled to be given such help, we are obliged to provide such help to our neighbours [Kołłątaj 1812: 82].

HEROISM […] IS AN ACT TO WHICH WE ARE NOT OBLIGED BY ANY DIRECT RESPONSIBILITY, BUT BY OUR INCLINATION TO DO GOOD TO OUR NEIGHBOURS OR THE ENTIRE SOCIETY [Kołłątaj 1812: 86].

An example of a wicked deed is a corruptive deed which means such a sinful act that – so to speak – provokes others to commit similar sins.

The entire […] atrocity of [a breach against obligations] is the most appalling in the corruption which is the utmost misfortune for each community and for the whole humankind [Kołłątaj 1810: 4].

Moral corruption creeps not only to our affairs, but also to our power of understanding and judging. It can be seen that superstitions have so many more ardent defenders than the most conspicuous truth does [Kołłątaj 1810: 4-5].

Man is by nature good and inclined to do good, urged so strongly by his own needs only to follow their dictate, only to try to find satisfaction using the means implied by nature, only to take advantage of what he is entitled to[11] and to comply with the obligations inherent in them – that cannot be evil. Man is a creature of habit; when forced into the company of exemplary or rogue people, he can develop either good or bad habits depending on the circumstances [Kołłątaj 1810: 3].

Sometimes, the perpetration of a wicked deed triggers guilty conscience. Guilty conscience does not change, however, the moral qualification of a deed which had already been performed – but sometimes acts as a deterrent for future wicked deeds.

[11] By "entitlement" Kołłątaj means a "right-to-something". Here is a sample pair: "Everyone is entitled to defend themselves against an assault and strike back with force" – "No man should neither assault nor use force against another unless in necessary self-defense" [Kołłątaj 1810: 133].

Even though conscience is not always capable of rectifying past errors, it proves very useful in preventing from future vile acts [Kołłątaj 1810: 90].

3.4.5. Guidelines for moral conduct

Kołłątaj believed that moral conduct requires that the following rules be followed:

(a) If the performance of a deed is our responsibility, such a deed ought to be performed.

(b) If one is burdened with several responsibilities and it is impossible to discharge all of them, then the deed that constitutes the most serious responsibility should be performed.

Every obligation is equally binding if it can be fulfilled; yet when several obligations coincide and it is impossible to fulfil all of them at one time – the obligation that is the most serious should be performed [Kołłątaj 1810: 117].

(c) If a responsibility is more strict, the performance of a deed we are most obliged to is less of a virtue, whereas its non-performance – more of a wickedness.

(d) If a responsibility is less strict (conditional, for example), the performance of a deed we are obliged to is a more of a virtue, whereas its non-performance – less of a misdeed.

There are […] two rules [of evaluating the degree of virtue and wickedness]; firstly, where an obligation imposes the most strict responsibility; the discharge of such a responsibility is a virtue of lesser value and the failure to do so – a wickedness of greater gravity; secondly, where an obligation imposes a less strict and conditional responsibility; the discharge of such a responsibility is a virtue of greater value and the failure to do so – a wickedness of lesser gravity [Kołłątaj 1810: 111-112].

3.4.6. Freedom and necessity

All and only voluntary deeds are subject to moral evaluation. This evaluation consists in determining whether a deed of a given person does not contravene the scope of rights of this person, and whether it does not violate obligations of this person.

Free will does not go beyond the scope of rights and obligations, and this is the essence of morality [Kołłątaj 1812: 20].

All natural laws operate necessarily […] [in man], and cannot be disobeyed because otherwise the entire order of nature would be overthrown. Entitlements and obligations are left to man's volition, since they determine man's physical-moral

order; he will be better off if he follows it; he will be worse off if he contravenes it [Kołłątaj 1810: 177].

Let us assume that a person faced with a choice of whether to perform or not to perform a deed (in particular to perform another deed) has resolved (*resp.* is willing to) to perform this particular deed. Such a resolution is said to be an act of volition.

A given deed is free if the following condition is met:

(1) It is necessary that a person performing the deed has resolved to do so.

In other words, a necessary (*scil.* indispensable) condition of performing a voluntary deed is the resolution to perform it.

Freedom is nothing but an absolute necessity to act on our own volition, our choice, our consent to perform a moral act [Kołłątaj 1812: 59-60].

[Such freedom is] actual and necessitated by the law of nature since it is within our capacity to act or to refrain from acting in keeping with our rights and responsibilities, to perform an action that is good or bad – and there is no dispute about that – since daily experience convinces us of that and our own feeling confirms this conviction [Kołłątaj 1812: 60].

Among […] [moral] laws, there is one which is called "free will of man", which means that we keep acting on our volition, our free choice, our consent, and we cannot act otherwise – thus any deed that is performed against our volition would not be our deed, but the result of the operation of another force which is beyond our control [Kołłątaj 1812: 18].

It is an absolute necessity to act upon our volition, our choice and consent, in order to perform a moral deed [Kołłątaj 1812: 63].

Man acts voluntarily when his action is in compliance with his free will, free choice and consent; […] every deed he has not chosen to happen, to which he has not consented – is not his and thus cannot be considered as moral [Kołłątaj 1812: 70].

The requirement for the presence of a resolution – or an act of will – in the event of performing a voluntary deed must be distinguished from necessity defined in the following formula:

(2) It is necessary that a person resolving to perform a deed has performed it as resolved.

According to formula (2) – which is by the way false – the act of volition would be a condition sufficient to perform the deed as resolved.

Freedom […] cannot act as it wills [Kołłątaj 1812: 70].

[Many] ancient and contemporary philosophers [mistakenly thought] that freedom is human capacity to act as one wills or fancies [Kołłątaj 1812: 63].

[The view that freedom is the necessity to act upon our volition, choice and consent] could be criticized […] for implying incapacity to perform any moral deeds

without the said conditions – thus our affairs are not contingent upon freedom, but on indispensable necessity. Hence, the necessity addressed in our description has nothing to do with morality, but rather with the power to act. It is one thing to say: I have to act thus and not otherwise, and it is another thing to say: I have the power bestowed by unchangeable and necessary right to act upon my volition, choice and consent. The necessity to act one way rules out the issues of morality; the necessity to act upon our volition, choice and consent is the condition under which a moral issue arises; it proves that we have freedom and capacity to act upon our will, choice and consent [Kołłątaj 1810: 85].

One could provide thousands of examples proving that we cannot act as we will; the example proving that what we have done is not the result of our will – is nowhere to be found. In consequence, we discover a profound difference between what can be described as the capacity to act as we will and between a situation in which we say that there is nothing we can do unless we want it to happen. The first sentence is evidently false, and the second is evidently true [Kołłątaj 1812: 63].

As regards voluntary deeds, in accordance with the formula (1), the following propositions are true:

(a) Some deeds are voluntary.

Our definition deems freedom indispensable for acting morally, however, fatalists deem all deeds a necessary consequence of *fatum* [because] everything depends on *fatum* [Kołłątaj 1812: 69].

(b) Not all deeds are voluntary because not all of them are performed with the necessary presence of resolution; such deeds are referred to as involuntary.

(c) Even in the case of voluntary deeds, resolution (an act of volition) is not a sufficient condition for their performance; therefore, freedom is always limited – by factors which become a sufficient condition for the performance of a voluntary deed only in conjunction with an act of volition; these factors include, among others, knowledge of the subject of the resolution.

Volition itself is not sufficient to induce a moral act [Kołłątaj 1812: 63].
We cannot want what is beyond our knowledge [Kołłątaj 1802a: 443].

(d) Each deed entails specific consequences; therefore, when performing a voluntary deed one has to reckon with its consequences.

You will do […] what you want to, but you will have to face the consequences of your choice [Kołłątaj 1810: 137].

3.4.7. Equality and community

Unlimited freedom is a theoretical fiction; the same type of fiction is represented by primaeval absolute equality, allegedly lost by the mankind in the transition from the state of "solitude" to the state of community.

There is no indication that the abovementioned state of primaeval "solitude" has ever existed.

> Wrong conceptions lead to equally wrong conclusions. Those who assumed that human freedom is unlimited concluded that people must have been equal in the past in all aspects of life, and considering man as an individual, they gathered that solitude was his first state, and that only in the transition to community did he lose his natural equality and became the way we see him today. This type of theory is completely wrong because it relies on false assumptions thus leading to numerous detrimental conclusions which may result in dangerous developments for the human community. […] [Since] nature has not granted man unlimited freedom […]. [Likewise,] man has never been naturally doomed to a solitary life, being always born and living in community [Kołłątaj 1810: 122].
>
> It is worth investigating, whether, nature created man as a solitary, stupid, savage and cruel being, and only through various needs and developments did he approach communities resembling him, or whether he has enjoyed their company from the very beginning: history is not able to lead us to the cradle of the human race. Philosophy is not revealing in this respect, except for romantic visions and delusions, and everyday experience convinces us that since we cannot do without the help of others from the moment we are born to our last breath of life, community, as a consequence of an indispensable human need, originates directly from a necessary and unchangeable natural rule. Therefore, it must have started with the very first beginning of the human race, because both the first man and the contemporary man have exactly the same natural needs. What is the point of investigating the undiscoverable [Kołłątaj 1802b: 373-374]?

That is true – in some respects all men are equal.

> Commencing this analysis with the most common knowledge, we will notice that every man is born in the same way, experiences the same sensations and the same needs; every man has his own strengths, which he can develop, maintain or use to acquire things satisfying his needs; every man is subject to various infirmities, passions, weaknesses and illnesses; and finally, every man has to die. In all these ways men are equal [Kołłątaj 1810: 123].

In some respects, however, men are not equal: they differ from each other.

> In one respect, men are equal while in another one they are not [Kołłątaj 1810: 124].

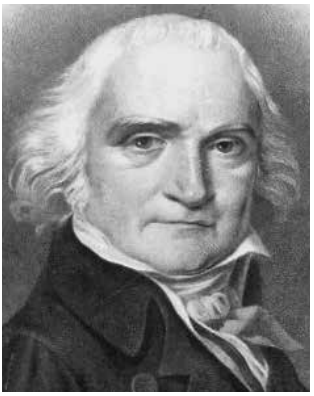
In the same manner, as there is no indication that community destroyed the primaeval absolute equality of individuals, community is not able to destroy their freedom either, since freedom is an irremovable feature of some human deeds.

> We used to see man as an imperfect work of nature which needs to be improved and developed by our civil institutions, as if we were able to add anything to the work of nature. We imagined his freedom as unlimited in order to have a pretext for depriving him of his real freedom. Schools commonly taught that when entering community man should give up his freedom completely, or at least give away its better part to the government; this view is false and absurd […], What is freedom then? Is it not the capacity of our soul to act, inseparably linked with our soul? How could I then separate the capacity which constitutes my essence from myself [Kołłątaj 1812: 71]?

4. Influence

The influence of Kołłątaj's pedagogic and political ideas on Polish culture cannot be overestimated. The influence of his philosophical ideas was, however, much more limited. Ferdynand Kojsiewicz (1801-1874), a professor of "the laws of nature and political skills" at Cracow University, who was at the same time the publisher of Kołłątaj's writings, may be deemed the immediate continuator of these ideas, particularly in the area of the philosophy of law. Indirectly, Kołłątaj also influenced Jan Śniadecki, with whom he was in contact both scientifically and personally.

2. Jan Śniadecki



The first property of education is
to comprehend well what we are talking and writing about,
and to think about things not on the basis of prejudice,
but rather that of conviction.

[Śniadecki 1819: 167]

1. Life

Jan Śniadecki (29.08.1756, Żnin in Greater Poland – 21.11.1830, Jaszuny near Vilna) was born of father Jędrzej and mother Franciszka née Giszczyńska. He graduated from the Lubrański Academy in Poznań (1764-1772). In learning the dialectics, he used the textbook by Kazimierz Stęplowski, *Logica incipientium*… [1753]. He then studied at the Cracow Academy (1772-1775), where he received his doctorate in philosophy. His main mentor at the Academy was Józef Muszyński, a lawyer, an expert on Latin and Polish literature. He attended complementary studies in Leipzig, Göttingen (1778-1779), Leiden, Utrecht and Paris (1780-1781).

He headed the Faculties of Higher Mathematics and Astronomy at the University of Cracow (1781-1802, with breaks for the journey to England in 1787) and the Astronomical Observatory at the University of Vilna (1806-1825), of which he was also the rector (1807-1815); earlier, he had taken his third trip to Western Europe (the Netherlands, France and Italy).

Along with Hugo Kołłątaj, he took an active part in reforming education in Poland. Through Kołłątaj, he met the main representatives of Polish cultural and political elite (including Ignacy Krasicki). He was a member of

Warsaw and Cracow Society of Friends of Sciences and a corresponding member of the St. Petersburg Scientific Society.

He was decorated with Tsar's medals of St. Anne and St. Vladimir.

He spent the last years of his life at Jaszuny Manor near Vilna, where he was died and buried.

His attitude towards life is best evidenced by what he wrote – in a letter to Franciszek Ksawery Dmochowski, from Paris (18 March 1804) – in connection with rumours about the alleged plans of marriage to Antonina Chołoniewska:

> I have never strived for assets, nor will I ever strive for them, for I do not need them. I would not give up my independence for the whole kingdom of Peru [Śniadecki 1804: 375].

His citizenship attitude is evidenced by the following passage from "Autobiography" (written in the third person):

> During his stay in Paris, French National Institute awarded the work by Mr Villers *On the influence of Luther's Reformation, containing a certain amount of false information, derogatory to Poland.* Śniadecki considered it his duty to stand against this injustice of the author: he therefore published French and sent to the French National Institute *Comments on the questionable passages on the history of Poland and its affairs in the work by Mr Villers, awarded by the French Institute on 23 March 1804* [Śniadecki 1828: 6].

2. Writings

The main philosophical works of Śniadecki include "O filozofii" [Śniadecki 1819], "Przydatek do pisma o filozofii" [Śniadecki 1820], and above all *Philosophy of the Human Mind* [Śniadecki 1821].

3. The state of minds in Poland and the roads to their recovery

Śniadecki's philosophical work occurred primarily in the period after the fall of the First Commonwealth. In the face of this fact, Śniadecki recommended an attitude, which was later called "positivist": focus of Poles, deprived of their independent state, on self-improvement.

> Having lost our homeland, the greatest good of souls noble and taken with the general interest, we are under hard judgment condemning us to the suppression and suffocation in ourselves of these movements, which animated and raised all our powers of mind, opportunities and talents. Today, a Pole needs to survive himself, create for himself another soul and close his feelings in tight limits of personal

The Śniadecki's gravestone on the family cemetery in Jaszuny, near Vilna (a present-day view)

existence. This is, true, a cruel destiny, but it is the law of undefeatable necessity, which one must succumb to. Let us use the rewards of enlightenment to make so severely crippling fate bearable to ourselves [Śniadecki 1803a: 349].

He primarily advocated expanding intellectual horizons. Śniadecki very harshly judged the state of minds in Poland in this respect.

In every country, there are more stupid than truly reasonable people [Śniadecki 1803b: 359].

He saw a way to repair this state of affairs in combination of an attitude of openness with an attitude of prudence – regarding foreign scientific achievements.

Cultivate your language, do not be a monkey of foreign epigrams and customs; claim the true doctrine, make use of foreign thoughts, perceptions and inventions, but take nothing without strict prudence and without the rigorous consideration – these are the principles of simple common sense, but also safe roads and venerable fruits of thorough enlightenment [Śniadecki 1822: 244-245].

METAPHYSICS IN A SENSE IS A SCIENCE IMPORTANT TO A SMALL NUMBER OF HEADS ALREADY THOROUGHLY LEARNED AND ENDOWED WITH POWER OF COMPREHENSIVE PERCEPTION OF THINGS, BUT MOST DANGEROUS FOR A COUNTRY BEGINNING PROPER LEARNING [Śniadecki 1814b: 146].

4. Predecessors

Śniadecki considered himself a follower of Kołłątaj. He appreciated his unwavering pursuit of truth, beautiful Polish language, strenuous work for the good of other people and his full commitment to the "national cause".

His [*scil.* Kołłątaj's] works as a writer adept in the vernacular are more precious for the national enlightenment in that, honoured by so many beautiful fruits of the poets, we scarcely expect good prosaic writers [Śniadecki 1814d: 70].

[Kołłątaj], in devoting everything [to the national cause], completely shared his lot with the Homeland, having lost everything but honour and fame [Śniadecki 1814d: 74].

I will always be pleased to […] strive for His Graciousness Lord Benefactor's goodness and prosperity everywhere, and though corruption made all too widespread in the people the stern maxim that MISERABLE PEOPLE HAVE NO FRIENDS, in the eyes of moral people, nothing can incite a greater respect and reverence than misfortune of one suffering for others [Śniadecki 1803a: 349].

Śniadecki also praised Krasicki – for an effective fight against prejudice: not so much with rational arguments as with ridicule.

> Krasicki […] showed that people in their inveterate prejudices and addictions are not so much afraid of evidence and conviction, as derision and shame, where wit can do more than reason [Śniadecki 1818a: 82].

However, he fought speculative tradition, to which references were made in his time in Poland.

> The thesis on Christianity [*i.e.* J.K. Szaniawski's *System of Christianity*] truly scandalized me, because apart from the dark, blusterous words, spoiling the language, I found things as common as those predicated in the reformers' sermons [Śniadecki 1803b: 359].

5. Views

5.1. Philosophy

According to Śniadecki, there are two varieties of metaphysics – and more broadly, philosophy: speculative and analytical ("scientific").

5.1.1. Speculative philosophy

Speculative philosophy is formed by hypotheses accepted without regard to any empirical base. They are, in fact – says Śniadecki – "metaphysical romances".

> [In the so-called philosophical metaphysics] the world of dreams, idiosyncrasies and delusions has been taken for the world of truth and reason [Śniadecki 1814b: 152].
>
> This […], which, as Kant thinks, is not a common phenomenon of thinking, but conjecture, HYPOTHESIS and presumption; does not explain what is happening in the mind, but what the author imagines. In short, it is a METAPHYSICAL ROMANCE [Śniadecki 1819: 169].
>
> With pain in my heart, I found that Kant's philosophy is metaphysics of Aristotle from the fifteenth century awoken in the nineteenth century, which infected and is beginning to spoil the Polish heads in Warsaw, who understand that talking the evil, dark language of things without sense, reference, as they call, them, transcendental, they would pass as wise. I hold Fichte and Kant to be fierce, dark and apocalyptic minds; they are a new kind of charlatans who want to do make certain to expel brightness, pure and simple recognition of things between scholars [Śniadecki 1803b: 359]
>
> [Speculative] metaphysicians, not having explored any teaching due to superficial or too general and weak imaginings, judge and jabber about everyone [Śniadecki 1813: 49].

It is barely not a prevalent sin of the present [SPECULATIVE] METAPHYSICIANS […] that they like to discuss and maunder about all human perceptions and skills, often not knowing either in-depth [Śniadecki 1820: 205].

The search for the ultimate causes of all things, among others, has such a speculative nature.

In almost all investigations, going from question to question, we finally arrive at a question impossible for us to solve. In physical things, for instance, the last question [is] what MATTER is […]. Whereas in mental things, for example, what is the SOUL […]. These are questions, which we can never answer. Thus, we hold it as an undoubted truth that the FIRST AND MOST REMOTE CAUSES OF THINGS FOR US ARE IMPOSSIBLE TO INVESTIGATE [Śniadecki 1821: 263].

The first principle of sound philosophy is: do not look for what is banned by nature to our concept and what must remain eternal mystery. In this case, they are the first causes of things, the first and most distant foundation of our knowledge [Śniadecki 1819: 167].

The subtle METAPHYSICIANS turned their brains dry over the last causes of things, not knowing themselves what they say, stating as a purpose of human work and strength that which was the fruit of their false thinking and blunder regarding the human nature and powers [Śniadecki 1781: 15-16].

Speculative metaphysics, due to its detachment from the empirical base is – according to Śniadecki – worthless, and holding discussions with its representatives is pointless, since they make use of ambiguous language, and their reasoning is logically incorrect.

The mind once led out into the world of vain abstraction stubbornly takes a dream for thought, and subterfuge for reasoning, and is not easily given to the straight and narrow path of thinking [Śniadecki 1820: 197].

ONE SHOULD NEVER QUARREL WITH [SPECULATIVE] METAPHYSICIANS. These are the minds of peculiar sort, bearing a bag of double-edged words, dark and going different directions; all of their wisdom depends on the knowledge of all the hiding places where there are concealed different meanings of the same word. In short, they are Arguses with owl's eyes, who only see in darkness. To all the difficulties inflicted upon them, they have one common answer: THAT THE WRITERS DO NOT UNDERSTAND THEM. This excuse is unfair; since their science by its very nature has this privilege, which no other holds, in that it can be both understood and not understood [Śniadecki 1820: 187-188].

Metaphysical reasoning is by its very nature dark and dangerous [Śniadecki 1818c: 119].

5.1.2. Analytical philosophy

Theses of analytical philosophy – as opposed to speculative metaphysics – are closely linked with empirical base, as provided by science: namely, they are its generalizations.

In this science [*scil.* in analytical metaphysics], things were considered through separating from them with thought only that which is their attribute common with many other things; therefore then, any general thinking, pondering over common truths of whatever subject and being the work of pure and more extensive reflection, was called "metaphysics". It is a wider embracing of things and learning general and universal truths from their common properties, thus raising the human thoughts from phenomena to individual perceptions, from sensory impressions into one binding chain, to the causes or the rights of which they are results. In this sense, each respectable science has its own metaphysics [Śniadecki 1814b: 147].

Metaphysics of science […] is nothing else but the application and adaptation of reason to phenomena, events and the individual effects [Śniadecki 1814b: 148].

Mathematical metaphysics […] [is for example] broad, general embracing of all science.[…]. To add either our own delusions, or vague judgments (*des principes vagues*) of supposed philosophical metaphysics to these strict views means to falsify science and convert this delightful capital of the truth and obviousness into pit of ignorance and dream [Śniadecki 1818c: 127-128].

Systems of analytical philosophy should meet two criteria: they should be reliable and accurate. A system is reliable when empirical arguments, being its starting point, are true. A system is accurate when its generalizations are neither too narrow ("constricted"), nor too extensive ("exaggerated"). The generalization "Each square is a rectangular" is too narrow because all rectangles are also rectangular; the generalization "Each quadrangle is rectangular" is too broad, because some quadrangles are not rectangular.

Good metaphysics of sciences […] should have two semblances of truth: RELIABILITY and ACCURACY. Reliability relies on not considering only that what is within things; delusions, prejudices, creations of the imagination and passion should not enter here, because they are taken from us, not from things. Accuracy should be in mental activities, so that the reason raised above the special effects does not attribute more to things in its conclusions and general thoughts than what necessarily results from these effects; here both real difficulties, and the greatest hazards occur. Barely not all metaphysical errors in the sciences arose from exaggeration, although the constriction errors also happened, or, so to speak, deficit errors, when the meaning of a general truth is not brought to its proper boundaries [Śniadecki 1814b: 149-150].

5.2. Logic

5.2.1. Subject

Śniadecki understood "logic" very broadly – according to the custom prevalent in his day and for a long time later. Śniadecki considered the subjects of logic to be: thinking (spiritual states and activities) – with particular emphasis on cognitive functions – language, truth and science.

LOGIC. I. How is the power of feeling and power of learning present in the soul? II. Which actions of the soul come from the power of feeling? and how are they described? III. Which actions of the soul come from the power of learning? and what is deference? abstraction? reflection? conviction? comprehension? wit? reason? IV. How are these actions, resulting from the power of learning, described with one name? how is logic described from here? and in how many ways does our thinking occur? V. What is an an image (idea)? in how many ways are images commonly divided? VI. Which kinds of images does the first division contain? how are they described? and which action of the soul do they come from? VII. Which kinds does the second division of images have? how are they described? and by which actions of the soul do we acquire them? VIII. Which images help us most to know things and how to acquire them? and which ones interfere, and where do these obstacles come from? IX. What are the words? what are their benefits? and what should one be wary of using words? X. How many ways of speaking are there? and which rules should be observed in each? XI. What are the sources of error within us? When are passions helpful? when are they harmful? and how to temper them? XII. Freedom of imagination is the beginning of what mistakes? what fanaticism? enthusiasm? and which rule serves us against this erring occasion? XIII. What are superstitions? how do they cause error? what pedantry? and what are the rules to eradicate superstition? XIV. What is the reason? how many kinds? and which are the rules for making good-sense? XV. What is the truth, and what are its signs? XVI. Which are the states of the soul regarding the truth? XVII. What is the inner conviction (*intimus sensus*), and to which truths within us is it is a witness? XVIII. What should one hold on the evidence of the external senses? XIX. What is a universal sense, derived from nature (*sensus naturae communis*), which are the causes of its deterioration? XX. Which are the characters of universal sense of nature? and is that a sure sign of moral truths? XXI. What is a sign of historical truths, and which are the characters of true testimony? XXII. What is criticism, and how many parts does it have? XXIII. What are the rules to discern the real from the fabricated testimonies? XXIV. What are the rules to discern the appropriate from planted authors? XXV. What are the rules for reading books and making healthy criticism on them? XXVI. What is hermeneutics? and what should be retained in the translation of books? XXVII. What is a concise and analytical way? and which should be used where? XXVIII. What is a good taste in thoughts? what are is its characters? and the means to acquire it? XXIX. Into how many classes are all sciences divided? XXX. The first class, improving memory, which type of sciences does it have? what should one keep and what to avoid? XXXI. The second class, perfecting reflection, how many sciences does it contain? and how should their progress be judged? XXXII. The third class, perfecting imagination, which sciences does it include? and which goals should we establish ourselves in learning any science [Śniadecki 1777: 43-45]?

5.2.2. Thinking

Logic delivers, on the one hand, a description of the thought processes, on the other – the rules determining when these activities are carried out correctly.

> Logic […] [indicates] the principles […] of good thinking in all this, whatever falls within the light of reason [Śniadecki 1778a: 126].

The thinking tool is language. Therefore, just as the language of science (*cf.* below), so too scientific reasoning should be characterized by clarity and simplicity.

> We think using language and words […].Therefore, […] we often let the words seduce and mislead, in either not holding tightly to their meaning, or pretending to understand what we honestly do not understand [Śniadecki 1821: 322].

Who speaks obscurely and intricately – also thinks obscurely and intricately.

> I am a REALIST, that is […] in words, I do not seek sound and wind, but things; […] for me, to understand is not to stop at the word, is not to satisfy myself with the first throw of attention, but to view a thing from all sides and accounts, acquire its clear and pure notion, name it properly, and then clearly convey it in explaining what I think. And that is why I hold the certain maxim: THAT WHOEVER EXPLAINS HIMSELF OBSCURELY, DOES NOT UNDERSTAND HIMSELF AND HAS NO RIGHT TO REQUIRE OTHERS TO UNDERSTAND HIM [Śniadecki 1820: 188].

5.2.3. Reasoning

Reasonings are of particular interest to logic – most of all scientific reasonings.

Depending on whether one seeks the reason of a given statement, or its consequence, reasoning is proving or inference.

Proving statement $\mathcal{Z}_1$ is the same as indicating statement $\mathcal{Z}_2$ such that $\mathcal{Z}_1$ follows from ("is included in") $\mathcal{Z}_2$. To infer something from statement $\mathcal{Z}_3$ is the same as indicating statement $\mathcal{Z}_4$ such that $\mathcal{Z}_4$ follows from $\mathcal{Z}_3$.

> If I ask "why?", the answer to it is called "proof"; and if the question is, "thus?", the answer to it is called an "inference". Let us examine what is the proof and what is the inference. SCIENCE IS MAN'S ADVANTAGE, BECAUSE IT IMPROVES HIM […]. [Here] I found the second statement "Science improves man", which includes the first statement "Science is man's advantage". […] SCIENCE IS NOT A GIFT BY NATURE, SO IT MUST BE ACQUIRED THROUGH LONG WORK. […] [Here] I found the statement "Science must be acquired through long work", which is enclosed in the first statement "Science is not a gift by nature" […]. In both examples, I tied two statements, of which one is enclosed in the other; such action of the mind is called reasoning (*ratiocinatio*), inference (*illatio, conclusio*), proving (*probatio*). Thus, to tie a relation to a relation is called "to judge", while to tie a statement with a statement is called "to prove" or "infer". As proving, inference is one [and] the same action since it is searching for a statement, which ties to the sentence given, and therefore one is enclosed in the

other. If the searched statement is more extensive, the statement given is its inference; if the searched statement is tighter or more specific, then it stems from the statement given as its conclusion [Śniadecki 1821: 332-333].

If I infer the given statement from a more general statement – or infer the statement stating occurrence of certain things from the statement stating occurrence of the reasons for this state of things – then my inference is *a priori*. If, however, I infer a given statement from the more specific statement – or, in other words, infer a statement of effect from the statement of cause – then my inference is *a posteriori*.

If I derive effects from the causes or deduce specific statements from general statements, I act *a priori,* which is also called "SYNTHETIC method." If, however, I derive cause from effects or deduce a general statement from specific statements, I reason *a posteriori*, which is taken to be an ANALYTIC method [Śniadecki 1821: 333].

A common, especially in philosophy, error in proving is a vicious circle with which we deal when a statement being proven $\mathcal{Z}_1$ results from the recognized statement $\mathcal{Z}_2$ only in conjunction with the implicitly assumed premise containing or identical with the sentence $\mathcal{Z}_1$ – or just because statement $\mathcal{Z}_1$ is the presupposition of statement $\mathcal{Z}_1$.

The error [of French and German philosophical schools] is that they do not distinguish between a phenomenon and a statement; what is, but what is not being proven, from what strictly should be proven. For example, they attempt to extensively prove the EXISTENCE of bodies, which is a phenomenon of FEELING, and THE FREEDOM of the will, which is a phenomenon of CONSCIENCE.[…] Therefore, all this evidence, considered in-depth, are either non-existent, or contain a logical fallacy called "*petition principii*," that is, that in proving we secretly state what we plan to prove. This is against the human constitution to prove the existence of bodies without resorting to the senses; and again, to prove this being through the sensual phenomena, which is, for example, the resistance of bodies convicted by touching, is to prove the reliability of sensations by sensations and fall into the obvious contradiction that the senses deceive and do not deceive us [Śniadecki 1821: 414-415].

In the empirical disciplines, a special role is played by: explaining, which (it seems) Śniadecki considered a kind of "weaker" proof, and two types of inferences: inductive inference and inference *per analogiam*.

There are three […] paths of the human mind in the sciences of observation and experience: induction (*inductio*), analogy and hypotheses – that is, conjecture and guesswork. One needs great […] moderation and prudence in their righteous and

useful use, because […] going too far and exaggerated, they brought the greatest people to vagaries and errors [Śniadecki 1821: 349].

INDUCTION and ANALOGY […] [are] two beaten logical paths in reasoning, where although we secretly suspect that what follows is contained in what it was preceded by, or that two things are similar to one another in everything, which [anyway] may not always be true [Śniadecki 1817: 115].

The path of comparison is the only way of knowing things; […] learning things takes its perfection from extending our thoughts so far as far the effects and connections of beings occur [Śniadecki 1781: 15].

There are only two kinds of truth in the whole sphere of human perceptions: truths of deeds (*verités des faits*), which are based on observation and experience, and the truths OF COMBINATIONS (*verités des combinaisons*) extracted by force of reflection, whose foundation is well understood IDENTITY (*identitas*). I call the "combination" or "application" this action by which I apply and fit one thing on the other; when I move similar things or thoughts away, or bring together those removed, when I combine and add those separated ones, when I separate and remove those combined, simply, when I compare one thing with another [Śniadecki 1820: 190].

To have a supposition, or HYPOTHESIS, be quasi-real (*probabilis*) and helpful to science […], IT SHOULD BE A GENERAL OR ALREADY PROVEN PHENOMENON, OR POSSIBLE TO PROVE BY THE FUTURE PERCEPTIONS [Śniadecki 1821: 257].

Scientific reasonings often require consideration of the relationship between very distant phenomena. Meanwhile – as studies show – the man is able to compare with each other at most three images. The way to overcome this limitation is – according to Śniadecki – to compare with one another not the images themselves, but their symbolic representations, and to test the combinations, which these representations may enter.

[Reason] being restricted in its courage and strength, unable to heed more than three images at one time, when it is to combine one truth with another very remote truth and experience a large number of centering combinations, it must necessarily cease in its guard and strength. Each reason has these limits, but not every one in one place. Therefore, it follows that if it had a way to attend a large number of thoughts and images in a short expression, it would be able to apply the most distant relationships between each other without the exhaustion of its vigilance, and thus pass easily from one truth to another. This service is rendered to us by the reckoning, which is a way to express SYMBOLICALLY many thoughts and COMBINATIONS [Śniadecki 1781: 18].

Śniadecki appreciated the qualities of symbolization, but he was not a symbolomaniac, at least in the sense to consider (syllogistic) schematization as a guarantee of relevance.

> Thorough reasoning does not need a syllogism; […] given reasoning seems better when it is expressed bare, without any artificial form; […] just all these forms have been the most common hiding place for sophistry; […] at the end, excessive care about the form of inference entailed neglect in seeking strength and thoroughness of proof [Śniadecki 1821: 431].

On this occasion, Śniadecki pointed to the confusion regarding the distinction between analytic and synthetic methods in mathematics and other sciences (including philosophy).

> Proving […] any truth or solving any questions by drawing figures, we proceed in mathematics using a SYNTHETIC method. Even if we used the algebraic signs, but when these signs are doing nothing more, but shorten common speech, the method does not cease to be synthetic. If, however, to prove any truth or to solve any question we use general letters and characters and from reasoning over these letters, from their algorithm we draw conclusions, we proceed in mathematics using an ANALYTICAL method, and even if we used drawings and figures, but when these figures serve nothing more than to explain an account, or to make it easier to come to express our task through letters, and then turn the whole reasonings into language, the manner of conduct does not cease to be analytical. In short, these are the two paths of reason manifesting in its action. The reason, when it considers relations and connections of thoughts in a drawing or in a definition, proceeds SYNTHETICALLY; when reading them in general language, in its symbolic expressions, properties and transformations, it proceeds ANALYTICALLY. Now, we have a pure and accurate meaning of these two words in mathematics, which are being taught in many books so deceptively, so variously and sometimes falsely. To say that the ANALYSIS is DISSECTION, it may be true in chemistry and other sciences, but it is false in mathematics: for analysis composes and dissects.[…] Yet, to say that *synthesis* starts from general truths, and *analysis* from specific truths, is also great falsehood in mathematics [Śniadecki 1818c: 134-135].

5.2.4. Language

While among the thought activities the focus of logic is reasoning, the language being the centre of interest of logic is the language of science – especially scientific terminology.

5.2.4.1. Understanding the language

He understands a given language expression who knows the concept associated with this expression. Śniadecki distinguished two types of concepts: common and scientific. The common concept – is a set of properties, by which users of this expression recognize whether an object is the object signified by the expression. The scientific concept – is a group of properties

identified through research in objects signified by the corresponding expression in the language of science.

> A spoken or written word puts in our minds a concept of the named thing, but the concept may be VULGAR or LEARNED, i.e. SKILFUL; both suggest the same thing or the same property and contiguity, but the vulgar notion ends at being and superficial meaning of things while the LEARNED CONCEPT brings us a lot of properties discovered by science in the named thing [Śniadecki 1821: 319].

The philosophical terms should be – according to Śniadecki – equipped, of course, with scientific concepts, rather than common ones.

> [One should] not derive the actions and judgments of the higher powers of the soul from common and boorish thoughts, but from sciences and skills where the greatest courage of mental prowess shows [Śniadecki 1821: 249-250].
>
> The philosophy of the human mind should contain a decent argument of mental phenomena; the most numerous mental phenomena are in sciences, in their discoveries and inventions, so the first condition of philosophy is knowledge of what was done and discovered in the sciences, which ways and means were followed in these inventions, and what warnings and principles arise from them for us [Śniadecki 1821: 416].

5.2.4.2. Language of science

Logic is primarily interested in the language of science, especially scientific terminology.

Śniadecki distinguished between the "good" language and "correct" language. It is difficult to expect from everyone to write well; but one can and should require from everyone to use correct language.

> You cannot demand of everyone to write well, because for that you need talent; but you should demand of everyone to write correctly and without errors, when publishing writings to all Poles to write clearly and understandably, and therefore not to include ways of speaking in certain provinces, incomprehensible and offensive to the ear in the other provinces. Each of the writers has their own individual style, but everyone should have one language [Śniadecki 1814c: 59].

The correct scientific terminology should – according to Śniadecki – meet the following demands: it should be morphologically natural (*i.e.* morphologically similar to natural language), acoustically harmonious (*i.e.* "mild" in sound), semantically precise, emotionally neutral (*i.e.* not generating frivolous associations), structurally uncomplicated (*i.e.* of simple structure)

and categorially similar (*i.e.* as closely as possible reproducing the structure of reality, to which it relates) and, consequently, intuitive (*i.e.* favouring expressions which refer to phenomena).

These demands should be guiding especially to those who want to improve scientific language and in particular enrich its vocabulary.

> Cobbling together new words where they are not needed is a sign of frivolity and irreverence to the nation, because it does not become a private person to follow their whimsy and introduce variations to the common property precious to; it is not proper to think that the language is the work of vagaries and waywardness and not the fruit of reason, long deliberation and public approval. But that new things and new thoughts formerly unknown to the country often draw new names, one, pressured by such a need to create new words should keep the following provisions, as arising from the principle cited above.
>
> Firstly: An expression of speech should have the national composition, ending and whole, so to speak, physiognomy, because only by this it is approaching everyday language.
>
> Secondly: It should not be hard for the ear, because sciences should be applied not only to enrichment, but even to mitigation of language.
>
> Thirdly: It should have PRECISION, that is bluntness, clearness […].The first […] property of perfected speech should be clarity and comprehensibility.
>
> Fourthly: A new word should be serious and MODEST, giving no reason to extend it to the ridiculous or shameful, insulting meaning […].
>
> Fifthly: One should also strive for an expression of speech not to be overly long-winded or glued together from many words [Śniadecki 1813: 38-39].
>
> Sixthly: The most important condition in orderly formation of new words is to preserve ANALOGY.[…] Similarity of name, therefore, should arise from similarity of thoughts or things [Śniadecki 1813: 40].
>
> [Seventhly:] The language must be sensual, that is taken from things which fall under the senses, to be understandable [Śniadecki 1821: 321].
>
> [Eightly:] Better is rarely used, harmonic and widely understood macaronism than ridiculous Polish [Śniadecki 1814a: 67].
>
> [Ninthly: The language should be simple.] The language is SIMPLE, when it can express complicated things, lofty thoughts and deep notions succinctly and clearly and in ways similar to those of ordinary speech. The language can be intricate as to the rules of grammar and simple in expressing things and thoughts. Simplicity of language is the most beautiful ornament of thoughts and a feature of its perfection. However, this simplicity must be separated from levity and awkwardness in the speech of commoners [Śniadecki 1814a: 77].
>
> The language is improved when we expand, complement and emphasize the attributes mentioned, for which the talent of writers and speakers is an essential condition, and good use of knowledge and sciences an immense help. Therefore, those who want to be given lessons in a foreign language or in Latin, not at all useful to the present state of knowledge, either aim for ruin, or for stopping the growth and perfection of the language [Śniadecki 1814a: 77].

Śniadecki was convinced that every predicate contains explicitly or implicitly a word "is". Therefore, the basic sentence structure is a subject-predicate sentence: *"A* is *B"*. If this structure meets the demand of categorial analogism, then the basic categorial structure of reality shall be deemed the fact that a certain object is attributed a certain property.

> All words (*verba*) explicitly or implicitly contain the word "is"; *e.g.* "The sun shines" means: the sun is shining; "Man writes, thinks" means: man is writing, thinking [Śniadecki 1821: 313].

With regard to the scientific terminology – besides the above-mentioned demands – Śniadecki further formulated demands of mononominality and affluence.

The postulate of mononominality was based on attributing at most one term to a given concept – as a conceptual network element of a specific scientific discipline.

> A venerable attribute [of the language of mathematics] of universal intelligibility is a great incentive to reject all changes and additions, which some even excellent geometricians wanted to introduce into mathematical calculus by multiplying unnecessarily the number of signs or altering those already established for certain perceptions, which in the signs already widely adopted can be saved and kept. A multitude of words and signs is not the richness of the language when they do not express either new thoughts and things, or remarkable variety in known thoughts and things; it may be convenient to speakers and poets in common language, but in the science of the strict truths and precision it leads to confusion rather than to the progress and clear stating of thoughts [Śniadecki 1813: 37].
>
> Wherever there is no real need, where there is no new thing or new thought or new image and movement, there one should not create a new word nor alter a word widely adopted and used by good writers; otherwise it is to spoil, obscure the language, and knock it down into barbarism [Śniadecki 1814a: 68].

The postulate of affluence was a *sui generis* complement to the postulate of mononominality. This had to do it with assigning at least one term to each concept.

> When the language can properly and comprehensibly name and express everything, such language is AFFLUENT or wealthy in names. We have things, thoughts, sensations and movements of feeling to name. Various phenomena occur in things, various shades and varieties in thoughts, varying degrees of power and intensity in movements. The language is rich, when it is able to issue and express all of that [Śniadecki 1814a: 77].

In the above list of demands, Śniadecki emphasized in particular the demands of morphological naturalness, semantic precision and structural non-complexity (simplicity), since their implementation is conducive to clarity (*scil.* intelligibility) of language.

> In every language […], the first principle should be: TRY TO CLEARLY UNDERSTAND AND EMBRACE THE MEANING OF EACH WORD IN THEIR ENTIRETY [Śniadecki 1818c: 119].
>
> [CLARITY of language] depends on the fact that every thing is properly named and the name is understandable to all those knowing the thing. No language can do without sometimes indicating the fair meaning of the word by contiguous words; the less the language needs and uses it, the clearer it is in itself. The clarity of the language is further spoilt by quite dense writing defects, by interjecting with too frequent and long parentheses, by interweaving and separating too far nouns from adjectives *etc.* [Śniadecki 1814a: 76-77].
>
> Language of obscurity and confusion […] it is not the proper language of truth and certainty [Śniadecki 1820: 196].
>
> Improving sciences should strive for increasing their simplicity and clarity, to make them easier to comprehend [Śniadecki 1819: 171].

An example of expression violating the postulate of semantic precision is the expression "form", which has at least five meanings.

> The word […] "form" in any language is obscure because it has many meanings. It means either beauty or superficial character, or cut, or a tool for extruding and casting of candles, statues *etc.* and even a certain system of sentences and thoughts in reasoning (*forma argumentationis*) [Śniadecki 1820: 199].

The postulate of semantic precision was not – in Śniadecki's terms – of absolute nature: ambiguous expressions may be used on the condition of willingness to indicate which of the attributed concepts is meant.

> Not always one can avoid words with multiple meanings in the language. The matter is only to explain in what sense the word is used as to be clearly understood in what one says or writes [Śniadecki 1816: 85].

Those who violate the specified demands – by replacing "ordinary language" with "mystical language" – are therefore dangerous pests.

> Language is the most principal and the most important instrument for the growth of science and enlightenment; who spoils it, who soils its simplicity and clarity, who wishes to announce the incomprehensible and meaningless things as wisdom, is the greatest enemy of science and pure reason [Śniadecki 1803b: 359].

> Poorly understood words […] may entail [many a] misery in matters of life […] [and] in the sciences [Śniadecki 1821: 315].
>
> Ordinary language could not be used to [describe] things not available to senses. Thus, a mystical language was created, the explanation was mastered of things incomprehensible to both a writer and a reader, and the whole doctrine of the so-called "philosophy" was composed as if from the articles of the new faith, full of inaccessible mysteries [Śniadecki 1818c: 122].

5.2.4.3. Purity of language

Implementation of the naturalness demand would also – according to Śniadecki – facilitate the absorption of scientific terminology by natural language, which promotes the popularization of scientific knowledge, and consequently raises the general education.

> Language of mathematics, as any other science should approach, if possible, a common language […]. In this way, we can transport many thoughts and ideas from science into common speech, […] acquaint the nation with every science and give it certain precision in their explanation, thus opening to speakers and poets a new source of metaphors and ornaments [Śniadecki 1813: 38].

In Śniadecki's times – and later – a condition of purity of language was added to the condition of clarity and simplicity. Śniadecki thought that this condition should give way if it stood in conflict with the latter two: it is better to keep the foreign term, but plain and simple, than try to create a familiar expression (with Polish root), but obscure and abstruse. He was, therefore, an adversary of radical purism in this regard.

Śniadecki provided an example of unnecessary – because misleading – polonization among others in pushing for the term "dissection method" (the Polish expression: "sposób rozbiorowy") in place of the already functioning term "analytical method" (the Polish expression: "metoda analityczna").

> It was better to leave in the language the word "analytical method", than to name it badly in Polish "dissection method", for *analysis* not only takes place in dissection, but also in putting things together. […] As a synthetic method, also analytical method goes from things known to the unknown, but everyone undertakes it differently; in human knowledge every human has their own separate departments and, so to speak, reign [Śniadecki 1813: 48].

Śniadecki stood by the view that lexicons and encyclopaedias should not record incorrect – from this point of view – expressions so as not to perpetuate them in the linguistic awareness of the society.

This misfortune befell all the languages that some spoiled them, others perfected them, but a reasonable dictionary always served as a rule which words are good and right and which wrong.[…] We must therefore fear that the dictionary, aiming to maintain and improve the language, does not further perpetuate the plague harmful to the language, by immortalizing the names insulting the language, ear and sense [Śniadecki 1805: 392].

5.2.5. Truth

Truthfulness is – according to Śniadecki – of great value.

The truth is benevolent for the people and nations and pure philosophy, busy calmly telling its story, never challenges and not draws people to the scene of rampant passions, where all its influence ceases and dies [Śniadecki 1819: 175].

"Truth" was defined by Śniadecki by means of double compatibility. A statement – namely – is true, if its elements and structure of relationships between these elements are in line with the corresponding conceptual elements and their structuring, and these in turn are compatible with the corresponding things and relationships taking place between them in the world of phenomena.

Words should agree with the concepts and concepts with things and phenomena of the world [Śniadecki 1821: 316].

When in judgment and sentence the names joined or disconnected agree with the concepts and the concepts with things and phenomena, the truth (*veritas*) arises henceforth [Śniadecki 1821: 338].

Śniadecki pointed to two "signs" of veracity: certainty and obviousness. It is not clear whether he saw the "signs" of veracity as its criteria (*eo ipso* sufficient conditions). He allowed, however, that they can mislead us, but did not indicate how to distinguish between real certainty and obviousness and apparent certainty and obviousness.

[There are] two signs of truth: certainty and obviousness (*evidentia*), but the apparent obviousness may seduce us [Śniadecki 1778b: 135].

Śniadecki considered the sources of error, among others, to be foolhardiness in thinking and incorrect language expressing them.

External causes of error […] [lie] in superstition, which we acquire before good sense [Śniadecki 1778a: 132].

First, we should think and internally judge with our reason what we say [Śniadecki 1778a: 129].

[These are] errors resulting from wrong use of words […]: doubt, obscurity, redundancy in writing [Śniadecki 1778a: 130].

Śniadecki recognized mathematics as the domain of certainty and obviousness. Mathematical theses owe certainty and obviousness to: (a) simplicity of mathematical objects and relations between them; (b) clarity of definitions formulated within mathematics; (c) reliability of deduction used in deriving these theses.

Mathematical sciences owe their certainty and obviousness first to their essence, or the object – simple, extensive and perfectly described in its meaning; they owe it to the view, under which the reason considers this object, without adding anything to it except for the capability of increasing or decreasing, and therefore considering the varieties arising of the nature of the object; they owe it to the descriptions, or DEFINITIONS clear, simple and undeniable from anyone; finally, they owe it to the mode, which does not depend on words and names, but on certain and infallible inference, either SYNTHETIC, when these conclusions are based on a fundamental description or a drawing, or ANALYTICAL when they are based on general language and its activities, which cannot seduce us [Śniadecki 1818c: 137].

Reliability is granted to mathematical inferences by their algorithmization.

The roads through which […] the language [of mathematics] passes in terms of varieties of quantities are different types of OPERATIONS or actions, which is called ALGORITHM [Śniadecki 1818c: 124].

In any algorithm, the principles of actions are certain and strictly proven; one can learn them well, and through great skill and exercise perform them easily [Śniadecki 1818c: 125].

About many things, however, we only have probable knowledge.

Except for mathematical truths, the great mass of human knowledge in its majority is just a collection of thoughts similar to the truth. Our reasonings, based either on experience or on the undeniable truth, the farther they float, the more they drift away from their beginning, the more they lose of their obviousness and the sooner they can make us insane [Śniadecki 1817: 114-115].

Śniadecki believed the theory of probable knowledge to be "the calculus of fates" or calculus of probability, to which he attributed great theoretical (methodological) significance.

I called the calculus of fates (*calculus probabilitatis*) […] the "HIT-AND-MISS calculus" [Śniadecki 1817: 99].

This is an OSCILLATION, which is a continuing fluctuation of hits and misses, that is auspicious and inauspicious events [Śniadecki 1817: 99].

It is therefore an arithmetic fraction expressing the ratio of the number of auspicious incidents to the set of all events that could occur, what constitutes "similarity of luck," or the number of opposite events to the set of all events that may occur, which we have called the "similarity of misses" [Śniadecki 1817: 100].

The human mind in its thoughts, views and reasonings would be infinitely happier and more confident if it could in any case know how close to or far from certainty it is, what to expect from the calculus of fates adapted to other sciences, as it is applied today to physics and astronomy. It would only be fair and effective *criterium veritatis* sought by logicians and metaphysicians in their rather useless chatter [Śniadecki 1817: 116].

Incidentally, probability calculus has not only theoretical but also practical significance.

If the reason was always an effective remedy for the passions and follies of men, it would find in this science the most powerful weapon to tame true rampant passion for gambling, or game of chance, leading to ruin, destruction, corruption of morals and a thousand woes of ruined homes and families. But even that does not require a profound reckoning, because simple research suggests what an unwise act is to pledge a reliable share of the estate in the event of uncertainty [Śniadecki 1817: 105].

5.2.6. Science

Śniadecki awarded science – its practice and assimilation – an important function in the culture.

All sciences improve the human mind, that is, facilitate and extend its concept, enrich it with thoughts, straighten its reasoning, raise or restrain imagination, and, to put it shortly, they extract, exercise and expand its powers. And therefore, whatever is true, is always respectable for the human mind. People provided with sciences, skilled in consideration and deliberation, skilled at seeing the different sides and in different forms of events and adventures of the world, reflect upon them, judge and apply them, are moved by them and finally manifest in their writings what they think and feel [Śniadecki 1816: 91].

In addition to skilful words and expressions, sciences also have a more important and more worthy effect on the language, improving and expanding the thinking, keeping all the faculties of the human mind in constant movement and exercise, and enriching them with new truths and perceptions [Śniadecki 1814a: 79].

Individual sciences differ from one another with regard to their object (studied objects), purpose (questions posed) and method (ways to obtain answers to these questions).

In every science, there occurs a THING, which we want to know and to prove; A PURPOSE for which we strive in this knowledge, and the MODE or MANNER, which leads us to that purpose [Śniadecki 1820: 229].

In particular, the object of empirical disciplines are phenomena, and the purpose – providing the theory of these phenomena.

A decent […] and thorough science aims at explaining the phenomena and using them to derive a theory [Śniadecki 1821: 424].

As […] we do not have and there cannot exist any most general mathematical truth that would not be based on the definition and assumption, and would not depend on them, so in other sciences we do not have and there cannot be any general statement, which would not be based on sensory phenomena [Śniadecki 1821: 375].

The source of all knowledge – and thus also of scientific knowledge – are impressions and reasoning.

Two are the origins of human cognition: sensory impressions and action of reason; first comes from things external, the other is in us [Śniadecki 1814b: 153].

The pure reason with its own innate thoughts by nature, without experience, without sensations, is a CHIMERA, which does not exist in the world, because where everything can be derived from sensory experiences, there innate ideas are unnecessary. The reason based on experience, on perceptions and sense impressions, drawing from them by force of reflection the general truths and from them again extracting phenomena, is a fair and benevolent power of man, given to him by nature as the commander in thinking and behaviour [Śniadecki 1814b: 162].

To be capable of something is to explore the relationship between specific things, and again connect reasonings drawn from there and use them, and draw their common beginnings that lead us to knowledge of the laws of nature, and which put together the essence of skill, allowing us to embrace with one look of reason innumerable circumstances and cases which strike the senses [Śniadecki 1781: 13].

Regardless of the above, there are the underlying assumptions of empirical theories, which belong to – as Śniadecki put it – historical faith or philosophical faith.

The assumption being a matter of historical faith – is "prudent" trust in the testimony of others.

The foundation of […] human cognitions is not only what we perceive and what we experience, but still in many cases [historical] FAITH, based on the truth and fairness of others, while maintaining strict principles of caution, defending us from gullibility and illusion [Śniadecki 1821: 265].

A matter of philosophical faith are the assumptions: of purposefulness of everything that exists; of simplicity of "actions" of nature; of recurrence of phenomena; of stability of laws governing the phenomena; of similarity of the primary sources of knowledge in humans and other cognizant creatures.

> There is […] in the realm of thinking and doing another kind of faith, which in the meantime I will call "philosophical": when we adopt sentences and statements, which we are not strictly capable of proving, but on which we still base our inquiries, and our matters. Nobody could, for example, prove: THAT NATURE DOES NOTHING IN VAIN; THAT IN ALL ITS ACTIONS IT HOLDS ONTO THE SIMPLEST PATH; […] THAT THE LAWS RECOGNIZED IN THE WORKS OF NATURE WITHOUT VARIATIONS WILL CONTINUE IN THE FUTURE [Śniadecki 1821: 266].
>
> So-called PHILOSOPHICAL FAITH is a strong confidence expressed and affirmed with specific cases, recognized by all, and therefore the great likeness with the truth, taken barely not as certainty and based on the following beginnings: firstly, that what happened and is happening, would also happen in the future; secondly, that what so far has been confirmed by the phenomena, can be confirmed by others, which may occur in the future; thirdly, that we shall not assign to the human constitution anything which would be opposed to other unmistakable beginnings of cognition [Śniadecki 1821: 267].

As has already been mentioned – the methods used in empirical disciplines include clarifying and inductive and analogous inference.

Mathematics takes a distinguished place in sciences.

> Mathematical sciences undoubtedly hold first place in the order of human knowledge, both because they are a repertory of certain truths, their model relationship and accuracy, and because they are a reliable honour to human reason in extensive inventions and important favours done to so many sciences and arts [Śniadecki 1815: 53].
>
> Do we possess these benefits in other sciences, and therefore may we introduce mathematical rigour in them? No, indeed! Object of the other sciences is either too complex and intricate, or not sufficiently described and vague, clearly not congruent with everything and anything, or dependent on an agreement, taste, human opinions and passions, subject to a thousand varieties and rummagings. FACTS, OBSERVATIONS and EXPERIENCES can be stable and reliable, but the view of them in the human mind may be wrong; and other facts can alter or overturn this view. It would take a human mind aptly seizing what is, and what might be, which is extremely difficult for the mind holding no firm support in its conclusions, and variously turning and rotating in its views. Thus, all other sciences and our knowledge pursued with forces of the mind are either erudition or a set of truths and notions, or for the most part approaching and resemblance to the truth, but none is a continuous path of unwavering certainty [Śniadecki 1818c: 138-139].

The unique qualities of mathematics could be usefully transferred to other sciences. Such mathematization of a given discipline is possible, provided that: properties tackled by the discipline may be presented as values; the studied domain involves "simple, solid and widespread" phenomena; regularity linking the phenomena belonging to this area may be grasped in the form of law, which could be considered interpretation of a specific mathematical thesis; causes of the deformation of properties of objects are known – and yet few and simple.

> Reasonable and useful application of mathematics to physical phenomena requires the following accounts: first – to be able to measure and calculate what we use mathematics for, thus granting it a clear nature of quantity; secondly – that the account is based on the simple, constant and widespread sensual phenomenon […]; thirdly – that […] the physical phenomenon can be tied to a mathematical or obvious, or thoroughly proven truth […]; fourthly – that the obstacles affecting the variation of the phenomenon are all well known, possible to assess and calculate; fifthly – that these obstacles are not too numerous and complex [Śniadecki 1821: 352-353].

So understood mathematization needs to be distinguished from pseudo-mathematization, involving the unauthorized introduction of mathematical terms to the disciplines that do not meet these requirements.

> When science itself is unable to adopt strict certainty, it will probably not be granted by mathematical names [Śniadecki 1818c: 137].

5.3. Ontology

5.3.1. Properties

Śniadecki believed that the real world is a world of individuals (*scil.* entities). These individuals have two types of properties: specific, which are only given to a given individual, and common, enjoyed by more than one individual.

> There are none else in the world, only mere individual entities (*individua*) put together from common and specific properties; there are no entities having only common properties [Śniadecki 1821: 291].

5.3.2. Time and space

Temporality, or location in time, and spatiality, or location in space, are the characteristics of things, and not a necessary "form of sensuality". After all – notes Śniadecki – some things have a temporal and spatial location and yet we can think about them without locating them at some time or place.

Students of Kant have the peculiar logic: they say and write that because each thing must be in place and in time, that is, somewhere and sometime, hence space and time are forms of sensuality. The first proposal speaks of being, or existence of things, the second – of thinking – and it is hard to understand how it may be inferred from that. Every thing is probably at the place and time, but I, thinking about this thing, may not think either about the place or the time [Śniadecki 1820: 202].

It is an indisputable property of the human mind, that in a thing, composed of many qualities inseparable of its existence, I may consider one attribute, not considering others [Śniadecki 1820: 202].

5.3.3. Causality

Śniadecki considered causality to be the central ontological category.

What we call "cause" of some effect [*i.e.* specific phenomenon], or law, that is provision, due to which this effect takes place and reveals itself, is also a major and more widespread PHENOMENON on which other phenomena depended, and of which they are a stable result [Śniadecki 1821: 254].

5.4. Epistemology

5.4.1. Spiritual conditions and activities

The task of metaphysics (and especially epistemology) is – according to Śniadecki – a description of the conditions and activities of the human soul: first of all impressions, thinking and wanting.

BOTH IN THE MATERIAL WORLD AND IN THE MENTAL WORLD, THE ONLY HUMAN EMPLOYMENT AND SCIENCE ARE THE PHENOMENA. The first and safe road to this is to EXPERIENCE and SEE [Śniadecki 1821: 254].

A thorough and truly useful metaphysics, founded not on hypotheses and speculation, but undeniable and universal truths, should explain to us fair, not imaginary strengths of soul, their aids and obstacles. The logic of the action of these forces should put forward and indicate the principles by which one should be governed in these activities, the characters of truth, certainty, resemblance to truth and sources of error [Śniadecki 1820: 209-210].

The human mind cannot be known for its forces and actions, but through its works and creations by external and internal experience in ourselves, that is *a posteriori* [Śniadecki 1820: 239].

Man FEELS, THINKS and WANTS.[…] FEELING, THINKING and WANTING, through which the human soul is manifested, are the properties quite different and unlike extent, impenetrability, paint, figures *etc.*, altogether from those by which the bodies can be known [Śniadecki 1821: 252].

But it would be a speculation to presume, for example, how the impact of external things on the human soul takes place that impressions appear in it.

> For a thorough […] response [to an unreasonable question, "why the external things of the world bear various knowledge and sciences in the soul"], one needs to know the nature and constitution of the human soul; one needs to understand this powerful and miraculous impact that the body has on the soul, immaterial being, and reversely – soul on the body – which was, is and apparently always will be a mystery incomprehensible to the man [Śniadecki 1820: 206-207].

Śniadecki advocated the view that the primary source of knowledge is experience – and firmly rejected the hypothesis of the existence of innate knowledge.

> Although I believe in intangible beings, I am still in Kant's meaning A MATERIALIST, because I hold there is not even the most general idea in man, which would not have its origin in the senses, and which would without their closer or more distant help flow from pure reason [Śniadecki 1820: 188].
>
> And […] although I do not consider sensory impressions, observations and experiences a science, but material for it, from which reason stems and creates a range of general truths, binding the sensual phenomena and representing science, I am nevertheless an EMPIRICIST, because I do not know and cannot see any thoughts, concepts or innate truths of the human mind [Śniadecki 1820: 189].

What is sometimes considered to be an innate knowledge, Śniadecki believed to be a result of abstraction.

> [It is an error] to hold as innate to human mind, what the mind itself can form through ABSTRACTION, as *absolutum* of space and time, to create from what is a true zero in human concept some Medusa, which with its look alone (*Anschauung*) transforms all the sensory images to mental ones [Śniadecki 1820: 213].
>
> The force of detachment [*i.e.* abstraction] creates in us an ever more extensive view of things; but the further this mental view stretches, the more vague and obscure it is [Śniadecki 1821: 296].

5.4.2. Attention

One of the manifestations of free will – is the ability to pay attention to something or turn the attention from something at will.

> We only believe what we want and turn our attention from what we do not want to consider; so attention is the FREE ACT of mind and in it, it is different from feeling and conscience [Śniadecki 1821: 280-281].

5.4.3. Imagination

In addition to the senses, reason and the will – faculties of the soul also include imagination.

IMAGINATION is the bravest, but also without bridle the most dangerous and most harmful [power of the soul] [Śniadecki 1818b: 121].

5.4.4. Memory

Memory is a sort of a reservoir, which stores states, and activities of the human soul already played at a certain time.

The faculty […] which keeps, hides and brings in need the already acquired concepts and products of mind, […] we call "memory" (*memoria*) [Śniadecki 1821: 301].

Memory united with understanding and a short attention provides reminiscence (*reminiscentia*), and united with longer and stronger attention forms recollection (*recordatio*, *recognitio*) [Śniadecki 1821: 303].

5.5. Ethics

The sources of moral standards should be – according to Śniadecki – sought in real possibilities and needs of people involved in social relations: first of all family and nation.

The entire carcass […] [of practical philosophy] should not be based on definitions, because it is not mathematics, not on hypotheses, conjecture and delusions, because it is not romance, but on certain and common phenomena and facts retrieved from the social condition of people, this is the family and nation state, and all those orders and relationships that occur in the community of people [Śniadecki 1821: 411-412].

Conditions necessary for the people to act morally, are the freedom of will and skill: knowledge alone about what actions are evaluated positively or negatively in moral terms will not suffice.

Reason draws the moral rules from the relationships of man to man and man to the community, so the foundation of morality are human and social relations, and freedom of the human will is an essential condition; it is the attribute of the will, but not the foundation of morality, as transcendentalists hold. Materialists, believing acts of will to be the necessary results of prior physical movements in a man, without its freedom derive morality. Therefore, they build morality on the hypothesis as absurd as transcendentalists, because they ascribe to reason that what is not, and the others deny the will, what is a common phenomenon of CONSCIENCE. The science of economists drawing morality from human needs and powers, and therefore from the phenomena impossible to deny, is simpler and more thorough [Śniadecki 1821: 412-413].

Man does not improve in ways other than through addiction; in wanting to make him good, it is not enough to show him the duties of virtue, but one must so wind and work him as to make him surely virtuous [Śniadecki 1781: 23].

Freedom of will is an indisputable fact, as it is given to us in self-knowledge.

> The first […] attribute of will is liberty and freedom of choice; we have internal conviction about the freedom of choice […]; this is the phenomenon of CONSCIENCE not needing proof and all the effort, and rummagings of writers to maintain or overthrow the freedom of will are quite unphilosophical [Śniadecki 1821: 410].
>
> The man is assured of freedom […] of choice by […] [his] own conscience, that is inner conviction itself, that what he chose, he could not choose and discard; that what he has decided, he could not decide or decide to the contrary [Śniadecki 1821: 252].

5.6. Aesthetics

5.6.1. Aesthetic rules

The faculty providing the rules for aesthetic evaluation is taste.

> We call simply "taste" the power of discernment of beauty and ugliness in the works of nature and art [Śniadecki 1821: 378].

Śniadecki pointed to the following rules of this evaluation – reconstructed *ex post* and based on actually formulated assessments: (a) those assessments are accurate, which persist long despite undergoing severe criticism; (b) aesthetic values increase with the development of knowledge about aspects of reality which are their carriers; (c) the assessments passed according to the criterion of originality or authority are irrelevant; (d) simplicity is a positive aesthetic value – as is the positive intellectual value; (e) gentleness and accuracy are positive aesthetic values, even though they tend to be overlooked by the general public.

> There are yet no discovered and revealed common rules of beauty to which we should refer. That an obvious or hidden action of reason must take place in all without exception works of taste, we find out from here: Firstly, that no work of taste can keep that will not withstand a long and harsh trial of CRITICISM, or reason. Secondly, that works of taste improve the more, the greater the increase of certain sciences, needed for such works. Thirdly, that the taste is infected and corrupted with everything that has no support and confirmation of reason behind it, as the desire for novelty, eager but not quite prudent, seriousness of great people, often imitated by inventions and variations only because they have the name and fame of the author behind, and which eventually are condemned by prudence and criticism. Fourthly, that simplicity, falling out of luckily defeated difficulties, from bringing things to the smallest number of clear and obvious cases is as great an advantage of both works of taste and reason. Fifthly, if […] there are two qualities of perfected taste: delicacy and accuracy; it is the power to perceive these beauties, which hide from

common view and mind, and again investigation and avoidance of minor defects and vices [Śniadecki 1821: 379-380].

5.6.2. Artistic values

Within the aesthetics, Śniadecki spoke almost exclusively about the theory of literature, which he called simply "literature".

> Literature is the tasteful and skilful dismantling of exemplary writers in order to discern in them the principles of order, power and beauty and to beneficially judge their art of writing [Śniadecki 1816: 92].

Śniadecki held the following as the main artistic merits of literary works: transparency of language and orderliness of content; uniqueness and moderation of expression; specificity and uniformity of construction.

> The greatest pride of true beauty is the simplicity (*simplicitas*) and pathos and loftiness (*sublime*) is a great, bold and true thought explained simply and clearly [Śniadecki 1821: 405].
>
> The style should be clear and, so to speak, transparent, allowing seeing clearly and easily the thoughts and movements of the writer, their framework and order, almost pouring into listeners or readers. This clarity is work of decent thinking and good expression. Who writes obscurely, does not understand either things or language, or both. Therefore, the new, extraordinary words not known to everyone with regard to their true meaning should not be found in what is being said or written to all. Disorderly thinking puts disorder in writing and complexity – in understanding; even if thoughts were the most beautiful, their messy disarray makes them lose their power when they are not immediately understood. One should think of human ear and attention as extremely ticklish and creative beings, not liking attachment and staying where they were once discouraged [Śniadecki 1811: 44].
>
> Good […] writing means not only that which is free of grammatical errors, and defects in purity and contrary to properties of language, but also writing pleasing to the ear, thrilling and drawing attention [Śniadecki 1811: 28].
>
> In the sciences and writing, one must measure and weigh words very carefully, to avoid exaggeration and not exceed the limits of truth and literary honesty requires not to promise more than one is able to keep and which human strength can provide [Śniadecki 1816: 89].
>
> Everyone has his own style and whereupon writes well, when he is not writing in imitated and someone else's style. Because everyone has his own special way of understanding, feeling and compiling their thoughts. The style should be the hallmark of feeling, thinking and even the personality of the writer. I understand here the character as what is a result of organization and physical structure of man [Śniadecki 1811: 42-43].
>
> Good and appropriate style should be one, that is an expression of different varieties in feeling and thinking of one and the same man.[…] To […] preserve

the unity of style, one must well recognize, examine and prepare in one's head the thing about which one is to write, or one's or someone else's thoughts [Śniadecki 1811: 43].

5.6.3. Literary styles

Śniadecki distinguished two main literary styles: serious and light. The first had – according to him – two varieties: sententious (*resp.* "raw") and ornamental (*scil.* "eloquent", "grand").

> Different types and divisions of style originate from things and character of the writer. Hence the serious or light style, which again are divided into different genres. The first into the raw style, despising any ornaments except those that result from the things and thoughts simply, clearly and neatly elaborated – and grand style, needing […] rich imagination of expression. […] The soul of light style should be wit, as the soul of serious style – reason and strict reliability [Śniadecki 1811: 43-44].
>
> You can speak and write wrong with the most beautiful thoughts; and again, one can be liked and keep the attention of listeners, although not for long, without particular thoughts, but with decorative speech. Hence, two general drawbacks in the art of writing: decorative verbosity and a style, so to speak, sententious, when the writer presses sentence after sentence, speaks as an oracle, not inferring these sentences in a connection, light and order as those occurring in a properly reasoning mind and as those resulting from one another. Then, the attention of listeners is fatigued, bored and lost without a guide, framework and rest [Śniadecki 1811: 36].
>
> Good writing this is not yet the same as writing ELOQUENTLY [Śniadecki 1816: 98].
>
> TO WRITE WELL is, keeping the purity of language to satisfy the readers' understanding, reason and ear to be liked and master their attention. But TO WRITE ELOQUENTLY – this is, with the whole greatness of language and strong embrace of one's issue – besides the understanding, reason and the ear to satisfy also imagination and feeling, in a word to take care of all the brave man's faculties and rule them [Śniadecki 1816: 100-101].

5.6.4. Romanticism and Classicism

Śniadecki joined actively in the on-going discussion in the early nineteenth century, regarding a new literary trend, which was Romanticism. Thanks to historians of literature, Śniadecki's opinions on this matter are probably the best known of all his aesthetic views – and all philosophy.

In this discussion, Śniadecki spoke out against Romanticism – and for Classicism. The justification of his position was simple:

Aesthetically valuable are those literary works that conform to the rules of poetry. Classicist works are compatible with them, and the works widely regarded as romantic are not. Accordingly, the first ones are valuable, and the second ones – not.

That Romanticism is a separate and supposedly new kind of poetry, that it touches upon and quickens with miserable memories and nostalgia for things past, or the resumption of events that entertained people in the age of chivalry, does not draw my attention at all. I consider it with its undeniable mark and only in truly harmful terms for literature and enlightenment, namely as not following the principles of art and seeking advantages in the free-swinging imagination, and as if new ways of playing and teaching. […] So in my understanding it all is classic, which is in line with principles of poetry [Śniadecki 1818b: 104-105].

Furthermore: romantic works, according to Śniadecki are not only aesthetically bad. Literary works – should be assessed not only in terms of aesthetics. They have specific content: they state something about reality. Alas, what they state – is a false picture of reality; that is why they are didactically harmful.

The human imagination may […] decorate and dress the truth in various ways, but it must not falsify it, that is deprive it of essential attributes and grant it other, contrary to those.[…] Beauty […] in arts is only reliable, durable and immortal, which itself is based on truth, or, as we used to say, which is compatible with nature [Śniadecki 1818b: 106].

It is not right […] to suspect [romanticists] that they do not obey any rules of reason, truth and decency, as it would mean to seem like Don Quixote and organize madness [Śniadecki 1818b: 107].

Romanticism likes to recall old customs and national events, yearns for centuries past, loves simple, wild and untamed nature! … Sorcery, witchcraft and ghosts are not nature, but the fruit of the mind corrupted with ignorance and superstition. […] Their memory demeans man, but does not arouse regret [Śniadecki 1818b: 108-109].

Romanticism despises […] the scissors of cold reason [Śniadecki 1818b: 119].

Poetry is not sincere music and no language in itself will keep human attention today in a constant liking. […] For these reasons, there cannot be nowadays any excuse for resurrecting ROMANTIC POETRY, recalling from the Middle Ages the weathered poppycock of credulity in witchcraft spirits and miracles, because these are neither a new invention nor consistent with education and belief of the era; they prove and show not abundance and wealth, but indeed poverty and thinness of imagination, which seeks novelty in trespasses insulting the truth, an increase of enlightenment and dignity of the dominant belief [Śniadecki 1821: 398].

Such allegation can be answered in two ways: either challenging the falsity of the romantic image of reality, or questioning the didactic function of literature. In both cases, according to Śniadecki, Romanticism would be mistaken.

Romanticism advises to abandon all principles of arts to acquire significance in independence; let us resolve to avoid lawlessness and licentiousness, because they lead not to the meaning, but to disorder and barbarism [Śniadecki 1818c: 124].

The intention of […] [tragedy] is to deter a man from the crime with its horror; to strongly present the woes, into which we are thrown by unbridled and violent passions; to encourage the courage and strength in adversity [Śniadecki 1818b: 111].

Romanticism does not want theatre as a school for people, or understands that science is easier and more effective when it is staged in a crowd of foreign things in disarray and confusion [Śniadecki 1818b: 113].

This is impossible to achieve without strict adherence to the unity of things, time and place [Śniadecki 1818b: 118].

5.7. Didactics

Śniadecki – like Kołłątaj – attached great importance to didactics, in particular teaching philosophy.

In his opinion, good teaching should be based on the following principles – mainly related to thinking and speech.

All mental improvement and cultivation of man consists in the speech and the power of reason exercised in the use of speech [Śniadecki 1822: 245].

Firstly, a lecture in a given field should start with the knowledge already known to a student – and build on it providing them with new knowledge.

In other sciences [*i.e.* outside mathematics], the word "analysis" means a certain order and array of both things and thoughts in the delivery of science. Each application and each truth are considered a conclusion of another well-learned truth or facts and perceptions already well understood and is not revealed until after the proving. It is, as we see, decent inference of things unknown, or rather new to the learner, from things already obvious to him. One could call it "invention method", but it is not a mathematical analysis, because this method equally serves synthesis and analysis. Such explanation shall not succeed in all sciences, particularly where there are the principles of imitating agreement, taste and fancy, and where there is no place for strict reasoning [Śniadecki 1818c: 139].

Secondly, one must be particularly careful in training a student to think abstractly.

The land of general thinking, being mostly a land of illusion, an error and a danger to everyone, is for almost exclusively extraordinary talents the land of great inventions and expansive views [Śniadecki 1820: 227].

Thirdly, the acquisition of knowledge in the field (*e.g.* logic or ethics, mathematics, *etc.*) should be accompanied by acquisition of skills of conscious conduct in accordance with that knowledge.

Philosophy is a science of righteous thinking and living, demonstrated in constant practice [Śniadecki 1819: 166].

Experience is the best master of man, and therefore it is not enough to give a man LOGICAL rules of good thinking to make him wise, but he needs to be trained in good and right use of his reason. Otherwise, all logical principles will stay in memory not penetrating into the mind, just like MORAL principles, if not instilled in a feeling, will stay in mind and will not go to the heart [Śniadecki 1781: 24].

[Ability of calculus reasoning or by calculus] is extremely important, so that youth in mathematics do not train to become mechanical calculators, so that they have a clear idea of what they do, so that one does not take dreams, to which the young heads are usually prone, for reasoning [Śniadecki 1818c: 117].

Fourthly, a student must speak only in cases on which he has sufficient knowledge.

Students […] should not give statements about any thing in nature, which they do not understand clearly and with insight [Śniadecki 1778a: 128].

Let us instil in young people, in science and examples, that they write only about things well recognized and understood [Śniadecki 1818a: 89].

Fifthly, student should precede every utterance by careful consideration in order to express it simply, clearly and in an orderly manner.

Let us instil in young people, in science and examples […], that they should turn and shape every thought in their heads until they bring it to the utmost simplicity and clarity, so that these thoughts float so neatly, as one follows from the other [Śniadecki 1818a: 89].

Sixthly, the students should not be required to formulate their statements in ornamental style (see above).

Let us instil in young people, in science and examples, […] that […] [to their] thoughts they should give only such ornaments and costumes, which they own feeling inspires them with in writing, and leave the rest to opportunity and talent of everyone [Śniadecki 1818a: 89].

Sixthly, students should be encouraged to study the texts of the masters of their language and specialists in the field.

Let us instil in young people, in science and examples, […] that they should try to get to know and explore their language and its exemplary writers [Śniadecki 1818a: 89].

The most important thing in reading any writer is pure and thorough embracing his fundamental truth, its application to the conditions of questions or intentions

of all science, considering ways and actions through which his reasoning leads, overcoming obstacles and difficulties he meets. All this requires the reader to pay profound attention and continuous reasoning [Śniadecki 1818c: 128].

Most of these rules were strictly respected in scholastic education. Total criticism of this education – according to Śniadecki – is therefore unjustified.

> We crossed a line in rebuke and mocking scholastic education. Not nearly all the old ways of learning were pedantry; we started to renew and modify everything, as if the former mode of learning offered nothing to preserve. […] The old school method cares about concise and clear description of meaning of the words to be used, and freeing language from doubt to well spread out and divide things into their parts, in every division concisely point out the principles and explain them with fortunately chosen examples. Then, gather everything under one view, present a general picture of science, point out its essential points and their more prominent advantages and disadvantages. It all served a pure and decent lecture, to more easily embrace the science and to keep it more sustainable in the memory. A manner of talking does not give us that. Through it, we turn a young man into a critic and inventor of what he does not know. Hiding from him the difficulty of learning, we rather get him used to recklessness and a high opinion of himself than to modesty and caution in judgment. [*E.g.*] Condillac's *Logic* is a critical debate on logic, but not logic itself [Śniadecki 1818a: 82-83].

6. Impact

Among others, Julian Ochorowicz considered himself a follower of Śniadecki in Polish philosophy. And independently of whether he was conscious of this fact, the greatest follower of Śniadecki was the founder of the Lvov-Warsaw School – Kazimierz Twardowski.

3. Anioł Dowgird

[There are no such truths] which can never be clearly expressed,
which are not accessible to ordinary people,
which can be understood only by a few privileged persons
such that we should take their word for it.

[Dowgird 1821: 82]

1. Life

1776: 11.12. Anioł Dowgird was born at Jurkowszczyzna, in the estate situated in the Mścisław District of Mohylew province in the First Commonwealth; as a result of the first partition, the estate was included in the Russian Empire (now it belongs to the Roslavl region of Smoleńsk Oblast). Anioł's father was an impoverished nobleman – Stanisław Dowgird.[12]

1786-1789. He studied in Jesuit schools in Mohylew and in Mścisław. During this time, his teachers were, among others: in Mohylew – Jan Lubsiewicz (rhetoric and poetics), Agostino Magnani (rhetoric and poetics), Wojciech Obrąpalski (mathematics), Jakub Rogaliński (grammar), Wincenty Rypiński (French) and Wincenty Tywankiewicz (grammar); in Mścisław: Antoni Abramsberg (mathematics and German), Tadeusz Hattowski (rhetoric and poetics), Nikodem Muśnicki (rhetoric and poetics), Longin Turyno (grammar and French) and Tywankiewicz (grammar and French).

1789-1791. He studied rhetoric, physics, world history, logic and the French language in Piarist college in Dąbrowno near Orsza (active in the years 1785-1799); rector of the college at that time was Józef Ostrowski.

[12] Stanisław – as his father's name – is listed in the personal questionnaire of Vilna University from 1816. In a parallel questionnaire from 1832 and the letter-request to tsar Nicholas I, instead of "Stanisław", "Andrzej" is given as the name of his father.

1791: 17.08. He joined the Piarist Order in Lubieszów (then the Mińsk province). During the novitiate, his supervisor was Jan Kanty Wykowski. The local Piarist college (active in the years 1686 to 1834) educated, among others: Tadeusz Kościuszko, Teodor Narbutt and Adam Naruszewicz. The prominent teachers in the college were: Michał Charkiewicz (author of the Latin rhetoric textbook), Aleksy Kotiużyński (translator of Virgil), Andrzej Puczyński (author of the world history textbook), Ferdynand Serafinowicz (professor at the University of Vilna) and Maciej Tukałło (translator of French and Latin).

1793: 17.09. He took holy orders.

1793-1795. He attended the monastic studies – in philosophy, Latin and Polish literature, mathematics, physics, natural history, world history and theology – first, for two years, in Dąbrowica on Horyń. The high level of the college was evidenced by the fact that among its graduates were: Alojzy Feliński, Cyprian Godebski and Łukasz Gołębiowski.

1795/1796. He studied mathematics, physics and theology at the University of Vilna, where he received a master's degree in theology. The rector during this period (1789-1799) was Marcin Poczobutt-Odlanicki, mathematician; the Department of Higher Mathematics was headed by Franciszek Narwojsz; Józef Mickiewicz (a distant relative of Adam) was a professor of physics; Filip Neriusz Golański, Piarist, highly valued by Dowgird teaches rhetoric and poetics at the Faculty of Theology.[13] One of the greatest Vilna philosophical individualities at that time was Hieronim Stroynowski, Piarist, since 1789 professor of the laws of nature and economics and then (1799-1806) rector of Vilna University, initiator of founding of the Central Seminary at the University (1808); his successor as rector (1806-1815) was another prominent – and, like Golański, valued by Dowgird – philosopher, Jan Śniadecki.

1796-1807. He was a teacher in the county schools of Lithuanian Piarist province, successively in Lida (1796/1797), where he taught arithmetic and geography; in Wiłkomierz (1797/1798), where he also taught arithmetic and geography; in Rosienie (1798-1801), where he taught mathematics and

[13] Here are the characteristics of Golański, which Dowgird outlined in the eulogy: "He did not rummage in those things that go beyond understanding. He did not grant his mind unlimited powers. He had no respect for a skill, which would only inflate people without making them better. […] Love of God and neighbour, generosity, temperance, humility, reasonable honesty, patience, kindness, charity attempting to please God in secret, rather than to acquire human worship, eagerness in the performance of his duties and faithful adherence to his state, comprised the continuous path of his life" [Dowgird 1824: 15].

The non-existent cemetery by the church of saint Stephen in Vilna
– a place of Dowgird's burial

physics; in Witebsk (1801/1892), where he taught mathematics; in Łużki (1802-1804), where he taught poetics and rhetoric; finally in Szczuczyn Litewski (1804-1807), where he taught physics and French.

3.10.1802. He was ordained to the priesthood in Mohylew.

1807-1809. He taught poetics and rhetoric to monastic youth in the Lubieszów Novitiate. He was the prefect of the Piarist Convitto of Noble Youth in Vilna.

10.10.1811-31.08.1813,[14] 1816-1832. He was chaplain of the Central Seminary at the University of Vilna.

1812. He served as a chaplain in the infirmary located by the French troops occupying Vilna in the building of the Central Seminary.

1812-1813. He was chaplain of Vilna Gymnasium.

1814-1816. In the Piarist Seminary in Dąbrowica, he taught Polish literature. In addition, he was acting provincial secretary and consultant of Piarist assembly and prepared a draft reform of the order.

1818-1821. After the death of Johann Heinrich Abicht, he was deputy professor of logic and psychology at the University of Vilna.

20.05.1819. He examined Adam Mickiewicz in logic at the Faculty of Literature and Fine Arts, University of Vilna.

1821-1823. He served as assistant professor of theoretical and practical philosophy at the University of Vilna.

[14] These dates are taken from available documents. A. Fijałkowski, P. Chmielowski and J. Bieliński give 1809-1812 for the first period.

1822. He became a corresponding member of the Warsaw Society of Friends of Sciences with a thesis *O logice, metafizyce i filozofii moralnej rozprawa* [Dowgird 1821].

1823. He lost (like Michał Wiszniewski) with Józef Gołuchowski a competition announced in 1820 for the Chair of Theoretical and Practical Philosophy of Vilna University. He rejected the proposal to take over as vicar of Oszmiana.

1824-1832. He taught logic at the University of Vilna. He also was a diocese examiner.

1826. He received a doctoral degree in theology with a thesis *De miraculis*.

1833. After the secularization, he became a canon of the cathedral of Vilna.

1834. He took over as professor of logic and moral philosophy at the Roman Catholic Theological Academy in Vilna.

26.04.1835. He died of asthma in Vilna. He was buried in the Cemetery of St. Stephen, one of the oldest graveyards in Vilna (active in the years 1660-1864), where in the first half of nineteenth century university professors were buried, among others. In the interwar period on the site of the former cemetery a building materials depot was created for the guild of stonemasons. After World War II, the remains of the cemetery were demolished – including the columbarium. No tombstones were preserved. He devised his estate to his niece, Placyda Puchalska;[15] his library – to Theological Academy.

2. Writings

The fundamental Dowgird's work published in his lifetime – is the first part of *Wykład przyrodzonych myślenia prawideł, czyli logika teoretyczna i praktyczna* [Dowgird 1828]. Among his smaller writings, his treatise *O logice, metafizyce i filozofii moralnej rozprawa* [Dowgird 1821] and posthumous publication "Rzeczywistość poznań ludzkich" [Dowgird 1839] are important.

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[15] Placyda Dowgirdówna (b. 1810) was the daughter of Stanisław Dowgird and Tekla née Karaś. On 29.07.1834, she married Józef Puchalski; wedding was held in the university church of St. Johns in Vilna in the company of, among others, Anioł Dowgird; on 23.04.1835 – shortly before Anioł's death – they had a son, Wojciech. So it seems that Anioł was Stanisław's brother. Some reliable sources – which we eventually applied – say, however, that he was the son of Stanisław, who was the son of Jan and grandson of Mateusz; Stanisław was supposed to have three brothers: Wawrzyniec, Stefan and Maciej. This line of the Dowgird family goes back at least to the beginning of the fifteenth century.

3. Views

3.1. The philosophical program

According to Dowgird, philosophy – if it is to be a science, and especially its foundation – should meet the following postulates:

(1) Philosophical theory should have clearly defined the following «parameters»: an object of study, its method and the starting point (*i.e.* the main principles), and the manner – and especially language – of explanation of the achieved results.

(a) Philosophical studies should be based on the "inherent reason" and should not refer, for example, to "light revealed", applied by religion (and theology).

(b) The basic research method in philosophy is analysis: "the deconstruction of our most common concepts and mental activities".

(c) Language of philosophy (and more generally – of science) should be: clear, pure (free of unnecessary neologisms), simple, unambiguous and accurate (precise, with fixed meaning). A philosopher should avoid "words too general, indeterminate or ambiguous" [Dowgird 1830: 472].

(2) The philosophical theory should be a deductive system: it should be that in it "one proposition flows from the other" [Dowgird 1821: 88].

(3) Theses of philosophical theory should be most reliable.

(4) In order to assess a philosophical theory, one must first analyse its "principles" (*i.e.* the basic theses).

(5) Philosophical theory should be consistent with the rules of common sense: it should clarify and justify these rights. "Common sense is nothing more than using the laws prescribed by the very nature to human thinking" [Dowgird 1828: 240].

(6) One should create a new philosophical theory only if it expands existing knowledge with new ideas, of which it may be presumed that they shall gain the approval of specialists. The philosopher should be "the enemy of all useless novelty"; should not deal with "false trinkets" or writing "metaphysical romances, which […] having brought upon themselves for a short time attention of a slim handful of avid supporters of novelty, soon had to return to their nothingness" [Dowgird 1828: 166].

In light of these postulates, philosophy is disqualified by:

(a) the variety of incompatible theories that occurs in a given phase of its history;

(b) the internal contradictions of proposed theories;

(c) "absurd theorems", "laboured abstractions" and "wild talk";

(d) the use of "misunderstood words" [Dowgird 1821: 96], leading to logomachy.

Evaluation of contemporary, and especially German (post-Kant) philosophy made by Dowgird from this perspective – is very negative.

3.2. Metaphysical realism

3.2.1. Thesis of metaphysical realism

Dowgird strongly advocated the thesis of metaphysical realism, which states that "out of our mind there are certain realities which correspond to our images" [Dowgird 1839: 488].

The external objects – to the soul – include also our body. It differs from other external objects in that: (a) no part of it can be detached without pain; (b) touching its part raises a double feeling (*i.e.* touching hand and touched hand); (c) strong action on it causes pain – and with other items does not produce such pain.

Knowledge of external objects is indirect and limited. We know that there are ("dwell") the real causes of some of our ideas – but we are not able to figure out what their "nature" is, *i.e.* what they are in themselves. We only know indirectly that these objects have properties of certain types (*cf.* below – absolute properties).

Dowgird held the realistic thesis as "very first principle" of human knowledge – unlike the only serious adversary of Dowgird in his time, Wiszniewski, who wrote bluntly:

> We do not see clear benefits that philosophy, literature, and IN GENERAL PEOPLE could rip from such a consolidation of reality of our perceptions [Wiszniewski 1830: 531].

Dowgird justified metaphysical realism in two ways: positive and negative (performing – in the latter case – *reductio ad absurdum* against idealism and scepticism).

3.2.2. Argument *pro*

The positive argument was as follows.

The operation of our mind is subject to certain natural laws. These laws, on the one hand, are not a figment of our will; on the other hand, they are advantageous to us ("beneficial"), because acting in accordance with them, we gain the knowledge necessary to "preserve our existence" [Dowgird 1828: 368].

They state that:

(1) To each effect, a cause different from it should be assigned.

This principle – *i.e.* the principle of causality is rejected by sceptics who reduce cause and effect relationships to the consequences of the relevant phenomena. This reduction, however, is completely unfounded – and leads to absurdity, because "concept of cause and effect means something more than the image of simple sequence of occurrences" [Dowgird 1828: 408].

(2) Common to all people is an illusion consisting in the fact that they refer some of their images to certain innervated parts of the body, and some to external objects; in this way, they mistakenly consider these images (colours, sounds, smells, tastes, heat and cold, *etc.*) as properties of these objects.

(3) All our ideas "evoke" in us the concept of the soul, which is the subject of these images, and this concept corresponds to a real object.

(4) Some of our ideas – namely "feelings" and "primarily" touch ideas – evoke in us the notions of external objects, which are independent reasons for those perceptions and concepts that correspond to some real objects.

3.2.3. Argument *contra*

The negative argument was as follows.

Dowgird assumed that:

(1) Convictions, in which we recognize the reality of external objects, are not the result of reasoning.

(2) These convictions are not random.

Hence, he inferred that:

(3) In accordance with the laws of the mind, they cannot be mistaken or uncertain.

For suppose that is just as idealists preach, *i.e.* that no notions, caused by our images are corresponded by real objects, so that all our convictions in which we recognize the reality of such objects are wrong. The existence of sensory illusions would support it.

But here, idealists make a mistake. First, the ingredients of insights beyond the feelings are notions (on this distinction – *cf.* below), and the latter are subject to the said rights of the human mind. Second, the decision that something is a sensual illusion is possible only on the assumption that something is not such an illusion, and the experience can decide which case we are dealing with. The assumption that everything the senses notify to us, is an illusion, is therefore untestable.

It is also an untestable idealistic thesis that all our convictions in which we recognize the existence of external objects, are wrong. Also, a claim that some of these latter beliefs are wrong is untestable if we wanted to check their legitimacy by means of sensory experience, because the convictions

of this kind are not a matter of sensual feel – but the natural principles governing the functioning of the mind.

Note that this argument does not touch the sceptics, according to whom belief in the existence of external reality lacks sufficient justification. According to Dowgird, sceptics are wrong, however, because they consider only one kind of certainty: direct. Meanwhile, there are also indirect certainty (*cf.* below), and it is that we are dealing with in the event of a realistic thesis.

Yet another argument against idealism and scepticism is the fact that it is inconsistent with centuries of achievements of mankind and "seeks to destroy the true morality in people", *de facto* rejecting the existence of God.

3.3. Ontological analyses

Dowgird did not like to use the term "ontology", believing that what in his day was called that was just "an imaginary part of metaphysics" ("detached philosophy". This does not change the fact that he carried out the ontological analyses himself – and they were very deep.

Here are a few examples of such analyses.

3.3.1. Objects and properties

Dowgird distinguished between, for example, external objects ("bodies") and ultimate – "virtually single" and non-expansive – elements ("mechanical atoms"), which make up the objects. It is to those ultimate elements that we, in fact, assign reality.

He further identified, absolute and relative properties. Suppose that the fact that external object *P* has property *W,* makes feeling *C* appear in our soul. Dowgird says then that property *W* is then an absolute ("non-referable") property of object *P,* and feeling *C* – a relative ("referable") property of the object *P.*

He thought also that the absolute properties may not be similar to the relative properties caused by them, because:

(a) if they were similar, all external objects would need to have the ability to feel (and only humans and animals have this ability);

(b) the same absolute properties in certain circumstances and in different people cause different images.

He considered the absolute properties – assigned to the appropriate images – "qualities of the first order" (in the sense of Locke), *i.e.* spatial and temporal location, shape, size, internal bond, impermeability, change (including movement), the ability-to-act and action itself, as well as

possession-number, extent, being-in-the distance, membership-to-set, being-similar and differentiation. This assignment is based on the fact that each actual image of the position corresponds to some real position, each actual image of the shape corresponds to a real shape and so on.

3.3.2. Reality

Absolute reality can correspond in two ways to images: in an original ("proper") and derivative ("causal") manner.

According to Dowgird, the original reality is awarded to, first of all, souls, and ultimate elements of real external objects, and, secondly, to some of the properties of these elements.

Now consider situations in which – according to our actual images – we are talking about an object *A,* which corresponds to these images that: (a) it occupies a certain POSITION ("place"), spatial and temporal; (b) it has a SHAPE; (c) it has a certain SIZE; (d) its parts are LINKED; (e) it is somewhat IMPERVIOUS (has a certain "thickness"); (f) CHANGES (or remains unchanged) – in particular, is MOVING (or stationary); (g) has the ABILITY TO ACT on object *B;* (h) ACTS on the object *C.* These properties – location, shape, size, internal link ("bond"), impenetrability, change, ability-to-act and action – are original properties; removal of any of these properties from the description of the object *A* significantly depletes this description.

Let us now consider situations in which – again in accordance with our actual images – we are talking about the same object *A,* that: (a) it is ONE; (b) it has a certain EXTENT; (c) it is at a DISTANCE from the real object *B;* (d) it belongs to a SET; (e) it is SIMILAR to the real object *D*; (f) DIFFERS from the real object *C.* These properties – ownership-number, extent, being-in-the distance, membership-to-set, similarity and differentiation – are only the derivative properties of the object *A*. The idea is that, by holding these properties, we are not saying about the object having them anything more than what we would say about it, indicating only all of its original properties.

Dowgird considered the distinction between these two ways of the external reality corresponding to our images his important discovery; mixing them was – in his opinion – one of the sources of idealism and scepticism.

3.3.3. Time

Dowgird devoted much attention to the analysis of time.

He primarily distinguished the time taken "referentially," or image of time – "one of […] most […] fleeting", as Dowgird wrote [Dowgird 1828: 341] – from the time taken "non-referentially", that is, from time in itself.

He identified time itself with "a sequence of moments following very quickly one after the other". However, he considered the time taken "referentially" to be a "constant succession of feelings and notions" [Dowgird 1828: 343]; when the sequence ceases – like in a dream – the image of time disappears. The different images of this sequence are the units of time measurement, and the number of units in a particular passage of the sequence determines the measure.

As can be seen, Dowgird rejected the widespread recognition of time as a sequence of any changes in any object. He considered in particular that it is not movement, which gives us the images of the passage of time. The impression that it is not the case came, in his opinion, from the fact that time period limits (*e.g.* two beats of pulse) were mistaken with the period itself; it is as if one would take the ends of a measuring rod for the distance between the two ends. Such limits of the period could be indeed any change – in the case of the sun not only its journey across the sky, but also, *e.g.* change in its colour on the sky.

3.3.4. Change

One of the oldest ontological paradoxes was paradox of movement – and more generally: of change. It can be reconstructed as follows. Consider the flight of an arrow released from the bow. At any time of the flight, the arrow is in a certain place, and to be at a certain time in a certain place – is the same as to be in the moment in that place at rest. So if the flying arrow at every moment of the flight is at rest, then at no moment of its flight does it fly. An attempt to describe the flight of the arrow leads – as it turns out – to a contradiction: the arrow flies and does not fly at the same time. Our senses inform us about the fact that the arrow flies; reason leads us to believe that the arrow is not flying.

Dowgird took the view that "the opposite of two cases, one of which stems from reasoning and the other from sensuality, is merely apparent". Dowgird's argument in this case is – one could say – so modern that any summary of it would be worse than the original, so it is worth quoting this argument explicitly:

> Properly speaking, by the "movement of a body", we should not understand that the latter simply could not last in any of these positions, through the number of which it subsequently passes, but rather so that the body actually lasting longer or shorter in each of these positions, aims to its inevitable variation, if no other body puts up any resistance. So, as long as the pursuit continues in the body, we speak about the latter, that it is in movement. Conversely, if this pursuit is destroyed by

> any resistance, then we grant the body rest. Hence, it appears that when above we called the movement the continuous variation of the real states of a certain being, the expression "continuous" should not be taken in the sense that we were to deny the duration of each individual variation, whose sequence is a movement, but this only that we cannot perceive with the senses the transition one from the variation to the other, which again confirms the truth explained in many preceding observations, namely, that our reasoning extends further than sensory cognition […]. If, however, anyone deemed it difficult to recognize how to reconcile a persistent quest of the body in movement to changing places with any staying in one place, and if it only was to be a reason to reject the last case of our reasoning, it seems that it would suffice, as an answer to this objection to refer the opponent to one of those wise men who dream that philosopher should explain all the mysteries of nature, or doubt all [Dowgird 1828: 359].

Let us note that according to Dowgird every change is a series of indivisible ontic atoms: "no sequence of changes can be divided without end, because its ultimate elements must be indivisible" [Dowgird 1828: 188].

3.3.5. God

Dowgird considered part of the philosophy – namely metaphysics – to be natural theology, *i.e.* reflections on God, referring not to revelation, but to the natural sources of knowledge.

According to Dowgird, certain properties may be reasonably assigned to God – for example omnipotence, omniscience and all-encompassing good (or most complete justice) – without recourse to revelation. This also applies to the very existence ("being") of God – in any event recognized as an "eternal existence that never had a beginning, and which is the first cause of all things".

Known since the Middle Ages, the so-called *ex motu* proof of God's existence was heading – in one version – to demonstrate that the chains of cause-and-effect cannot be eternal, so that there is a First Cause that is something that has no cause different from itself. Key in this argumentation was to reject the thesis of eternity of chains of cause and effect. Dowgird dealt with this thesis in a way characteristic for himself, *i.e.* using *reductio ad absurdum*.

Suppose, he said, that the chain of cause and effect is eternal. This means that there is no time at which there would still be no link of the chain. Suppose now that for every cause – taken separately – there is a moment in which that cause has not yet existed. If so, then for all causes – and therefore the entire chain – there is a moment in which there all these reasons were non-existent. Therefore, the chain of cause and effect cannot be eternal. Thus, we arrive at a contradiction.

3.4. Epistemological analyses

3.4.1. Logic and psychology

Epistemological analyses – or, as we would say otherwise, the analyses in descriptive psychology – were conducted by Dowgird as part of the broader logic, or, as he sometimes said, "mental philosophy". He justified it saying that because the logic in the strict sense is a theory of correct reasoning, and reasoning is one of the sources of knowledge, the logic in the narrower sense must be grounded in the theory of "faculties of the soul" (*cf.* below), thanks to which these reasonings materialize. What is more: it is precisely the determination of the natural laws that govern these faculties which enables reconstruction of reasoning correctness criteria. For the "principles of good thinking cannot be arbitrary, but should stem from the nature of the human mind" [Dowgird 1828: 195]. It is supported by the fact that people knew how to think correctly (*i.e.* adhere to these principles) before they created (*resp.* learned) logic. These principles are eternal, permanent and unchangeable and common to all men; if it were not so – any disputes would be pointless.

In this situation, it is already a matter of convention whether we regard descriptive psychology in the strict sense as part of the broader logic, another part of which is logic in the strict sense – or whether we regard logic in the strict sense as part of the broader descriptive psychology. Dowgird leaned toward the second convention and could therefore say: "Logic is an essential part of psychology, and psychology is part of metaphysics" [Dowgird 1821: 134].

Such inclusion of "metaphysics of the human mind" to the broader logic was met with criticism from Wiszniewski, according to whom:

> Logic is to be just a collection of laws derived from the nature of the mind, to which all activities of the mind, seeking to invent and discover the truth, must succumb [Dowgird 1828: 470].

3.4.2. The soul

Reading the soul itself – and in particular the mind – he held the following beliefs: Firstly, the soul has no parts, and therefore it is non-expansive. Secondly, a hotbed of activity of the soul is the brain. Thirdly, the body is the instrument of the soul.

The first conviction – on the indivisibility (*resp.* non-expansiveness) of the soul – is to be evidenced by the fact that the soul is able to compare and match different images from different senses. If these images were expansive, they would – according to Dowgird – be located in different parts of the

soul comparing them, but then it could not compare them. He justified it as follows. (1) Two expansive objects only then can be compared with each other, when both occupy exactly the same place. (2) In the exact same spot there may be – as a whole – only one expansive object. So if images were expansive objects and were to be compared to each other, then – according to the premise (1) they would be in the same part of the soul. But – according to the premise (2) – they cannot. And since they are often compared, they cannot be expansive objects. Therefore, the soul is not expansive.

The second conviction on the soul – on its location in the brain – he explained as follows:

> When […] says that the human mind has its habitat in the brain, we cannot reasonably understand the assertion otherwise than that the brain has a closer location with respect to a thinking being and a closer relationship with it than other parts of our body [Dowgird 1828: 210].

The third conviction – about the body as a tool of the soul – was, according to Dowgird, obvious, but he considered explaining what this "managing" by the soul of activities of the body would rely on as crossing the inherent possibilities of the human mind. Therefore, Dowgird's principal focus was directed on the description of the activities of the soul themselves. According to Dowgird, the description should be especially precise since metaphysical "madness" of philosophers came mainly from the inaccuracy of that description.

3.4.3. Faculties of the soul

The starting point of this description was traditional distinction within the activities (states) of the soul – of three kinds of them: thoughts, desires and feelings. The latter – feelings – did not especially occupy Dowgird: he concentrated, understandably, first of all on thinking and – to a lesser extent – on desires, that is activities of two faculties: the mind and will.

There was a time when the faculties of the soul had been reified: it was imagined that these were some substantial parts of the soul. For Dowgird, such a perspective was not acceptable. By "faculty of the soul", he meant simply the soul's ability to perform certain activities, so in case of mind the ability to think, in the case of will – the ability to perform volitional acts or desires. He thought that mixing of faculties-abilities of the soul (*i.e.* its fixed properties) with the activities of the soul (*i.e.* certain actions of the soul possible thanks to the abilities), threatens with idealism or scepticism.

Before presenting his analysis of the mind and the will – so, in fact, an analysis of thinking and wanting – let us emphasize two things.

Firstly, Dowgird in his own way resolved the dispute between genetic nativism and sensualism. He thought, namely, that it is a dispute arising as a result of mixing mental acts with dispositions for these acts. Nativism is justified in relation to the disposition and sensuality – in relation to the acts.

> Qualities of our soul, that is its faculties and laws, according to which the faculties develop, are innate rather than images or other mental activities [Dowgird 1828: 259].

Secondly, Dowgird considered both these types of actions of the soul intentional acts: there is neither unsubstantiated thinking nor wanting.

3.4.4. Images

Let us begin with thinking.

The human soul has three varieties of thinking faculties (*scil.* skills): the power of imagining something (today we would say perhaps – presenting oneself something), the power of judgment about something and power to focus on something (attention). Imagining something is a simple act of thought, and judging something – a complex act.

Simplicity of imagining something comes from the fact that images are ontological atoms of thought: the "image" (or – as Dowgird sometimes put it – "knowing") means "everything comprising of our thought, and what only in it can be distinguished" [Dowgird 1821: 100]. Thus, to imagine something – is to live a single image; to think about something requires the presence of more than one image.

With regard to the subject of images, Dowgird divided images into independent ("chief", of the first order) and dependent (higher order), and the latter – into concrete (*e.g.* relationship between certain objects) or abstract (*e.g.* relationship as such).

Independent images are images of independent objects (*e.g.* images of the soul, body, *etc.*). Dependent images are the ideas of properties ("attributes"), which always have in the background some other objects – namely those in which those properties are vested (*e.g.* images of pleasure or pain, or vividness or weaknesses, which refer to the appropriate feeling; ideas of "movement, rest, strength, performance, shape, *etc.*), where these objects are often themselves dependent objects (see *e.g.* speed of movement, which is itself an attribute of some things).

Dependents images are also negative images (*i.e.* images of the absence of something), because they are not possible without positive images (*i.e.* images

of presence of something). An example of the negative image is to imagine space ("empty expanse") with respect to the image of the full extent: "while the latter corresponds to a reality outside of our mind, that other idea does not correspond to any reality" [Dowgird 1828: 330].

It should be emphasized that Dowgird considered division of images into independent and dependent a relative division because, for instance, red can be considered as the property of a red object, but also as colour red itself.

3.4.5. Feelings

Due to this, which is a tool of having images, and due to the degree of their "intensity", we distinguish among them feelings or sensory images, and concepts, or purely mental images. One can express it differently, saying that we have two faculties: «sensitivity» (whose tools are the senses – hence the feelings are called "sensory perceptions") and «comprehension».

Sensual images can be real feelings or imagined feelings.

Two properties distinguish the real feelings from the imagined feelings. First, the real feelings are more vivid than imaginary feelings; second, the first ones are always accompanied by "the conviction of the actual existence of present objects" [Dowgird 1821: 110]. Real feelings, in turn, tend to be external (when they are caused by external objects on specific parts of the body) or internal (when coming from those same parts that otherwise – let us remember – are external to the soul).

Imagined feelings are – in other words – the images of feelings: all imaginary feelings are in fact "images of past real feelings" [Dowgird 1828: 206]. Dowgird called the power of feeling imagined feelings "imagination" in one of the meanings of the word.

3.4.6. Concepts

The second kind of images, *i.e.* concepts, are distinguished from the feelings, firstly, in that they are less vivid than feelings – even imaginary, and secondly, that they are less clear than feelings.

Concepts are caused by feelings. Some feelings are accompanied by a judgment – namely a judgment expressing appreciation that the feeling are the effects of a certain external object. If feelings, causing given concepts are real, then actual external objects correspond to these concepts: the concept of the soul, which has the feelings and concepts, and the concept of objects that are causing these feelings and concepts. Dowgird considered this thesis a "fair law of our mind": it is "nature itself, which gives a man a message about the cause of feeling in him, and tells him to think that the cause exists

outside of his being" [Dowgird 1828: 229]. Therefore – remember – the belief in a "proper reality" cannot be false.

Also, Dowgird divided concepts into external and internal, but the principle of the division was slightly different than for similar division of real feelings: he regarded external concepts as concepts relating to external objects and own body, and internal concepts – concepts relating to own soul. Dowgird called the ability to have so understood internal concepts "self-recognition".

3.4.7. Judgments

Dowgird describes judging – the second variant of thinking – as "mental activity through which one thing is assigned or denied to the other". The impulse for judging are feelings, and its consequence – the concepts. Dowgird included three kinds of activities in judging.

First, he judges, who in experiencing the real feelings recognizes that the objects of these feelings really exist. The mental activity thus performed Dowgird identifies with "the knowledge of external objects".

Secondly, he judges, who experiences the concept of a possible object, combining the imaginary feelings in it in a way in which the corresponding real feelings have not yet been combined. Dowgird calls the power of such judging "imagination" in the second sense (*cf.* "imagination" understood as the power of experiencing imagined feelings). The error associated with this power is the attribution of reality to only possible subjects of imagined feelings; such an error occurs in the case of dreams and "insanity".

Thirdly, he judges, who experiences a concept of real object, combining in it the imagined feelings in a way in which the corresponding real feelings have already been combined. So this is a recollection of once-experienced real feelings, to which memory predisposes.

3.4.8. Kinds of judgments

With regard to the structure – Dowgird divides judgments into incomplete and complete. Incomplete are the judgments, in which it a certain object is granted something, *e.g.* existence, which lies in it anyway.

> We say generally that THIS OR THAT BEING HAS PRESENCE, or that SUCH A BEING HAS NO PRESENCE as if the word "being" does not include in its meaning the idea of presence, or, as if we said that we should grant or deny the attribute of presence to a being, which in itself is not considered a presence [Dowgird 1828: 363].

Therefore, incomplete judgments – we would say: existential theses – do not ascribe anything new to counterparts of their grammatical subjects.

On the other hand, due to the "imaginability" of relevant states of affairs – Dowgird divides judgments into necessary and (only) possible, whereby he distinguishes the metaphysical (absolute) necessity from the physical (experimental) necessity.

Judgment is namely necessary metaphysically, when it is inconceivable that there occurs what the denial thereof states. This condition is met only by the judgments relating to the relationship between the images; it is not met by judgments pertaining to the relationship between the images and the external reality; therefore, among the latter there are no judgments necessary metaphysically.

By contrast, with the physically necessary judgment – a state of affairs proclaimed by the denial of such a judgment is indeed conceivable, but its occurrence is ruled out by the laws of nature.

3.4.9. Attention

Focusing on something – the third kind of thinking after imagining something, and judging about something – is "pondering exclusively certain image, giving no regard to other images which may be related to it" [Dowgird 1828: 231]. As Dowgird puts it: due to action of attention images become clearer and thus their "degree of knowing" increases.

Dowgird distinguishes two types of attention. The first is attention directed at own real feelings; the other is an analysis of images in general. The first is called "perception", the second – "deliberation" ("reflection"). The latter is beneficial only if it is done using language.

3.4.10. Decision

I want to do something – when I decided to do something. Analysis of desire can therefore ultimately boil down to analysis of a decision, which Dowgird describes as "making choice regarding the real use or non-use of a certain thing" [Dowgird 1821: 127].

The decision is preceded in us by certain knowledge and a judgment. What prompts someone to specific choice – is that the selected thing is good, *i.e.* that "brings us the feeling of pleasure or is a means to this end [*i.e.* to achieving pleasure]" [Dowgird 1821: 128]. Dowgird distinguished between the relevant good (*resp.* bad), which is attributed to an action yielding lasting good effects (*resp.* bad), and the apparent good (*resp.* bad) attributed to short-term good action (*resp.* bad).

When we speak of volitional acts, immediately the issue of liberty and its borders emerges. Dowgird places particular emphasis on the fact that the freedom of the will is one thing, and the freedom to act is another ("freedom of man" – as he says).

Man has freedom to act when he "can do what he decided" [Dowgird 1821: 128]. When it comes to freedom of the will, a man does not have such freedom, if we understand by it that he has it, who can want for themselves not good (especially happiness), but evil. But there is a sense of "freedom of will" with which the human will is sometimes free. Namely:

> The man then only, and only so much is free in deeds of his will, where no necessity urges him to make an urgent choice with respect to the use or non-use of a certain thing, that is to make a choice first, before proper consideration of effects which may occur in the future and comparing them with current ones. These are the borders, to which the freedom of the human will extends [Dowgird 1821: 131].

3.5. Logic in the strict sense

3.5.1. Artificial and natural logic

As we recall, according to Dowgird:

> Logic is a science, expounding the thinking principles natural to man, which should guide him in seeking out the truth and its discernment from error […] and decent explanation of various truths to others [Dowgird 1821: 90-91].

Strictly speaking – we are talking about the so-called by Dowgird artificial logic, *i.e.* a system of rules, reconstructed on the basis of actual thinking, which takes place in accordance with innate principles, which Dowgird called "natural logic".

The ideal of artificial logic – is a system stating rules "so clear, true, reliable, adequate, simple, and easy to comprehend, that it would be impossible to misrepresent their use and use them badly" [Dowgird 1821: 83]. It is this logic which can and should "preside" over any sciences based on reasoning (including philosophy) – "preside" in the sense that rules indicated by it apply to all science.

3.5.2. Truth

One of the key issues of logic (and, more broadly, epistemology) is considered – and Dowgird was no exception – the issue of truth. In accordance with his philosophical program, Dowgird strictly separated from one another the statements giving the DEFINITION of "truth", statements indicating the CRITERIA of truth and statements having the character of THESES on truth.

The definition of "truth", adopted by Dowgird was: truths are thoughts ("ideas") which are consistent internally (*i.e.* they are "compatible with the nature of the human mind") – and the thoughts consistent with things (consistent with "nature of things") to which they relate. Of the first he said, according to tradition, that they are "formal truths"; of the others – that they are "material truths".

Dowgird understood the criterion of truth as a principle, with which one can "discern the truth from delusion in a given object" [Dowgird 1817: 45], and believed that we have a universal criterion of truth – in any case, of material truth. There are many indications that he believed the criterion of truth to be universal consensus. He wrote:

> That which is common to all men and ages, must necessarily have its ground in our mind's natural laws and thus be based on truth [Dowgird 1821: 82].
>
> Truth is the property of all ages and people, and it cannot be as variable as quirks of fashion and fantasy [Dowgird 1821: 82].

There were two directives related to this criterion, which Dowgird formulated with regard to propositional attitudes – recognition and rejection of scientific judgments: (1) the judgments should be considered as true, which have been widely and long adopted by researchers. (2) One should not hastily reject the judgments, which are accepted by most scholars as "clear and true" for claims for which we have not yet sufficient justification.

The main Dowgird's thesis on truth – was the thesis of perenniality of truth: "If a thought, a claim was once true, it always has to be so". On the eternity of truth Dowgird did not speak. Interesting, however, that in his writings one can come across a statement that may probably be interpreted as an admission of a third – except truth and falsity – logical value. Here is the statement:

> The image of any number applied to real beings, or rather the judgment of such a number may be true, false or insufficient [Dowgird 1828: 281-282].

It was provided by Dowgird with the following commentary:

> Properly speaking, any image itself can be neither true nor false, but whereupon only when one assigns or denies it anything, *i.e.* when it is the subject of a judgment […]. And applying this remark to the image of the number, the image only then can be true or false, when we think that at some point such is, has been or will be the number of real beings [Dowgird 1828: 282].

3.5.3. Falsehood, error and illusion

Dowgird had a very clear view of the relationship between falsehood, error and illusion.

Suppose that a judgment is FALSE. If someone considers such a judgment to be true – and so "takes the semblance of truth for the truth" – he succumbs to an ILLUSION and as a result commits an ERROR.

It follows that there are grounds for believing that an "error […] is only known by comparison with the truth" [Dowgird 1828: 393] – similarly as "uncertainty by comparison with certainty" [Dowgird 1828: 409]. The point is that "our conviction alone, that in certain circumstances we misconstrue [something] […] is already evidence that, in other circumstances, we have accurate and reliable judgment of these things" [Dowgird 1828: 279]. A situation in which we would always have false judgment about something cannot therefore take place.

This statement was – as we have seen – of huge importance for the criticism of idealism taken by Dowgird.

It is worth noting that Dowgird thought that one must strictly distinguish between what we would today call "denotation of the term" (in his terminology – a defined set of objects), and what we could call a "connotation of the term" (in his terminology – defined image of these objects). The difference can be seen even in the fact that a set of people is contained in the set of mammals (so the denotation of the name "man" is included in the denotation of the name "mammal"), and the image of man includes the image of a mammal (so the connotation of the name "mammal" is part of the connotation of the name "man").

3.5.4. Principles of reasoning

The issue which particularly interested Dowgird within the logic in the strict sense, was a methodological issue. He treated methodology as a science of how to follow the truth and of the "best method of teaching and proving the truths to others" [Dowgird 1821: 107].

With respect to following the truth – primarily within sciences based mainly on reasoning – Dowgird formulated the following directives:

(1) Horizon directive: all research should be preceded by establishing the horizon of knowledge, *i.e.* the limits of researcher's cognitive abilities. It is unacceptable to "grant unlimited authority to the human mind" because it "opposes reason and experience" [Dowgird 1828: 286]. With such an unattainable limit of human knowledge we deal in the event of *e.g.* the nature of real objects ("entities"), establishment of which "is not within the

power of man"; similarly, although *e.g.* between objects acting on each other "there is, indeed, a dependence relationship," yet "we cannot explain it" [Dowgird 1828: 305].

(2) Gradation directive: research should begin from things recognized ("known") and easier, and only then proceed to the unrecognized ("unknown") and more difficult.

(3) Penetration directive: one should "explore materials" which form the basis of research with utmost scrupulousness.

(4) Organization directive: one should keep as much "reference and order" in the research as possible.

The gradation, penetration and organization directives indicated for following the truth – appropriately modified – also apply in relation to the explaining the truth to others. The list of these directives included also:

(1) Clarity directive: one should «explain» their views as clearly as possible. In particular, one should: (a) "explain technical terms and attach constant importance to them"; (b) "avoid any obscure definitions" [Dowgird 1817: 74]. When it comes to component (a) of that directive, one must also remember that "not all words can be defined" [Dowgird 1821: 126]. As for the component (b), let us add that the "obscure definition" occurs when the defined term is clearer than the defining term.

(2) Succinctness directive: one should try to make the explanation of views as succinct as possible. One should avoid "long-winded prattle" [Dowgird 1830: 472]: "a major lecture on general truths the more gains in value, the shorter the matrix it is contained in" [Dowgird 1828: 158].

(3) Exemplification directive: one should refer to the "relevant" examples.

(4) Punch line directive: one should present their views in a literal language; only after a literal presentation it may be complemented by a metaphorical punch line, acting as recapitulation.

> Metaphors may be only decoration of already proven truths, but in themselves they cannot provide any proof; they may stroke the imagination, but cannot speak to conviction [Dowgird 1828: 179].

3.5.5. Justification

When it comes to proving truths, it must be remembered that the term "proving" was used by Dowgird in a wider sense than it is used now – namely as a synonym of "justification", or (as he sometimes said) "demonstrating"; this demonstration is a kind of reasoning. No wonder that Dowgird devoted much attention to reasoning, of which he wrote that "it often is to the mind what binocular [*scil.* microscope] is for the eyes" [Dowgird 1828: 360].

The reasoning in the strict sense was for Dowgird a "mental action", consisting in the "drawing of a judgment from other, preceding judgments" [Dowgird 1839: 492] where on premises ("preceding judgments") Dowgird imposed requirement that these are the rules, or certain (indubitable) judgments, and on the inference – that it takes place according to the "natural relation" connecting those premises with conclusions inferred.

He emphasized the fact that an essential tool of reasoning is language: one can reason "only with certain words at least imagined in mind" [Dowgird 1821: 89]; similarly – to convince others. He allowed, however – as it seems – for non-linguistic thinking when he wrote that "what […] cannot be embraced with thought, even less can be expressed and described" [Dowgird 1817: 45].

Dowgird divided, as was the custom, reasoning into direct and indirect proofs ("incidental", *reductio ad absurdum*). He wrote on this occasion about two ways to reject views: by showing that their justification is erroneous, or by demonstrating that one is a master of argument and – based on *argumentum ad auctoritatem* – stating, without going into details, that the rejected views are erroneous.

He also conducted a – somewhat enigmatic – division of reasoning into analytical reasoning ("dissecting") and synthetic reasoning ("collective"). Synthetic reasoning would rely on the fact that, "from the comparison of simpler images […] conclusions arise indicating the relationship between more complex images" [Dowgird 1821: 126], and analytical reasoning – on a reverse procedure.

3.5.6. Certainty

The property inherited in reasoning is – according to Dowgird – not accuracy, but certainty of judgments: thanks to reasoning certainty of premises would "spread" to conclusions. No wonder, then, that Dowgird's interests included an analysis of certainty. As a result of this analysis he identified two degrees of certainty of judgments: complete certainty and partial certainty.

He considered the completely certain judgments the judgments primarily caused by real feelings, *i.e.* the judgments like "I smell a melon", which he described as judgments of direct certainty. He included the judgments of the existence of reality in a separate class. They are certain if they are awakened by the real and not imagined feelings. He defined such – total! – certainty in this case as "indirect certainty". The judgments of this kind are not tested empirically.

Partial certainly, meanwhile is found in supposition judgments such as "There is a melon in this room". As Dowgird wrote:

> The supposition judgments have it in common that certain real feelings, combined with imagined feelings, stimulate us to do guesswork [Dowgird 1828: 375].

And he added:

> Delusions and sensory errors for the most part are nothing else but deceiving supposition judgments [Dowgird 1828: 382].

The supposition judgments are empirically verifiable – by successively felt feelings.

3.6. Moral philosophy

3.6.1. Laws of morality

In work published in Dowgird's lifetime, issue of moral philosophy (*scil.* practical philosophy, ethics) – *i.e.* the theory of "righteous conduct" – does not take up much space, but there is no doubt that it is in the centre of philosophy.

Dowgird clearly indicated what the most important problems of moral philosophy are. These are: question, "what is meant by the laws of properly named morality", and question "what thorough happiness depends on, which is the goal of the former" [Dowgird 1821: 142].

Dowgird answered the first question – about the status of moral laws – as follows. "The law properly moral" is a rule which "restricts our innate tendency to use moral goods" [Dowgird 1821: 143]. Sometimes this restriction goes so far as to put "an end to our commitment to the very source of all pleasure to be had in this world, that is to our life" [Dowgird 1821: 146].

This rule should be contrasted with "the law of the physical nature of man" – and so the "right to use those goods". The first should "govern" the other. If this happens, the latter becomes "relative moral law" [Dowgird 1821: 143].

3.6.2. Conscience

The most important incentive for compliance with this rule is the "voice of conscience giving praise internally to the good acts of man, and a reprimand to his dishonest acts" [Dowgird 1821: 147]. The strength of the voice of conscience is strengthened by two convictions. The first – is the

belief that conscience is in fact the voice of God, and that beyond the grief of conscience, evil will be severely punished by Him after death. The second – is the belief that:

> Morality not only stems from the nature of man, but is a necessary need of the human race, without which no society can survive. Even those who secretly violate some rules of morality must explicitly recognize its laws, and condemn it in the others, in which they indulge themselves [Dowgird 1821: 84].

There are circumstances in which the voice of conscience is drowned out.

> Man in calming passions commonly distinguishes well between the virtue and vice, the fair and the wicked; but in vehement arousal of his passions he often loses the sight of this difference, and sometimes colours even the greatest crimes in a certain guise of virtue [Dowgird 1821: 141].

On the other hand, there are circumstances that favour the «purity» of moral intuitions. Dowgird wrote emphatically:

> When I said that the science of moral philosophy contains a great number of unquestioned truths, it has to be understood that they are only in the following circumstances construed as unmistakable: first, when thinking about them, we are free from the passions and interests; secondly, when we consider them generally without a relation to specific cases; thirdly at the end, when we apply them to the conduct of others, regardless of ourselves [Dowgird 1821: 141].

3.6.3. Principle of happiness

Dowgird answered the second most important question of moral philosophy – the question of the rule, compliance with which is necessary to achieve this thorough happiness – as follows. The highest principle of morality is:

> Always do so as not to be ashamed to confess your act before the whole world and reveal the motives that led you to it [Dowgird 1821: 152].

It is puzzling that this was the answer of a prominent cleric and an excellent preacher. Why not – the commandment to love our neighbour? One may believe that Dowgird would have answered this question indicating that the commandment is a particularization – let's call it so – of his principle of shame. For Dowgird, there was no doubt that breaking the commandment to love one's neighbour would be the action that we should be ashamed of "before the whole world".

Dowgird also formulated three important «operational» particularizations of the commandment to love one's neighbour. According to the first, one shall not "think wrong of anyone […] with no obvious evidence" [Dowgird 1830: 467]. According to the second, one shall "take even those matters of others which have a bad appearance […] as much as possible, at a face value" [Dowgird 1830: 485]. According to the third, one should remember that "this happens only rarely, that people of great mind and careful education need our help"; so it has to be prepared to show Christian *caritas* to "people indecent, even vile and vicious" [Dowgird 1828: 455].

One might suppose that this last warning is a theoretical reflection of charitable and missionary action in which Dowgird was involved in the Franco-Russian war in 1812.

3.7. Art theory

There is no evidence which would allow forming an opinion on Dowgird's orientation in matters of art. Scattered in various places of his writings, his statements on aesthetic topics, however, allow us to hypothesize that this orientation was not inconsiderable.

Dowgird's statements on these topics are arranged in the following aesthetic concept.

There are two main sources of artistic creation: taste and imagination. Both taste and imagination are to some extent a "gift of nature itself", but even more so are the "result of experience and mental habits acquired under certain friendly circumstances" [Dowgird 1828: 447]. Therefore, one can learn them, and in any case one can enhance them: taste – through "considering the works of art which have acquired the advantage of beauty among people", and imagination – by making the effort to call "the same, or at least similar images in one's mind" [Dowgird 1828: 447], which imagination suggested to the artist. Works of art are, in fact, on the one hand an effect of taste and imagination of the artist, on the other – they themselves affect the recipient's taste and imagination.

Between the individual arts there are important differences.

Poetry is an art of imagination: both on the creator's and the recipient's side. In case of poetry, "both the author and the reader or listener, combine their feelings, images and ideas in such a whole, which cannot correspond to anything real in nature" [Dowgird 1828: 447].

"The art of painting, woodcarving and music" – these arts mostly affect not imagination, but "our true sensitivity". Painter, sculptor, woodcarver

and musician cannot directly depict "feelings, […] internal passions and thoughts":

> The field, where painter and woodcarver gather their materials is very limited. Under their command they only have visible items, and of all intellectual and moral property, they can express only those which are attached to facial features and body posture. In music, considered by itself, without reference to poetry, the matter ends at the harmony of sounds, or at least its creations only give the reason for certain feelings and thoughts that may not be explained. In construction and in art of landscaping gardens, an artist cannot assume any other purpose, only to charm people's eyes with the beauty and splendour of shapes [Dowgird 1828: 449].

It is believed that the arts – especially poetry – also fulfil the important cathartic (soothe the savage) and intellectual functions (contributes to the "enlightenment of the mind"). Therefore, for example, religious writings and scientific treaties were sometimes given poetic form.

But – as Dowgird stressed – sometimes, communing with art, especially poetry, has the opposite effect: negative – because it leads to "soft customs, effeminacy", and even "weakening of religion and morality". In connection with the latter, he warned:

> The habit of feeding oneself with imaginary stories adds to the disgust towards all that which was commonly used to accompany the misery and sorrow, and performs a fake refinement of taste altogether incapable to accept our real condition. One can even push this exaggerated delicacy to such an extent that it would make a man unable to perform common duties and to withstand the sight of woes, which he would be able to end [Dowgird 1828: 455].

3.8. Analytical *silva rerum*

On the margins of analysis of the main problems, Dowgird – often in extensive footnotes – conducted numerous analyses of specific issues, including many subtle distinctions in terminology.

Here is a list of the most important ones:

(1) clarity of feelings ("clarity of sensations") *versus* clarity of concepts ("clarity of beliefs") – the latter occurring when a conceptual idea is sufficiently distinguished from others;

(2) cognition-knowledge (including knowledge "from description") *versus* cognition as "knowledge [of some entity], in which [real] feelings are combined by the idea into a single image";

(3) removing the image from the mind *versus* removing the images from attention; the difference between these actions is evidenced by the fact that

one cannot remove real images from the mind – but one remove them from attention;

(4) desire and aversion *versus* fancies and disgusts (being feelings);

(5) real presence (*resp.* real existence) *versus* imagined presence (*scil.* image of presence); other opposites: presence – absence; past, present and future presence; possibility of being – impossibility of being;

(6) being-nature ("essence") *versus* nominal (nominative) being *versus* metaphysical being; the first – is property of the object from which one can deduce its other properties; the second – is a property whose possession by an object determines that the word applies to it; the third – is a property of the object, which, with all its changes remains unchanged;

(7) substantial identity *versus* imaginative identity *versus* attribute identity; the first occurs, when we say that two portions of a substance (*e.g.* water) are the same substance (here: water); in case of the second one image is the same image as the other if the first differs from the last only with the time of occurrence (it is believed by Dowgird to be the basic meaning of "identity"); for the third, the relationship exists: if an object has a property quite similar to other property, held by the second object, both properties are the same attribute;

(8) similarity *versus* likeness (*scil.* analogy); the first may concern "two images composed of different kinds, whose individual parts are not similar to each other" like, for example, similarity "between spring and adolescence, between control of the ship and the government of the state, between the storm of the elements and the fight of passions, between the array of words and array of images *etc.*", the second "is used for ideas of one type, as for example likeness of colours, shapes, *etc.*" [Dowgird 1828: 246];

(9) past eternity *versus* future perenniality *versus* sempiternality *tout court* (*i.e.* past and future at the same time);

(10) law of causality *versus* principle of causality; first is innate to man and forces him to "assign every effect, or any variation of certain entity, to a cause"; the second states that "every effect has its cause" [Dowgird 1828: 411];

(11) truth (*resp.* error) as a true (*resp.* erroneous) judgment *versus* truth (*resp.* error) as compliance (*resp.* non-compliance) of a judgment with "laws of mind."

4. Predecessors and impact

Among his compatriots, probably three thinkers influenced Dowgird's views most: Przeczytański (like Dowgird – Piarist), the author of *Logika czyli sztuka rozumowania* [Przeczytański 1816]; then Jan Znosko, translator of very popular in Poland in the early nineteenth century, *Logika czyli pierwsze zasady*

sztuki myślenia by Condillac [1802] and lecturer of logic at the University of Vilna before Dowgird; finally Feliks Jaroński (graduate of Piarist schools), whose textbook *O filozofii* Dowgird subjected to a detailed analysis.

Among the foreign thinkers – he referred, above all: positively to Locke and Dégérando, and negatively to Hume and Kant.

Dowgird did not leave behind students who could be considered as the direct followers of his thoughts – and certainly did not gather around him any group which could be called a "philosophical school". Among his listeners, an important place in the Polish culture was taken not by philosophers of his style, but rather poets (Mickiewicz and Słowacki) and philosophers-mystics (Andrzej Towiański and Florian Bochwic).

This was attributed to the fact that he had no teaching talent. However, it seems that the main reason was elsewhere: in the destruction by Tsarist regime – after the fall of the November Uprising – of the intellectual centre, which was the Vilna University.

The centre was only revived after World War I; in philosophy, it was the merit of Tadeusz Czeżowski, one of the most prominent representatives of the Lvov-Warsaw School. Anyone who knows the program of the School – and the implementation of this program in terms of heritage of Kazimierz Twardowski and his followers – is struck by a remarkable ideological resemblance of Twardowski's School to what Dowgird wanted to do and did in philosophy (for example, it suffices to compare his analysis of the concept of change – to the analysis of this concept made by Kazimierz Ajdukiewicz [1948] or the principle of shame – to the principle of excellency by Tadeusz Kotarbiński[16]), who can therefore be considered a precursor of the School.

[16] It reads in one of original wordings: "What does it mean to act disgracefully? Here is the answer: disgracefully – it means that through it one deserves the contempt of men worthy of respect, and respectability is the opposite." *Cf.* [Kotarbiński 1956b: 209].

4. Krystyn Lach-Szyrma

Happy nation that knows its great people.

[Lach-Szyrma 1828: 47]

1. Life

17.12.1790. He was born in Wojnasy near Olecko – as Christian Lach.

His grandfather was Kazimierz, and his father Adam, who converted from Catholicism to Lutheranism; his mother was Katarzyna née Heyduk, daughter of Wojciech, a landlord from Marcinów (near Kalinów). Krystyn's ancestors probably came from the Suwałki region, from where his great-grandfather moved to Wojnasy in the twenties of the eighteenth century.

1797-1803. He took his initial schooling in a Polish school in Wojnasy.

Already then, he revealed his touring interests. About Marcinowska Mountain (near Wierzbów), located near the village of his grandfather, Marcinów, he later wrote:

> There are various rumours of this mountain circulating among the people. […] The people settled around here are of Polish descent, speaking a dialect of the people of the province of Augustów and the whole of Mazovia, and seem to be of one origin with them [Lach-Szyrma 1829: 274, 276].

1805. In the second half of February – at the expense of Pastor Jerzy Fryderyk Schrage of Wieliczki he goes to the Old Town Gymnasium in Królewiec to receive education as a pastor. The journey takes place first on foot (to Węgorzewo), then on mail stagecoach (to Królewiec).

He arrives in Królewiec on the day of the funeral of Immanuel Kant, *i.e.* on February 28. His supervisor is Ignacy Żegota Onacewicz, who awakens in him the Polish national consciousness. Under his influence, he changes his name initially to "Krystian" and finally to "Krystyn" and adopts the soubriquet "Szyrma".

1811. He graduates from Królewiec Gymnasium and on the advice of Onacewicz he enrols the Department of Literature and Liberal Arts at the University of Vilna.

1812. He makes a hiking trip to his home land.

1813. He obtains a master's degree in philosophy at Vilna University.

Thanks to the support of Jędrzej Śniadecki he becomes a home teacher to Adam, the son of Prince Konstanty Adam Czartoryski and nephew of Prince Adam Czartoryski. He arrives at the Czartoryski residence in Sieniawa and Puławy. He meets Zorian Dołęga-Chodakowski.

His first literary attempts come from this period: translations of the first two books of Homer's *Odyssey, Praise* by Agesilaos and three books of Xenophon's *Cyropaedia* and *Catiline* by Sallust.[17]

1819. He makes a second hiking trip to his home land, where he will remain for two months, visiting, among others, Rajgród and Bakałarzew. Part of the description of this trip (cut short at Węgorzewo/Węgobork) was published by Klementyna Hoffmanowa née Tańska [1859], with whom he remained in close contact – personal and *via* letters.

1820-1824. He travels with Adam Czartoryski to Switzerland and Great Britain.

At the Edinburgh University, he studies philosophy and political economy and obtains his doctorate [Lach-Szyrma 1828: 573].

1824. Based on his dissertation *Wstęp do filozofii*, he takes over the Department of Philosophy at the University of Warsaw, where to 1831 he teaches anthropology, logic, law of nature and the philosophy and its history.

In December, he is awarded doctorate in philosophy based on "Speech on Philosophy".

1826. He marries Józefa née Dzierzgowska, born in 1804.

He becomes an English teacher at the newly established Polytechnic Institute.

25.11.1826. His first daughter, Bożena Klementyna is born in Warsaw. She died on 9.01.1844 in Wrexham (England).

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[17] Lach-Szyrma's poem "On Shakespeare's Cliff" was preserved – written by him on Shakespeare's Cliff in Dover during a storm and included in *Anglia i Szkocja* [Lach-Szyrma 1828: 507-508].

In winter, he makes the third trip to his home land.

18.08.1828. His second daughter, Czesława Katarzyna is born in Warsaw. She became the wife of Prince Ignacy Terlecki. She died on 29.09.1870 in Paris.

1828. He becomes a selected member of the Royal-Warsaw Society of Friends of Science based on the work *Anglia i Szkocja. Przypomnienia z podróży roku 1820-1824 odbytej* and other scientific works (in 1831 he was proposed as an active member).

1829. In the summer, he makes the fourth trip to his homeland.

1830. He takes part in the November Uprising. He establishes a 1200-person Academic Guard and becomes its commander (leaves the service with the rank of colonel).

Violently persecuted for radicalism by Maurycy Mochnacki, who ironically called him "a Scottish philosopher on the black horse".

Removed for radicalism by general Chłopicki and sent by him as an emissary of the National Government to England.

Arrested at the Prussian border – imprisoned by the Prussians for several weeks in prison in Wrocław.

1831. He returns to Warsaw and joins – as a volunteer – to the corps of general Hieronim Ramorin.

After the surrender of the corps – *via* Slovakia, Germany and France – he emigrates to Britain, settling first in Edinburgh and then in Devonport.

He belongs to the followers of the camp of Adam J. Czartoryski.

1832. He becomes secretary of the Literary Society of the Friends of Poland in London.

He establishes friendship with the poet and historian François-Xavier Garneau, a member and chairman of the Literary Society of the Friends of Poland – the author of the poem "La liberté prophétisant sur l'avenir de la Pologne", and after returning to Quebec (1833) – the poem "Souvenir d'un Polonais", addressed to Lach-Szyrma.

22.01.1837. Lach-Szyrma's first wife, Józefa, and her newborn son – die in London.

1839. He establishes the Historical Society of London (as a branch of the Paris Historical and Literary Society).

1840. He marries Sara Somerville, the daughter of the captain of the Royal Navy.

25.12.1841. His second wife gives birth in Devonport to son Władysław (using the name Somerville Lach-Szyrma), who – like his father – kept in touch (*via* letters) with his homeland. Władysław after studying at Oxford, became a clergyman of the Church of England. He published works in the field of cultural history; he was also a pioneer of science fiction (he was the

first to use the word "Martian" – in the novel *Aleriel or a Voyage to Other Worlds*, 1883). He died in 1915.

1846. He receives British citizenship.

1854. Krystyn's nephew informs him in a letter of the situation in his homeland.

21.04.1866. He dies in Devonport (England); his gravestone is now situated near the church Stoke-Damerel.

Throughout his life – in the country and abroad – he was a champion of the Polish issue both in terms of politics and culture.

The cemetery by the church Stoke-Damerel in Devonport – a place of Lach-Szyrma's burial

In the description of his first journey around Great Britain he meticulously recorded all *polonica* and compared the local relations with the Polish ones.

> English coffee is weaker than the Polish and tastes quite different, which is due to the fact that they do not roast it enough [Lach-Szyrma 1828: 31].
>
> Having attended one of the lectures of Mr [John] Leslie, I heard him read a beautiful passage about our Copernicus, whom, in spite of so many misunderstandings he called a Pole. Seeing me before my departure, he told me a very interesting thing that at the University of Edinburgh there was once the fund for two Polish Protestants. The benefactor was supposed to be a Brown, a merchant of Gdańsk [Lach-Szyrma 1828: 101].
>
> Musical festivities in Edinburgh were then directed by [Feliks] Janiewicz, our compatriot, who had settled there a long time ago. […] Janiewicz in his art was so deserving, that the honour thereof graces the country which delivered him [Lach-Szyrma 1828: 131].[18]
>
> The complexion […] [of Englishwomen] is more robust than delicate, agrees well with the eyes, which, like in Polish women are dark or big and grey: the latter construed there to be reasonable, for the eyes of Minerva [Lach-Szyrma 1828: 144].
>
> Valentine's Day is for Scottish women what eve of the St. Andrews is for Polish women [Lach-Szyrma 1828: 156].
>
> The old generations of Slavs, delegating power of government to their chiefs, sat them on the boulders: chairs became customary later. I happened to see the old seal of one of the Polish kings of the Piast Dynasty, where not an eagle, but

[18] Lach-Szyrma gave a detailed description of the artistic and organizational activity of Janiewicz [Lach-Szyrma 1828: 130-133], with whom he became friends.

stool with Gothic ornaments, that is the capital was embossed [Lach-Szyrma 1828: 220].

In pronunciation, [Scots] slightly prolong syllables, particularly the letter *a*, like Lithuanians, which gives the speech a certain lyricism, which is not at all unpleasant for unprejudiced ear [Lach-Szyrma 1828: 275].

The strange thing is that between such a large […] number [of metals of the mining kingdom] and a large number of those whose homeland was described, I have not found [in British Museum in London] any one from Poland [Lach-Szyrma 1828: 405].

That the relations between England and Poland were frequent, is demonstrated by their mutual deputations to each other at different times, which are mentioned in the history. In London there is even a street called Poland (Poland Street), adjacent to large Oxford Street, which probably was so named from the residence of some Polish envoy [Lach-Szyrma 1828: 411].

A particular curiosity must be added here that the architect […] [of the Covent Garden theatre building] was [Michał Józef] Nowosielski, who, judging from his name, was either a Pole or born from Polish parents; and he had to be a famous builder if elevation of such an important building was entrusted to him [Lach-Szyrma 1828: 427].

In St. Clement [meaning the cemetery in London] in the altar, there is supposed to be an interesting painting of the Pretender, his wife [Klementyna Maria], who was née princess Sobieska, and their children. This is an interesting souvenir for a Pole [Lach-Szyrma 1828: 462].

I met Major [John] Cartwright, so famous for his specific political and moral views. He was then an eighty-year-old man and when I was introduced to him as a Pole, he politely took me by the hand and asked if they remember about Kościuszko in Poland. He said it as if he was convinced that such things are easily forgotten in our country [Lach-Szyrma 1828: 468].

I have [also] met a priest of the sect of Unitarians [Charles James] Fox, who upon learning that I was from Poland, inquired about the condition and fortune of his co-religionists in our country, because in England, as I happened to hear several times, it is believed that in Poland there are many Socinian churches [Lach-Szyrma 1828: 469].

At the eastern end [of the ceiling of the Painted Hall in Hospital in Greenwich] a gallery with banners won from Spaniards, there also Tycho Brahe, [John] Flamsteed and – what should interest a Pole more – Copernicus, holding the sphere of the sun in his hand, with marked the path on which Earth orbits the sun [Lach-Szyrma 1828: 500].

Lach-Szyrma contrasted patriotism with cosmopolitanism, of which he spoke disapprovingly:

What is, actually, a so-called citizen of the world? Here is a man following his own whim or delusion, indifferent to the country which gave him life and upbringing, from which, however, he continues to reap the rewards and dry it from the sources of wealth. Patent for world citizenship makes man a stranger to one

country and useless for all, and in fact it is a common privilege for idleness and parasitism; its user is a passive creature, living free on the society, not contributing in any way to its good. The man who wants to be a citizen everywhere is a citizen nowhere; he is nowhere at home, everywhere – a foreigner. At looming storm, neither a country, in which they chose to settle, nor homeland, which they scornfully abandoned, cannot rely on the way of thinking and arm of those people. They left their own, so they will also leave a foreign roof and will settle where selfishness will indicate them the safety and seduction. This travelling brotherhood is similar to migratory birds which every year pick nests somewhere else without leaving a hope for the future. How low in terms of a reliable utility is the position of people staying abroad, I heard an apt sentence of an official famous in our country that the mayor in a small town is worth more for the country than a senator sitting abroad [Lach-Szyrma 1828: 299].

2. Writings

A strictly philosophical treatise by Lach-Szyrma is his lecture "O związkach myśli" ["On Connections of Thoughts"] [Lach-Szyrma 1825]. He also touched upon many important philosophical questions in his travel log of Britain: *Anglia i Szkocja* [Lach-Szyrma 1828].

Otherwise, he edited *Pamiętnik Umiejętności Moralnych i Literatury* (since 1830) and *Dziennik Gwardii Honorowej* (No. 1/1st-January – No. 8/January 11th-1831). He co-edited *Pamiętnik Warszawski Umiejętności Czystych i Stosowanych* and *Polonia or Monthly Reports on Polish Affair*s (together with Bach; 5 numbers were issued from August 1832 to December 1832, from issue 4 – quarterly).

3. References

Among the achievements of Polish philosophers, Lach-Szyrma was familiar with, among others, works of Sebastian Petrycy of Pilzno, Andrzej Maksymilian Fredro, Jan Śniadecki and Feliks Jaroński.

He valued Petrycy for "sophisticated commentaries on Aristotle's *Politics* and *Ethics*" [Lach-Szyrma 1823: 185]; Fredro – for the "principles of wisdom and prudence, spoken in short sentences, on different sides of human affairs" [Lach-Szyrma 1823: 169], stressing that these are not some selfish rules, given in the form intended to dazzle readers, but accurate and deep observations of the man of action worried about the common good [Lach-Szyrma 1823: 170]. On the other hand, he wrote about Śniadecki and Jaroński:

> In studies of philosophy and [theory of] literature, [Śniadecki] combines […] the precision of mathematician in deductions – with insight of a man of the world in observations, carrying out his arguments in style at the same time full of verve, clarity and elegance [Lach-Szyrma 1823: 189].

> Dissertations […] [by Jaroński] about the nature of mind are worth careful study, not so much because of the originality of his views as due to the novelty of the endeavour itself [Lach-Szyrma 1823: 189-190].

4. Views

4.1. Logic

As every analytic philosopher, Lach-Szyrma valued sobriety of expression. He approvingly spoke of Englishmen:

> Nowhere less than […], [in England] do they argue about words and rules: they care for the essence and thoughts [Lach-Szyrma 1828: 165].

With regard to the issue of logics *sensu lato*, Lach-Szyrma was interested, first of all, in "connections of thought" – "laws, according to which thoughts arise and relate to one another" [Lach-Szyrma 1825: 284].

> We construe "connections of thought" ["associations"] as certain associations of concepts, images and feelings, so that one hinting at the second combine together and form a series of thoughts [Lach-Szyrma 1825: 284].
>
> Not perceiving […] [the difference between the concepts and images] often was the reason for the wrong judgment [Lach-Szyrma 1825: 284].
>
> The opportunity to form connections of thoughts […] is the set of all faculties of the soul. Attention and memory, reason and imagination, when combined, create the connections of thoughts. […] The whole soul with all its faculties contributes to the formation of connections of thoughts [Lach-Szyrma 1825: 286].
>
> There are various words in human speech to signify the actions of those faculties with regard to connections of thoughts.[…] With respect to attention, we say, thoughts ARISE or DRAW our attention; with respect to memory they HINT; with respect to reason and imagination they ASSOCIATE, COMBINE, BIND, UNITE [Lach-Szyrma 1825: 287].
>
> Circumstances […] and the laws resulting from them for the connections of thoughts are: CONTIGUITY *(contiguitas)* OF PLACE AND TIME, SIMILARITY and ADVERSARINESS [Lach-Szyrma 1825: 287].

Secondly – he commented on the relationship between natural language and theoretical language. He believed in particular that a lot of theoretical terms – are metaphorical expressions adapted from natural language.

> Many of the concepts […] are so far unnamed: the clearest proof thereof, is the gradual improvement of the languages in the course of scientific progress; and between concepts which were called, many are poorly signified: we are most often convinced of it by the most commonly used ways of speaking. We say: VOICE is THIN or THICK. But on what basis do we assign voice or tones thinness or thickness? What affinity and relationship occur between voice and tones when neither the voice of any living being,

nor musical tones are so material as to call them "thin" or "thick" as we call a TREE? For this reason, properties of voice and tones can also be called "falsely designated". Their current expressions "thin", "thick", "sharp", *etc.* cannot be otherwise explained […] except only in appointing them the cause in HYPERBOLES or METAPHORS.[…] In naming the tones "thick", "thin", "sharp", man did not think so much of the essence of as subtle a thing, as the tone, but rather of the shape of objects issuing tones and falling under his senses. He called the tone "thin", since the string emitting it was thin, and "thick" since it was thick [Lach-Szyrma 1825: 292-293].

He pointed out that many psychological terms – are expression extended to experiences related to "objects which fall under the senses":

Due to spreading […] [similarities] to objects which fall under the senses […], a lot of expressions of sense wedged into speech to mark the various states of the soul. We say that we feel the bitterness of regret, the sweetness of life, pangs of conscience [Lach-Szyrma 1825: 296].

Thirdly, he believed that all scientific disciplines are interconnected – so that science is *sui generis* a unity:

All […] parts [of science] are in a relationship and mutually supportive among themselves [Lach-Szyrma 1828: 474].

4.2. Ontology

Lach-Szyrma spoke very rarely about general ontological problems.

It is worth noting, that he included time-spatiality and (as we would say today) tightness among the properties of material things.

It is difficult to imagine a thing that is not in place or in time [Lach-Szyrma 1825: 288].

Therefore, the nature of things itself demonstrates that in one moment, if we want to think better, we cannot have more than one thought or feeling, just like in a place already occupied by one body there cannot be a second body [Lach-Szyrma 1825: 190].

4.3. Philosophical anthropology

In contrast to the overall ontological issue – Lach-Szyrma devoted a lot of attention to this part of ontology, which may be called "philosophical anthropology". He justified it, saying:

The greatest detail in the animals is not as important as the smallest one in man [Lach-Szyrma 1828: 160].

He believed that dignity and ability of self-knowledge is what distinguishes a man.

> Visiting prisons […] I felt pity with respect, and deaf quiet prompting contemplation, sometimes interrupted by heavy sighs of regret, gave the place an incomprehensible solemnity. The essence of man is so noble, that even in its own fall it does not cease to be great – never ceases to interest a man [Lach-Szyrma 1828: 66]!

Within the anthropological issues, he was most interested particularly in five sets of problems: the hierarchy of human needs, records of human flaws, the status of outstanding individuals, the rules governing the community and identification of the «spirit» of the nation.

4.3.1. Human needs

Among the human needs, Lach-Szyrma identified the physical (economic) needs, and – as he expressed it – "moral and imaginary" needs.

Regarding wealth and poverty, he spoke without illusions:

> Where there are the rich, there must be the poor [Lach-Szyrma 1828: 388].

He perceived the relationship of "imaginary" needs to the physical needs as the measure of wealth of the man (and the country): the poorer he is, the less he is able to allocate to the "imaginary" needs – or the higher needs.

> Worker's food is not a measure to assess needs; it includes his clothing, housing and various conveniences which are not the same in all countries. Food, which an English labourer needs, is barely a third part of this measure; and food a lord needs, is barely a hundredth part. So small are the physical needs as compared to the moral and imaginary needs. The richer the country, the more needs of the last order it has. A truly poor country would be the one with nothing left for the imaginary needs. In this state, the wild nations remain, for which the simplest food, drink and clothing are sufficient for a happy life [Lach-Szyrma 1828: 105].

The distinction between physical and moral needs was – for Lach-Szyrma – the basis for the distinction between (physical) poverty and (moral) destitution and accordingly between their victims: a pauper and a destitute.

> There is some distinction between poverty and destitution. Poverty does not yet obstruct the road to happiness and respect; lack of morality plunges one in a boundless misery. With the former, a man is only a pauper; with the latter – a destitute [Lach-Szyrma 1828: 231].

Lach-Szyrma indicated four higher needs, arranged in two pairs: the need for truth and the need to dream – and the need for roots and need for change.

On the need of truth he wrote:

> Truth […] can only be seen wrong by ignorants […] or by those who are unable to break away once acquired prejudice [Lach-Szyrma 1828: 12].

The need for dreams is *sui generis* a complement for the need of truth:

> People, even best-paid, will be tardy, if not left with anything to expect [Lach-Szyrma 1828: 30].

About being rooted – in tradition – he spoke as follows:

> Where the history ceases, there a legend is pleasant; where there is a legend, there a tale is a treasure, because fairy tale cannot be without grounds and must point to something further, which a thinking person wants to investigate and penetrate [Lach-Szyrma 1828: 264].
>
> Nobody is such a cynic as to be quite indifferent to what soil will cover his eyes [Lach-Szyrma 1828: 464].

The need for being rooted can be considered the need to extend life into the past; its complement is a need to extend life into the future.

> The old age is content to survive itself, and when it senses the end to sending otherwise its name and deeds to posterity, it feels an unwitting desire to extend the memory of itself in the trees. Therefore, the elderly like above all to live in the countryside; rural life seems to be most appropriate for them [Lach-Szyrma 1828: 183].

Lach-Szyrma considered the need for change a *pendant* for the need to be rooted:

> Staying in one place, we seek change in the food, beverage, company; to change the sights, we travel [Lach-Szyrma 1828: 18].
>
> Travels do not need and should not be a newspaper in which only most recent news pay; presence in them, as it is the result of the past, should be associated with the past, or the history of the countries in which they take place [Lach-Szyrma 1828: 11].

He saw the following relationship between wealth and poverty – and the needs for rooting and change:

Poverty persists with the former, wealth and vanity lead to volatility and imitation [Lach-Szyrma 1828: 136].

4.3.2. Human flaws

Among human flaws, Lach-Szyrma thought to be particularly prevalent: ambition, megalomania (vanity, pride, conceit) and fanaticism. He was of the opinion that they manifest themselves especially in people belonging to the «upper class»:

Ambition, pride and fanaticism have in them such a property that they are found always in high sphere, and it is its height which is the cause of vertigo in people [Lach-Szyrma 1828: 352].

About megalomania, he wrote:

What would one not sacrifice to satisfy vanity [Lach-Szyrma 1828: 253]?

O the pride of the wise, be vigilant, do not believe yourself [Lach-Szyrma 1828: 353]!

Conceit and prejudice for one's own is not only a flaw of the scholars of that country [*scil.* England] [Lach-Szyrma 1828: 79].

He believed fanaticism to be the most dangerous. He wrote:

[There is] nothing more horrible than fanaticism [Lach-Szyrma 1828: 55].

One way to cure oneself of these flaws was – according to Lach-Szyrma – to visit a psychiatric hospital, where one can see what "the ruin of human reason" looks like. Lach-Szyrma had such an experience himself – he recalled it as follows:

Every ruin has something sad in it, but the ruin of human reason is the saddest: its delicate structure, once destroyed, cannot be easily repaired. There are certain eternal laws for man, whom he cannot trespass if he does not wish for the hand of Providence to abandon him. Excessive intellect leads him to sophistry and delusion: wherever there is excess, human audacity becomes entangled in its own trap and causes its own downfall. So many terrible falls happen here; here we saw only a few. There, haughty pride should go for a lesson in humiliation and relentless self-conceit for a lesson in modesty. It would not be amiss to lead flexible minds of young people to such a place; knowing their history, more than one would watch carefully over oneself, would not allow to root pernicious fantasies (*idées fixes*), would understand better his destiny. The impression one experiences there is so great that it is enough to find oneself once at the insane asylum, to never go there again [Lach-Szyrma 1828: 358].

4.3.3. Outstanding individuals

Lach-Szyrma believed a mark of greatness – genius – to be the ability to synthesize and infinitize:

> When reaching a great design is in view, where genius works in the realm of inspiration inaccessible to the common people, who will call him down from on high to the school's teaching rules? Why this, which in fact we all consider joint in mind, could not be in the same combination on canvas? It is the privilege of genius, to embrace in one image what was scattered in the centuries of time. Thought and feeling connect all: in them are the links of the whole. Lack of these links disengages, introduces breaks, reveals mental poverty [Lach-Szyrma 1828: 116].
>
> The genius is able to give the smallest object a huge form, for it is able to grasp the infinity of beings [Lach-Szyrma 1828: 14].

Lach-Szyrma considered pride and envy as a sign of mediocrity:

> I witnessed how true greatness was joined with simplicity, the deepest science with the greatest modesty. I have found that pride and envy are a reliable sign of mediocrity [Lach-Szyrma 1828: 94].

Lach-Szyrma considered here that – on one hand – to evaluate the outstanding individuals one needs to maintain a certain distance from them.

> Great people, to appear as they really are, must be observed from a distance and judge them according to their own, and not common measure [Lach-Szyrma 1828: 466].

On the other hand – communing with outstanding entities, we experience the positive impact of the latter:

> Finding myself against greatness, it seemed to me that I soared towards it and that I was capable of it. It seems to exert such a strong influence that not only it encourages, elevates, but also dares, when on the contrary, the view of villainy saddens, because it is opposed to noble buds of human nature; it is as if a deadly breath of death suppresses and destroys the most exuberant capabilities [Lach-Szyrma 1828: 94].

4.3.4. Community

Lach-Szyrma recorded four regularities regarding community.

(1) The higher the education of community members – the greater the extent to which its cohesion depends on "social laws":

The desire […] to admit a common kindship is peculiar to all peoples at a lower level of education. The reason for this is sometimes their inherent sincerity and the need to replace deprivation of social laws with bounds of blood [Lach-Szyrma 1828: 228].

(2) The higher the moral level of members of the community – the greater honour is felt by its members in belonging to this community.

Where could one seek greater honours, if not in the company of noble people [Lach-Szyrma 1828: 183]?

(3) The larger and geographically «denser» the community – the greater its moral differentiation.

This is the fate of all great cities that they are a pile of crime and a hotbed of the noblest virtues – their image is the same everywhere, only in different colours [Lach-Szyrma 1828: 35].

(4) The «higher» the community – the greater is its tendency toward uniformity.

Higher societies, both in the cut of tailcoats, the form of hats, and in pronunciation are in need of uniformity, because it protects them from committing numerous ridicules which they themselves could not avoid [Lach-Szyrma 1828: 276].

4.3.5. Nation

Lach-Szyrma considered the nation as the highest type of community.

Individual nations differ in «national spirit», which otherwise is difficult to characterize.

Each nation wants to live their own way also in heaven [Lach-Szyrma 1828: 164].

Painting the overall picture [of «natural spirit»] is the most difficult, because it is a result of confluence of a multitude of individually and jointly operating reasons, tied to the climate, the shape of the government and many other circumstances [Lach-Szyrma 1828: 509].

Despite that, he tried to identify the main component of «national spirit» of Englishmen. He considered deliberation to be such a component. He wrote in this regard:

In a nation where too lively movements of one's body are considered to be ridiculous, the whole power of expression must rely on reasonable moderation and

folds of voice. An Englishman talking to the people must be still as a statue; otherwise he would be accused of a lack of dignity and reason. To sensible people, one must speak carefully and quietly: passions do not have power over it. […] Everyone, where there is a question of self-interest or national matter, weighs every thought and every word of the speaker; the smallest sign of immoderate zeal can do him more harm than good [Lach-Szyrma 1828: 82].

Lach-Szyrma believed that there are no nations which would carry only positive values, and there are no nations characterized by only negative features.

Each nation has its good and bad side [Lach-Szyrma 1828: 12].

One practical way of individualization of «national spirit» is the comparison of two peoples living in neighbouring territories.

In journeys, there is nothing more important than the entry from one country to another; the history and fate of the bordering nations enkindle so many abundant imaginings and sometimes sublime feelings [Lach-Szyrma 1828: 509].

Lach-Szyrma recognized the respect for principles as the exponent of enlightenment of the nation – and the happiness of its members.

Principles of every man are the result of a long reflection and experience. Their offense is severe – the more severe when the wound is moral. Thus, the more the nation is enlightened, the more they respect its rules. The savages have no rules nor are they able to evaluate them [Lach-Szyrma 1828: 140-141].

Nothing contributes more to strengthening the happiness of the nation than the well-arranged structure of laws and their strict execution [Lach-Szyrma 1828: 361].

4.4. Epistemology

4.4.1. Thought and reality

Among the statements of Lach-Szyrma belonging to epistemology *resp.* psychology – two of his observations draw particular attention. One – concerns mono-layering of thoughts, the other – the touchstone of reality.

About mono-layering he wrote as follows:

The soul in one and the same moment [is] incapable of creating more series of thoughts than one [Lach-Szyrma 1825: 189].

However, there are cases in which the thought is created and comprehended not alone, but together: and even only when it is complex, it [is] capable of being created in the mind. Music of the orchestra contains a collection of various sounds

coming from different musical instruments, and still the audience understands it: if even one of them would want to grasp every tone individually, he could not detach it from the others, so intertwined they are with each other; and if he could, he would spoil the whole pleasure resulting from their entirety with such analysis. Although this example seems to contradict our assertion that the soul in one moment can think and comprehend one thing only – it is not so. This principle in its entirety can be used here, since however the orchestra music is composed, we, listening to it, understand not its separate parts, but its unity [Lach-Szyrma 1825: 290-291].

He considered "effectiveness and usefulness" the touchstone of reality:

Whose effectiveness and usefulness was found by experience, it is no longer a fantasy and a chimera [Lach-Szyrma 1828: 393].

4.4.2. Knowledge and imagination

Lach-Szyrma was confident about the interaction of knowledge and imagination.

On the one hand – the imagination expands the frontiers of knowledge:

I would […] consider […] knowledge […] as an incentive and means. A man spreads and multiplies his desires and means to satisfy them in no other way than by a broader vision, thus not only embracing more through knowledge, but also being capable of achieving more: opening up the whole world for himself. It is sufficient to once awaken his desire and ambition, and they will persevere – strengthened by his imagination; through it, distant objects will become close and uncertain certain, and the hope of achieving them will turn through the imagination into actual possession [Lach-Szyrma 1828: 280-281].

Human imagination likes to animate inanimate objects, and in helping the weak concept, is making a plaything of huge features of nature [Lach-Szyrma 1828: 213].

On the other hand – knowledge stimulates imagination:

Where the eye does not have diversity and immensity of nature in front of it, there it is not easy for the mind to rise to the daring imagination [Lach-Szyrma 1828: 290].

Who has not been in the open expanse of the ocean and has not lost sight of everything except sky and water, cannot have an accurate idea of infinity. Actual presence in its unlimited reach has an unspeakable, delightful lure [Lach-Szyrma 1828: 287-288].

4.5. Ethics

Lach-Szyrma devoted relatively little attention to moral philosophy. From the references scattered around various places, the following picture emerges of his views in this regard.

(1) There are no acts which would be morally homogeneous.

> In every thing […] with the good […] the bad [must] intervene [Lach-Szyrma 1828: 298].

(2) The noblest act – is an act whose motive is compassion for another human being. The opposite is insensitivity to other people's misfortune.

> What could be more noble for man, if not compassion for their neighbour and humanity [Lach-Szyrma 1828: 349]?
>
> It would reveal an unfavourable side in man, when what hurts someone would give him most fun [Lach-Szyrma 1828: 92].

(3) An expression of pity – is charity, which can be individual or organized. Charitable societies prevail over benevolence of individuals, because they are «immortal». Therefore the number of charitable societies in the given country is a measure of nobility of the nation inhabiting this country.

> Societies [composed of "citizens zealous for the good of humanity" taking care of prisons] […] are the greatest boon to mankind. Man, though most charitable, dies, putting an end to his goodness, but a society is immortal: it survives in its selected members, carefully and systematically develops an effective plan for improvement, by mutual encouragement and support gives the drive and strength to noble intentions. Improvements coming from such a source are not a passing whim or reckless asking for novelty, but are born as an effect of healthy reflection and experience. Their beginning is not in selfishness or conceit, but in willingly sacrificing oneself for the good of others and the country [Lach-Szyrma 1828: 387].
>
> If we think about the amount of selfish feelings in a nation, should we not consider the number of beneficial societies, which are the best proof in wait for the good of humanity [Lach-Szyrma 1828: 474]?

(4) The source of morally reprehensible acts is ignorance of a person acting.

> Where is the source of the [moral] error, if not in ignorance [Lach-Szyrma 1929a: 63]?
>
> Nothing awakens so much distrust and disgust towards the man as having forfeited the most necessary gift for reasonable conduct, which is the gift of reason: without it there is no guarantee and security among the people: there is no virtue [Lach-Szyrma 1828: 354].

(5) The moral strength of man is evidenced by his courage; moral weakness – by timidity.

Crazy people are very timid. Cowardice, as can be seen, is the lack of moral strength [Lach-Szyrma 1828: 355].

(6) Virtue and merit depend on the strength of temptation. The less temptation – the easier to achieve virtue, but also the less merit.

Where so many [*scil.* numerous] temptations, there virtue has it most difficult: it is easiest to be virtuous, where you do not have them, but also little honour to overcome the desires [Lach-Szyrma 1828: 373].

(7) The severity of the sanctions should be proportional to the availability of temptations – especially economic – favouring violations of moral norms.

A poor country will always have fewer thefts to punish than the rich, because there is nothing to steal; in the poorer one even laws are more lenient. This indulgence is natural: the severity of penalties where the offense only bothers would be unnecessary torment; but where it threatens undermining the public order, there it is justice [Lach-Szyrma 1828: 373].

4.6. Aesthetics

During his first stay in Great Britain, Lach-Szyrma participated in the discussions on the aesthetic topics. He recalled about one of them:

It seemed to me that the guardian genius of feasts and good cheer was present at the table and directed the conversation [during the feast at home of prof. John Wilson, who wrote under the pseudonym Christopher North]. I still remember something of its content: it was said about the boundaries between painting and woodcarving, about contoured shapes and colouring, and what exactly is the pleasure taken in those arts. We talked about loftiness in writings and arts, from which the conclusion emerged that beauty has its pathos, that [Edmund] Burke, who wrote about loftiness and beauty, was wrong, disconnecting them from each other [Lach-Szyrma 1828: 100].

Lach-Szyrma devoted relatively much attention to aesthetics throughout his life. It undoubtedly stemmed from the significant place he assigned to art in human life.

It is difficult to comprehend and more than one of economist might be brought down from the height of his theory, how far objects of art and literature can exist in the nations with a complete dearth of not only excessive, but the very first necessities of life. […] There is a reason which makes mental improvement as well as the nobility of feelings independent of wealth. Woe be to humanity if it were any different [Lach-Szyrma 1828: 269].

Lach-Szyrma focused on three areas belonging to the aesthetics: What makes aesthetic judgments of the same works of art tend to be diverse? What are the features of works of art? What is the specificity of the different types of arts – especially literature and music?

4.6.1. Differences in aesthetic evaluations

As has been mentioned before – according to Lach-Szyrma there are three factors involving association of experience ("relations of thoughts"): spatial-temporal proximity, similarity and contrast. He wrote about this as follows:

> As a similar thing […] [guides] to a similar one, so an opposite thing can guide to its opposite.[…] Adversariness [*scil.* contrast] makes […] the objects remaining in contrast with each other present more forcefully situated next to each other than individually [Lach-Szyrma 1825: 298].

Laws of "contact", "similarity" and "adversariness" also apply in the field of aesthetic experience – and evaluations. But in this area there are significant differences between people. According to Lach-Szyrma these facts do not falsify these rights. The differences stem from the fact that the circumstances in which individual experiences take place, modify their final quality.

> Why one thing astonishes, delights, elevates someone, and leaves someone else indifferent? Does it not make suspect the certainty of principles, on which we based the relations of things towards things and creation of the relations of thoughts? Not at all; the principles outlined above do not cease to be immutable: relationships of thought will always depend on them and develop uniformly on them: one must only have regard to the circumstances which […] change […] their character with their influence. These circumstances could be called "side principles" to distinguish them from the above mentioned, which are major [Lach-Szyrma 1825: 301-302].

Lach-Szyrma lists ten such circumstances: (1) length of time of contact of thoughts; (2) force of "original concept"; (3) intensity of curiosity and attention; (4) frequency of remembering; (5) temporal distance; (6) specificity of the objects of thought; (7) memory and mental abilities of the thinker; (8) type of temperament; (9) momentary mood; (10) "addiction" (habit).

> Not […] only according to the laws of reason ideas and their order are formed; feelings also form the ideas and form their ranks according to their laws [Lach-Szyrma 1825: 307].

> Beautiful nature, though in itself speaks to the feeling, however, its size occupies us in an incomparably stronger manner, when the visited places are accompanied by the memories of important historical events and legends [Lach-Szyrma 1828: 197].
>
> The best work without expensive care of newspapers will lay like a stone on the shelves in the bookstore, because no one will know about it. The new work is also supported in sales when some scientific journal or literary newspaper will perform its analysis, good or bad, it does not matter [Lach-Szyrma 1828: 339].

Because of the impact of these circumstances on aesthetic experience – of creators and consumers – one must reckon with the fact that aesthetic judgments should not be considered as a final evaluation.

> What someone cares about, and perhaps he cares about it for vanity and the sake of the amount of money spent, does not have to occupy all; not everything which draws temporary attention deserves the attention of posterity [Lach-Szyrma 1828: 111-112].

4.6.2. Functions of art

Lach-Szyrma drew attention to the two functions of art: expressive-evocative and reproductive.

The evocative function of art – art impact on the mood of the recipient – was realized already in antiquity. Thus, for example – conscious complementing tragedy with "merry jest" or (in England) with ballet numbers relaxing for the viewer.

> After the main play, which usually is a tragedy, [English theatres] play merry jest or ballet. It aims, as the Greeks' satirical drama, to exhilarate viewers after the sad tragic disasters [Lach-Szyrma 1828: 424].

Reproductive function is assigned mainly to painting.

> The greatest art in painting is to deliver a complete similarity, or identity; or as it is expressed in the Polish language to HIT THE MARK. In HITTING THE MARK, similarity is grounded in the POINTS OF SPACE [Lach-Szyrma 1825: 295].

Perfecting this function may result in the long term in refraining from touring and replacing direct contact with nature – with communing with its artistic rendering.

> We do not know where art will lead us in time! If other interesting views were so faithfully exhibited [as the views exposed in the diorama in Paris], many would spare themselves the hardships of travelling to view the wonderful creations of the human hand and nature [Lach-Szyrma 1828: 56].

It is worth noting that Lach-Szyrma made interesting comments on the impact of access to works of art on its reception, expressing his belief that free access to the arts adversely affects the reception.

> One cannot praise enough the nobility of our government, that the entrance to the exhibitions is free; I dare say, however, that the imposition of a small fee would not in any way offend its generosity, nor would audience count it as a burden, and these important benefits would be achieved.
>
> Firstly – we would save public money on awards, or at least provide new capital for their multiplication.
>
> Secondly – it would thin a crowd of idle people, coming there not to evaluate art or government care for it, but only for errant wandering.
>
> Thirdly – it would significantly serve arts and crafts themselves, for those coming to the exhibition, the entrance to which they would have to pay, would stay longer, would more inquire about details, would learn everything more in depth, would not gloss over things, as it happens now, thinking that they will see tomorrow what they have not seen today – and usually never come back. Such fleeting visits need to be prevented, and since they cannot be completely prevented, at least made more difficult, because neither art nor artists' fame do not gain profits that way. Works of art and industry require exploration, gain nothing from the superficial consideration.
>
> Fourthly – in making the supposed benefit to the public, which in effect is harmful both for the public and the art, we would not expose the exhibitions to contempt because people only appreciate what they pay for, and they usually value things more, the more they pay for them. It is a sad side of human reason, but so it is. For this reason in England and almost everywhere abroad, entries to exhibitions are paid.
>
> Because the value of money is very relative and what for the craftsman would be onerous, is not so for a greater merchant and tycoon; the difficulty would be what payment to assign to everyone, which in practice would not be possible to do, but which would be very desirable, in order to effectively achieve the goal we could leave unlimited scope for generosity [Lach-Szyrma 1828: 319-320].

4.6.3. Literature

Lach-Szyrma believed that the development of literature in the country is affected by the state of education of its inhabitants and the degree of their national identity – the latter in particular affecting the development of dramatic literature.

> Literature […] is a natural outflow of feelings which only higher education is capable of developing in the nations [Lach-Szyrma 1828: 61].
>
> Peoples characterized by nationality also excel in dramatic works: such are now the British, French and Germans.[…] Slav peoples, as can be judged by their present state, do not yet deserve any attention in this respect; so far they have had no

opportunity to develop their spirit in the sciences, not having developed it in social relations, however, they are taking a big step towards manhood. Establishing the government between them and benevolent fraternity will help soon, as expected, in developing a national character and robustness of literature. Their theatre, so far supplied with foreign models, will have its own native scope. Following the national spirit of peoples and resurrecting it where it withered will spread its expanse [Lach-Szyrma 1828: 413].

Lach-Szyrma distinguished popular and national, or – as he said – traditional literature, and especially poetry.

Traditional poetry is based on recalling events which actually happened in a certain place at a certain time, and are later transmitted by centuries of oral tradition. It appears consequently to have some historical character. Popular poetry on the contrary, having more general meaning, may – or may not – imply the idea of historical events. It consists of pure impulses of the heart, expressed in song, and retains the same popular nature regardless of whether it comes from the ancient or modern era. It is called "popular" because it is born and develops in the hearts of individuals [Lach-Szyrma 1823: 29].

Popular poetry excludes all things foreign to its subjects – both in content and in the way [of presentation]. It has to do solely with the universal feelings, expressing the moral life of individuals. […] By contrast, national poetry is not so strictly limited to what is specific to individual people [Lach-Szyrma 1823: 30].

Among Polish national poetry, he ranked the works of Krasicki, Niemcewicz, [Ludwik] Kropiński, [Franciszek] Wężyk and Woronicz, and among popular poetry – some poems by Kniaźnin, Karpiński and Brodziński [Lach-Szyrma 1823: 32].

The main artistic measures used in poetry are – according to Lach-Szyrma – metaphor and comparison, both referring to the relationship of similarity. He wrote:

Of all the relations of thought, formed in the poetry from similarity, most weight have those that arise from METAPHOR and COMPARISON. Metaphor is the language of rapture; comparison – of a calm mind pondering over various relations and connections of things. […] The vice of metaphor is sometimes grandiloquence and pomposity, the vice of comparison – far searched similarity [Lach-Szyrma 1825: 297].

4.6.4. Music

While the primary function of painting is the reproductive function, the primary function of music is expressive-evocative function.

Hence the enormous influence of music on the human emotional sphere.

> The power of music seems to have such omnipotent reign over the feeling that the youth [British even] against strict tenets of Calvin does not give up […] fun [Lach-Szyrma 1828: 282].

The strength of this impact is increased by – according to Lach-Szyrma – the time of performance of musical compositions, namely their performance "in time of darkness".

> In the time of darkness […], as we know, the power of music usually affects feelings more strongly [Lach-Szyrma 1828: 188].

According to Lach-Szyrma, the manner of emotional expression in music is similar among different peoples at different times. He illustrated this with an example of songs of mourning.

> In a row of communal songs, the so-called coronachs or funeral songs occupy an important place. They were known to most ancient peoples: the Romans called them "ululatus" the Irish "ululoo", ancient Prussians "o lele lele". Almost all of these mournful cries are similar, because the voice of grief has one sound everywhere [Lach-Szyrma 1828: 265].

4.7. Didactics

Lach-Szyrma attached great importance to education. He wrote in this regard:

> From whatever position we wish to regard upbringing, whether in terms of impact on the poorer classes of the population, or on the general public, it is always a matter of great importance [Lach-Szyrma 1828: 486].
>
> Upbringing […] is the only way and warranty for the greatness of man in particular and the entire nation in general. The natural dispositions may be more evenly distributed among people than we think, but there is nothing more certain than the fact that the best soil without cultivation and sowing becomes just a fallow bearing weeds [Lach-Szyrma 1828: 480].

The condition of education is, among others, a factor in determining the state of morals, "handicraft and industry" in the country.

> Complaisance […] as a salutary effect of education, is also a reliable sign of its high degree [Lach-Szyrma 1828: 25].
>
> Nothing raises as much handicraft and industry as a reasonable education of a craftsman [Lach-Szyrma 1828: 85].

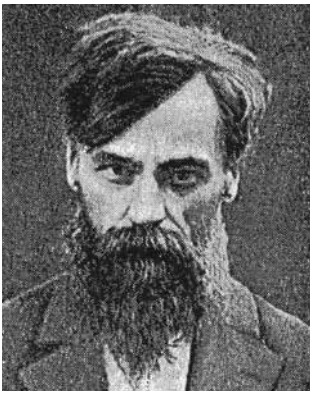
Lach-Szyrma points out four teaching directives: reducing the number of subjects tought, teachers' differentiation, self-education and training through an example.

> Even the best head will become futile with the superfluous amount of subjects: ideas will fade out ideas and nothing will be fundamentally understood, when the excess of everything is superfluous [Lach-Szyrma 1828: 496].
>
> One man, even the most enlightened can never be a sufficient teacher of a young man who is to systematically prepare for the higher sciences, and even less the one who is burdened with the duties of his calling. Such education does not produce great people [Lach-Szyrma 1828: 488].
>
> Nothing develops faculties as much, as own work; others' thoughts subtract power to of independent thinking. And the mind has its own conveniences, through which it becomes effeminate. A thousand examples from the history of science teaches that the greatest geniuses owe their fame to themselves, which the comfortable education of the wealthy cannot give them. Own work brings also a benefit of forever establishing the respect for science and commitment to that on which a young man laboriously worked [Lach-Szyrma 1828: 495].
>
> Courtesy and politeness of our peasants should in large part be attributed to this shape of government, and especially a large number of mansions and polished manners of the nobility. Hence the apparent difference in refinement of the estate, where there are mansions nearby and where a proper landlord resides [Lach-Szyrma 1828: 271].

5. Impact

The listeners of Lach-Szyrma included, among others, Bronisław Trentowski, but the latter went a completely different philosophical path than his Warsaw professor.

5. Jan Sleszyński



For many years, I lectured on differential calculus.
Since I wanted to be understandable,
I tried to give strict proofs which could convince everyone.
I did not want to act as mathematicians often do.
Replies which they give to their pupils often have a meaning such as:
It is quite obvious for me.
Since you do not understand it,
you have become a mathematician by mistake.

[Sleszyński 1921: 3]

1. Life

Jan Sleszyński was born on 23 (11 according to the old style) July 1854 year in the town Lisianka on Gniły Tykicz in the district Zwinogródka in the Kiev region. The family of his father, Władysław, coat Doliwa, probably came from Greater Poland, from where it spread in Mazovia, in Łomża region, then in Mazovia fiefdoms, particularly in the later Bełz region. Lisianka from the beginning of the eighteenth century belonged to Jabłonowskis, Branickis, Moszkowskis and the Radziwiłłs; the owners – especially Branickis – brought to the town and the surrounding area many families of lesser nobility from western and central Poland; in the late nineteenth century in Lisianka there were about 300 descendants of those settlers.

Sleszyński, orphaned early by his father grew up in an environment heavily Russicized, if not just Russian. However, he did not succumb to denationalization and his own house in Odessa was purely Polish. He married Helena (from Augustynowicz family, well known on the Borderland; her brother, Józef, was, it seems, a lawyer, married to Alina, sister of Ludwika

The Sleszyński's gravestone in the Rakowicki Cemetery, Cracow

Michałowska); they had four children: Janina (b. May 30, 1881), Wacław (b. December 18, 1883), Helena Maria (b. May 12, 1886) and Józef (b. May 14, 1888). Daughter Helena (1° Grabiankowa, 2° Krahelska), a graduate of Kiev University, was active in the Polish House in Odessa; in the years 1914-1917 she resided in exile in Siberia for political activity; in December 1918 she came to Poland; since 1931 she taught at the Free Polish University; during World War II she was in the Home Army; arrested on 13 (or 14?) July 1944 by the Germans – died on 19 April 1945 in Ravensbrück. Son Józef was the Volhynia Voivod in the years 1929-1932.

In 1864, Sleszyński enrolled in the first grade of gymnasium in Kishinev; in 1868 he moved to 5th grade of Armand E. de Richelieu Gymnasium in Odessa, one of the best middle schools in the contemporary territory of the Tsarist empire (to this school – incidentally – a part of the library was transported from the University of Vilna closed by the Russians). It should be noted that at that time in Odessa there was a large Polish colony, whose numbers – about 15,000 – made it the third national group in the city after Russians and Jews. Sleszyński graduated the Gymnasium with honours (silver medal) in 1871. In the same year he enrolled in the Faculty of Mathematics, University of Odessa, which he graduated from on 19 August 1875[19] also with honours (gold medal for his competition dissertation "Developing functions for trigonometric series"). Before, on June 23, 1875, he passed the examination as a teacher of mathematics in secondary schools. His daughter, Halina, wrote about this period:

> My father […] made friends in university days [with Andrej Zhelazov (1850-1881)] (our family kept Żelazov's letter to my father regarding some peer issue) and frequented the meetings of the Narodnaya Volya in Odessa; his active participation in this organization, apart from a disposition of researcher rather than a politician, was compromised by the fact that my father was an opponent of the use of terror. Kazimierz Dłuski [1855-1930], also my father's fellow of youth, visited my father

[19] Unfortunately, when it comes to this date – and further dates until the beginning of Sleszyński's stay in Cracow – I was unable to determine whether it refers to an old or a new style (in the latter case, you have to add 12 to numbers of days before 1900 and after 1900 – 13).

on the occasion of each stay in Odessa; of the conversations they had together at the dinner table, I remembered the detail that Dłuski always most eagerly inquired about the mood in the radical circles of Russian society.[…] Father characterized various professors, university lecturers and students to him in these conversations from the side of their affections and views [Krahelska 1934: 47].

In 1880, Sleszyński received a master's degree in pure mathematics and left for two years as a scholar of the Tsarist Ministry of National Education to Berlin, where he attended lectures by Ernst Kummer and his student Leopold Kronecker, specialists in the field of number theory, and their polemicist Karl Weierstrass, a specialist in the field of theory of analytic functions. In 1882 he returned to Odessa and submitted his habilitation dissertation on "Variation calculus according to research by Weierstrass". On January 20, 1883, he was appointed – as a private associate professor to conduct lectures in mathematics at the University of Odessa. In the period from October 5, 1882 until January 7, 1886, he was a mathematics teacher at the local seminary, and in the period from December 4, 1882 until July 21, 1892 – a teacher in one of secondary schools in Odessa (on September 24, 1892, he moved to another, Polish one?). On February 4, 1893, he received his doctorate (Russian counterpart of habilitation) in pure mathematics with a thesis on the theory of least squares. On October 17, 1893, he became an associate professor, on May 2, 1898 years – a full professor, and on May 28, 1908 – a so-called distinguished professor. He taught – first at the University of Odessa, and then also in the Higher Courses for Women – such subjects as: introduction to the analysis, theory of finite series, differential calculus, theory of defined integrals, theory of analytic functions, pure algebra, number theory, probability theory, introduction to methodology of mathematics and mathematical logic. On September 28, 1909, he retired at his own request (he received the salary – 3,000 roubles a year – until the collapse of the tsarist regime in 1917).

In the Odessa period – and beyond – he maintained close relations with the Russian mathematicians: Samuil Satunovski (1859-1929), Dmitri Kryzhanovski (1883-1939) and his student Venijamin Kagan (1869-1953), later founder of the Moscow geometric school of so-called tensorialists.

In October 1911, he was «remunerated» (*i.e.* reappointed with financial compensation) as a private associate professor – with the title of full professor – at the Jagiellonian University (with an annual salary of 6,000 kroner *per* year); the readership was founded at the Faculty of Philosophy by generous bequest which in 1907 engineer-mathematician Władysław Kretkowski

offered the Polish Academy of Sciences to promote mathematical sciences in Poland. He lived at 7 Wygoda street.[20] On July 3, 1919 – after the release of the department of mathematics by Kazimierz Żorawski (who moved to Warsaw University of Technology) – he was appointed full (titular) professor of mathematics and logic at the Jagiellonian University; his department was the first department of mathematical logic at the Jagiellonian University. He lectured as before (and again seven hours a week) – with the exception of higher algebra and analytic functions – introduction to the analysis, theory of determinants, number theory (every other year), differential calculus (every third year), probability theory (every third year), introduction to the methodology of mathematics (every other year) and mathematical logic (every other year). His lectures were said to be "marked by great development. Some even put forward the allegation of this nature, that because of that, the lecture no longer gave the student a lot of material for contemplation and additions during home reading" [Gołąb 1964: 121]. On August 31, 1924 – at his own request – he was retired; on September 11, 1925, he received the title of honorary professor of the Jagiellonian University, but did not use the opportunity to continue the lectures.

Sleszyński did not conduct seminars in Cracow, so he had not many students in a strict sense; these included: Stanisław Krystyn Zaremba and – prematurely deceased – Wacław Borejko. His circle of influence included: Antoni Hoborski (1879-1940), Leon Chwistek (1884-1944), Tadeusz Ważewski (1896-1972) and Stefan Rozental (1903-1994).

He was a member of the New-Russian Society of Naturalists in Odessa, Mathematical Society in Moscow, Philosophical Society in Cracow and the Polish Mathematical Society (which he co-founded on April 2, 1919). He participated in meetings of those societies and presented papers. Two Odessa readings were published ("Логическая машина Джевонса" [Sleszyński 1893] and "Жизнь и труды Абеля" [Sleszyński 1903]); Cracow readings were also announced in whole or in the form of self-presentations (among non-published are: "*Logika ogólna* śp. ks. Gabryla" ["*The General Logic* of the late Fr. Gabryl"] – January 1917 at the Philosophical Society; "O logice Biegańskiego" ["On the logic of Biegański"] – May 11, 1919 there; "O podstawach etyki" ["On the foundations of ethics"] – November 25, 1920 in the Medical Society; "O tak zwanych prawach myślenia" ["On the so-called laws of thought"] – June 30, 1921 in the Philosophical Society). Upon arrival to Poland, he participated in the summer Course for People's Teachers in Zakopane in 1914, where he had a six-hour lecture "Logika

[20] He lived there for certain from December 31, 1918 [Krahelska 1934: 272].

w stosunku do matematyki" ["The logic in relation to mathematics"]. On May 12, 1921, he became a corresponding member of PAL.

After a short but serious illness, on 3 March 1931, he was brought to the Department of Surgery of the Jagiellonian University, where he died on March 9; funeral took place on March 11; he was buried in the Rakowicki Cemetery. On April 23, during a special meeting of Philosophical Society dedicated to his memory, T. Garbowski gave a lecture "Jan Sleszyński – charakterystyka myśliciela" ["Jan Sleszyński – characteristics of the thinker"] and W. Wilkosz – a paper "O badaniach prof. Sleszyńskiego w zakresie podstaw matematyki" ["On the research of prof. Sleszyński in the basics of mathematics"].

He was a man of large format and a model for integrity of the research. It suits him as well what he said about B. Bolzano: that he was "truly modest" and "did not care about publicity", and his works were characterized by "immense conscientiousness" [Sleszyński 1925-1929. vol. I: 45]. This is confirmed by the words of one of his listeners:

> Professor Sleszyński was a man of rare qualities of high character. Towards the youth, he was tolerant, he was characterized by extraordinary modesty towards colleagues. Only in the meetings of the Philosophical Society [in Cracow], which he regularly attended, he rigorously required of his colleagues to precisely clarify their thoughts [Gołąb 1964: 121].

2. Works

The scientific works of Sleszyński clearly break down into two periods.

In his first, Odessa period of creativity, he worked primarily in the theory of numbers; his dissertations from the years 1883-1892 are generally linked to the theory of continuous fractions. Even then, however, he became interested in mathematical logic, as evidenced by the work "Логическая машина Джевонса" [Sleszyński 1893].

In the second, Cracow period, his research concentrated on mathematical logic, especially propositional calculus (so-called by him proof theory).

The reason for the change of the research field were gaps which he constantly found in mathematical arguments.

> Content of mathematics is wonderful, but the form leaves a lot to be desired. […] In other sciences – he added – it is, unfortunately, far worse [Sleszyński 1923b: 39].

He believed that "everything obscure and complex is worthless"; that "the search for clarity and simplicity should be the keynote of all research in this

area". He considered logic the only tool that "can eradicate weeds in the field of science and through analysis shorten and condense this enormous material provided by scientific work" [Sleszyński 1925-1929. vol. II: 212].

> The logic is the only means sobering researcher, pointing out to him standards of validity of topic and maturity of his work [Sleszyński 1925-1929. vol. II: 4].

Echoing "the views of those scholars who attach great importance to the study of logic" [Sleszyński 1910: 212], he at the same time warned – like K. Twardowski – against what the latter called "symbolomania and pragmatophobia" [Twardowski 1921]. Logical ideography is not the value in itself. Its use in mathematics is to "simplify the evidence […], to make them clearer" and in logic to "facilitate analysis and strict wording of the so-called primary laws of thinking (or rather its principles)" [Sleszyński 1913: 23a]. Moreover, he considered the content of the symbol – after Ch.S. Peirce – as "an expression of experience or clue how to proceed" [Sleszyński 1925-1929. vol. I: 6].

He saw the source of ambiguities in mathematical works in the intricacies of the research itself and the difficulty of explaining their results. The former depend on "inaccuracies of research methods" and "the essence […] of mathematical truths" [Sleszyński 1923b: 45]; the latter rely on introducing unsubstantiated lemmata to evidence and "excessive use of proof by *reductio ad absurdum*" [Sleszyński 1923b: 46]. In other words – unfounded trust in intuition combined with "negligence of logical culture" [Sleszyński 1923b: 46]. Hence, the demand to deliver complete evidence, *i.e.* composed of "parts (links), each of which is the use of a previously proven or accepted [without evidence] theorem [*i.e.* respectively lemma or principle] based on the *modus ponens*, *i.e.* on the basis that if q follows from p, and p is true, then q is THE truth" [Sleszyński 1923b: 47]. Complete evidence he opposed to incomplete evidence *i.e.* one in which no evidence is given to lemmata occurring in it. He stressed that "without complete evidence serious research on the foundations of mathematics is virtually impossible" [Sleszyński 1923b: 52]. However, he realized that the disadvantage of complete evidence is its excessive length. "Intuitive evidence shortcuts" [Sleszyński 1923b: 51] are used precisely to cope with this somehow. These shortcuts usually rely on ignoring logical premises and so-called original, "very well-known" or "very simple" mathematical premises. Unfortunately, good knowledge and great simplicity – are "largely subjective things" [Sleszyński 1923b: 51]. To avoid the drawbacks of these intuitive shortcuts, Sleszyński proposed exact logical analysis of mathematical theories and finding rational methods of

shortening the evidence procedure. He considered such a method to be skipping only "secondary sentences" (*i.e.* logical premises) and using them as a "way of inference (rather than as premise)" [Sleszyński 1923b: 51]. Then – as he wrote:

> The wonder of free imaginative mathematical fancy and statuesque beauty of mathematical truths will not be dimmed by logical muddle of its current form and will become a source of supreme bliss for wide circles of people of thought [Sleszyński 1923b: 52].

Sleszyński was aware of CONGLOMERATIVENESS of traditional logic. He wrote:

> I tried to separate from […] traditional logic what is important and necessary for mathematics [Sleszyński 1921: 4].

And he added:

> For the mathematics we had so far, traditional logic is quite enough. But this logic is not enough for mathematics of the future. If we deal with the study of the foundations of mathematics, this requires a new logic, whose first outlines are found in *Principia mathematica*. In these studies, all claims are obvious, and the idea is to establish a logical link between the claims [Sleszyński 1921: 11].

Sleszyński's research focused on mathematics and mathematical logic, but his interests reached beyond these areas – to metaphysics and axiology.

In terms of ontology, he was an anti-fictionalist. Introducing fiction – and particularly contradictory fictions – to the scientific picture of the world he considered to be a destructive and knowledge-deforming factor, especially knowledge of mathematics. He wrote:

> Contradictory fictions appear in mathematics only where the mathematical concepts have not been thoroughly investigated [Sleszyński 1914: 199b].

The source of apology of contradictions and fiction in some philosophers is that they do not sufficiently know science and its history.

> Progress [of knowledge] has taken place not because of contradictions, but despite contradictions" […]. [Contradictions should not be adored, but] detected and disposed of [Sleszyński 1914: 199b].

In epistemology, he considered "the issue of obviousness" as "one of the most difficult ones". It is evidenced by practice, consisting in the fact that:

> The more complex […] [somewhere] logical relationships, the more abundant use of […] [a] word "evidence" [Sleszyński 1923b: 45].

He shared the view of L. Couturat that every closed sentence (without real variables) has a definite logical value, that is it is true or false, but there are sentences – open (with real variables) – which are unspecified in this respect.

He taught the principle of tolerance toward others, and ethical rigour towards oneself – and he scrupulously respected both of these rules [Gołąb 1864: 121]. Hugo Steinhaus compared his moral character to Leo Tolstoy's attitude [Śródka & Szczawiński 1986: 346]. He attached great importance to "the ethical side of research" [Sleszyński 1921b: 40].

3. The main work

He published little – under the motto of C.F. Gauss: *pauca sed matura.* He lamented the fact that it is increasingly being violated:

> Currently […] everyone writes and no one reads [Sleszyński 1925-1929. vol. I: 2].

He spoke good Polish. However, some of the terms which he used have not been adopted. He used *e.g.* the term "quantifier" [Sleszyński 1925-1929. vol. II: 147] but he called particularizator "a sign of existence" [Sleszyński 1925-1929. vol. II: 108, 147], and generalizator – "a sign of generality" [Sleszyński 1925-1929. vol. II: 146, 147]. Such terms of his as "indeterminant" [Sleszyński 1925-1929: *passim*] instead of "variable", "turning" instead of "obversion" [Sleszyński 1925-1929. vol. I: *passim*], "Euler circuits" [Sleszyński 1925-1929. vol. II: *passim*] instead of "Euler circles", "descript" [Sleszyński 1925-1929. vol. II: 136] instead of "description", "individual" [Sleszyński 1925-1929: *passim*] instead of "component (of class)" have fallen into disuse.

His main work – the two-volume *Teoria dowodu* – was based on lectures from the years 1921-1924, and notes, taken with these lectures.

The first volume of this work opens with general remarks about the structure of a deductive system. Sleszyński indicates as the difference between the postulates (in I. Kant they would correspond to the synthetic propositions) and definitions (Kant's analytic propositions) that the latter may be omitted [Sleszyński 1925-1929. vol. I: 22]. The postulates are assigned the role of determining the (various) interpretations of the primitive terms [Sleszyński 1925-1929. vol. I: 23]. Then, he gives the outline of the history of logic. He especially emphasizes the historical importance and topicality of the paradoxes of Zeno [Sleszyński 1925-1929. vol. I: 30]. It is also characterized

by his high evaluation of B. Bolzano and G. Frege. About *Wissenschaftslehre* [Bolzano 1837] we read that "this work is so serious that all the others seem to be childish" [Sleszyński 1925-1929. vol. I: 44]. In the volume's closing methodological part he analyses the concept of "deductive evidence" in mathematics. He considers, among others, such matters as the nature of evidence, manipulation of variables in material and formal results, implication and inference, reductive and deductive form of proof, proving directly and indirectly, argument by mathematical induction and completeness of the evidence. For many years it was – as noted by T. Kotarbiński – "an only textbook reading on these subjects, a reading extremely useful both because of the issues it touches upon and due to the extremely thorough and extensive development of the examples", although "all of it is still an introduction" [Kotarbiński 1926-1927: 18a].

The second volume brings a brief overview of what G.W. Leibniz contributed to the logic (as a precursor of mathematical logic). This is followed by sections devoted to creators of the theory classes and algebra of logic: G. Boole, S. Jevons, H. i R. Grassmanns, E. Schröder and P. Porecki; then G. Peano, C. Burali-Forti (presented quite accurately) and B. Russell and A.N. Whitehead (presented rather briefly). Sleszyński stresses in particular the role of G. Boole as the proper (independent of Leibniz) creator of mathematical logic; S. Jevons, who cleaned Boolean algebra of non-logical accretions; E. Schroder, who systematized it; G. Frege and G. Peano and his students – A. Padoa and C. Burali-Forti who applied it explicitly to propositional calculus. Noteworthy – according to L. Chwistek [1917: 16] – is Sleszyński's observation that in the Russell-Whitehead's system *modus ponens* does not occur as a premise. Propositional calculus lecture contains evidence of 250 (of which 44 in the appendix by S.K. Zaremba) laws of propositional calculus based on (decidable) system, made up of 11 axioms and rules of detachment and substitution. To the system are also included three so-called interpretation demands (and therefore semantic demands). The first postulate – is a "philosophical" (methodological) law of identity, according to which "the symbols which we operate are permanent, *i.e.* their sense does not depend on space and time" [Sleszyński 1925-1929. vol. II: 151]. The second postulate – is the law of contradiction, claiming that "no proposition can be both true and false" [Sleszyński 1925-1929. vol. II: 151]. Finally, the third postulate is the law of excluded middle, which "assigns to each proposition at least one logical assessment: every proposition is therefore to be true or false" [Sleszyński 1925-1929. vol. II: 151]. As can be seen, the last two postulates correspond to metasystemic principle of bivalence.

They are not used directly in the evidence practice, but merely its background, "as they refer only to the meaning of symbols and patterns which we operate" [Sleszyński 1925-1929. vol. II: 151]. The book ends – as a sort of illustration of the benefit that can be brought to mathematics by logical analysis – with a detailed logical analysis of several mathematical proofs.

4. Acclaim

Teoria dowodu has been widely acclaimed as an outstanding book.

T. Kotarbiński recognized it immediately as a "work which beautifully combines a respect for the old traditions with the spirit of modern research" Kotarbiński 1926-1927: 19b]. The part relating to Aristotle's syllogisms, although presented in a traditional way, according to him constituted "the most developed and best at all […] in Polish literature, indigenous and translations, explanation of traditional doctrine of direct and indirect inference" [Kotarbiński 1926-1927: 18a]. It was also positively assessed by W. Wilkosz, recognizing that it contains an explanation of syllogisms "probably the only one in the world so correct" [Wilkosz 1931: 61].

Over the years, it was awarded an increasingly higher value.

Thus, many later Polish textbooks of logic referred to it, including: *Granice nauki* by L. Chwistek [1935], *Elementy logiki formalnej* by A. Wiegner [1948], *Elementy logiki* by H. Greniewski [1955], *Wykłady z dziejów logiki* by T. Kotarbiński [1957] and *Logika* by T. Czeżowski [1968]. S. Gołąb wrote bluntly:

> This is an excellent guide, and its first part even today would merit a publication in a foreign language. In those times it was a sensational textbook [Gołąb 1964: 121].

According to P.S. Krzystek:

> *Teoria dowodu* was the first Polish textbook on mathematic logic, discussing its then current trends. The current usefulness of the book is based on extensive and thoroughly discussed historical material [Krzystek 1975: 339].

According to W. Suchoń, its "outline of the history of logic […] [is] explained in a lively and interesting manner" [Suchoń 1980: 33].

> The following advantages appear: […] distancing itself from psychologism and epistemological accretions, an excellent lecture on syllogisms based on set theory semantics, perhaps the pioneering justification for the so-called laws of syllogism, through the concept of elementary propositions, anticipation of generalization of syllogisms to the propositional calculus, a firm distinction between a thesis and the rule of inference, the separation of logical considerations from set theory considerations,

use of the correct assumption evidence while explicitly highlighting a temporary lack of logical reasoning for such a manner of argument, incorporating the latest achievements of contemporary logic [Suchoń 1980: 38].

If any flaws were pointed out, they included: too "chatty" tone of historical part [Kotarbiński 1926-1927: 17a]; the fact that "discussing individual authors, Sleszyński uses – for historical reasons – the original symbolism every time […] [making] a book at places difficult to read" [Krzystek 1975: 330]; finally "certain verbiage" [Suchoń 1980: 37].

Some of Sleszyński's suggestions – from *Teoria dowodu* and other works – have encountered doubts and reservations.

T. Czeżowski accused him that in his work *O logice tradycyjnej* [Sleszyński 1921a] he explained the analytical principle of Gergonne's division in a manner similar to E. Schröder in *Abris der Algebra der Logik* [Schröder 1909-1910. vol. I], *i.e.* not distinguishing between contrariety and independence and between contradiction and contrariety [Czeżowski 1968: 254].

On the other hand, K. Ajdukiewicz drew attention to the fact that Sleszyński was not the first researcher who came up with the idea of defence of syllogisms – referring to assumptions about non-emptiness and non-fullness of classes – although perhaps he reached the idea on his own alone.

[Already] J.N. Keynes in his classic lecture on traditional logic [in *Studies and Exercises in Formal Logic*, London 1906, ed. 4, Macmillan and Co.] proved that all positive assertions of traditional logic may be maintained and proved with definitions without the existential addition, if one accepts the axiom that there are no empty classes and does not allow the substitution of blank names for the name variables [Ajdukiewicz 1926: 18].

L. Chwistek had most complaints. He criticized an explanation given by Sleszyński in [1923a] that the motive of Zeno's belief about the impossibility of movement is impossibility of imagining an infinite number of moments. He wrote:

It is difficult to imagine a more opaque argument [Chwistek 1935: 152].

He was not satisfied with defence of Aristotle proposed by Sleszyński in [1921] and [1925-1929]. He wrote:

Some logicians [*e.g.* Sleszyński] try to justify this obvious error [*i.e.* the principle of the reversal of general affirmative judgments] with the fact that Aristotle did not reckon with the existence of empty concepts. But therein lies the essential difficulty of verbal philosophy [Chwistek 1935: 8].

He rejected as unfounded the hypothesis of G.W. Leibniz as a precursor in the field of calculus. He wrote:

> I am not convinced by arguments of [M.] Cantor [that Leibniz did not take inspiration from I. Newton and I. Barrow] and I am surprised that Sleszyński found them to be decisive [Chwistek 1935: 156].

About the concept of «realistic» logic system by Sleszyński, he wrote:

> Its negative side are immense difficulties that would emerge in the taking of evidence. I must confess that I cannot see how to overcome these difficulties [Chwistek 1917: 18].

5. Significance

Sleszyński became the precursor – at least on Polish soil – of much research in the field of mathematical logic. He was particularly appreciated for that by J. Łukasiewicz. He wrote:

> One of the pioneers […] [of this logic] has been, for many years, prof. Sleszyński. He is widely known for his constant striving to achieve the truth, fully understandable and fully justified. For this ideal pursuit we owe him deep reverence and gratitude [Łukasiewicz 1923: 401].

This pioneering position has been revealed as follows.

Sleszyński formulated a program of logical reconstruction of the actual course of argument in mathematics, taken up later by S. Jaśkowski and realized in the form of a natural deduction system. J. Woleński considers him a "precursor of interpretations of traditional logic in terms of natural deduction" [Woleński 1980a: XVII].

His system of logic – competitive with regard to proposals of Russell-Whitehead – was described by L. Chwistek (otherwise distancing himself from the concept) as follows:

> It is a system completely independent of the theory of types, in which paradoxes would be overcome by the rejection of the principle of excluded middle. […] It can be regarded as the first serious attempt to eliminate the paradoxes of logistics in terms of pure realism [Chwistek 1917: 18].

Sleszyński was – as determined by A. Korcik [1962] – an author of an important contribution to the general study of the relations in the form of axiomatic theory of relation BEFORE, which he characterized as a transitive relation, and to which he reduced the relationship AFTER and BETWEEN.

In methodology, he clearly distinguished "ready science" from its "creation" [Sleszyński 1925-1929. vol. I: 149]; he distinguished them – particularly in mathematics.

> The discovery of mathematical truths is done mostly by intuition with creative imagination and cannot be included in any specific principles [Sleszyński 1921b: 44].

Only then there is verification of "speculation" with "strict proof". But it should be kept in mind that "the proofs also arise intuitively" [Sleszyński 1923b: 44]. At the same time he considered "deductive logic" to be "the only true logic" [Sleszyński 1925-1929. vol. I: 24]. He wrote:

> *Ars inventiva*, *i.e.* the ability to create, as a science does not exist [Sleszyński 1925-1929. vol. I: 24].

He regarded deductive system as hypothetical system. In particular, mathematical theorems are "conditional statements whose content is the relationship between the predecessor and successor" [Sleszyński 1912: 119a].

> If […] we accept basic propositions as true, all the propositions of the theory will then be true. The truth of formal science is relative, that is conditional [Sleszyński 1925-1929. vol. II: 118].

For obvious reasons, he devoted much attention to the methodological status of definition and – especially – proof "by Frege".

As regards the definition, according to its essence, "not all concepts can be defined, since the definition of a concept is nothing other than bringing it to other concepts". To avoid recourse in defining, one needs to accept "without evidence certain statements characterizing these concepts" [Sleszyński 1910: 215].

On the other hand, proof "by Frege" consists in the application of rules of detachment and substitution to "claims previously adopted" [Sleszyński 1912: 119b]. This "Frege's method" was used by him for the first time with complete proofs of 6 logical theorems – conducted in the symbolism of L. Couturat in addition to translation of his *Algebra of Logic* [Sleszyński 1909] (*cf.* [Korcik 1966: 209]).

In the case of theorem on deduction, he believed that:

> The method of arguing implications, which consists in passing from premises to conclusions […] in logic is […] inadmissible because unfounded [Krzystek 1975: 339].

He believed – against B. Russell – that the best way to avoid antinomies is "to limit the world of speech" [Sleszyński 1925-1929. vol. I: 53], *i.e.* to exclude antinomy-genic terms; in connection with the antinomy of the liar, he called for distinguishing language from metalanguage; he considered that antinomy the result of unacceptable identification of a statement with its logical evaluation [Sleszyński 1925-1929. vol. I: 37]. On the other hand, he explained the so-called implication paradox pointing out that:

> Any generalization of the concept involves a loss of some conventional properties and at first produces paradoxical impression [Sleszyński 1910: 217].

It is worth quoting a description of how he saw stages of this generalization in the case of implications, because it was probably the first stating and solution to this paradox on Polish soil.

> The new concept of consequence is a natural extension of this concept, which dates back to Aristotle, *i.e.* the concept according to which, if we say that statement *b* follows statement *a,* it means that if the statement *a* is true, then statement *b* is also true. It has a direct meaning for the predicative forms [*i.e.* sentences with real variables]. If, for example, we say: "From the fact that a number is divisible by 4, it follows that it divides by 2", it means that the meaning of the variable "number" which converts the first form into true statement, translates the second form into a true statement, *i.e.* if we take any number dividing by 4, it will be also divided by 2. If we take the number not dividing by 4 (the first predicative form is then transformed into a false statement), then the number may be divided by 2 (*e.g.* 6) or is not divided by 2 (*e.g.* 3). The new concept of consequence extends the implication to all the statements not containing variables and obtainable from the predicative forms [Sleszyński 1910: 218].

Sleszyński considered in detail "general methods of reasoning": deduction, reduction, analysis – *i.e.*, "drawing conclusions from the sentences, of which we do not know whether they are true – and in this *reductio ad absurdum*, further the so-called synthesis and mathematical induction. Many years before Ajdukiewicz, he stressed the importance of reasoning led by the task:

> In inventing new claims […], the most effective method is to raise questions about the relationship which occurs between the concepts or about setting values on the basis of other (given) values [Sleszyński 1925-1929. vol. I: 149].

In the history of logic – he was one of the pioneers of modern research on its history, involving the reconstruction of the traditional problems using modern formal apparatus.

He defended the Aristotelian syllogisms – which he interpreted as class theory – against the charge that it is fraught with serious errors, explaining that the source of these alleged errors is the above-mentioned Aristotle's assumption, that it only concerns non-empty and non-full classes:

> When we change assumptions, it will change some of the assertions of logic, so one cannot speak of errors [Sleszyński 1921: 9].

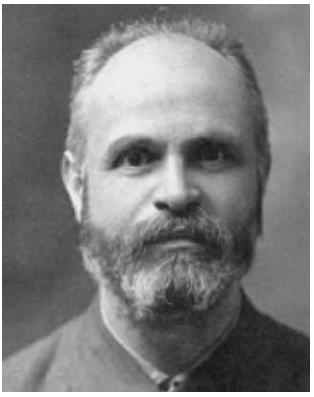
If we remember this, then syllogisms remain "an excellent method of verifying reasoning, if carried out syllogistically (which is not always possible)" [Sleszyński 1921: 4]. In this way, he gave – regardless of J. Łukasiewicz – impetus for further research into syllogisms, carried out later by the likes of J. Łoś and Z. Kraszewski.

He advocated the rehabilitation of the Middle Ages as the "epoch […] extremely engaging, though little known and, in general, unjustly judged" [Sleszyński 1925-1929. vol. I: 42]. It was not without impact on undertaking research on medieval logic by Fr. Konstanty Michalski, J. Łukasiewicz and Fr. J. Salamucha.

He was well versed in the current logical literature. He considered an advantage of G. Frege's propositional calculus – whom in general he perceived as "one of the most deeply-minded logicians" [Sleszyński 1910: 217] – the fact that it is decidable using table method. It is possible that L. Chwistek owes him his interest in *Principia mathematica* [Russell & Whitehead 1910-1913].

He also referred to the Polish works: he prized for example – though not uncritically – *Logika ogólna* by W. Lutosławski [1906] (*sic*!), *O filozofii średniowiecznej* by K. Twardowski [1910a], *Logika ogólna* by Fr. F. Gabryl [1912], *Teoria logiki* by W. Biegański [1912], which he ranked among the best textbooks [Sleszyński 1925-1929. vol. I: 48], *Wstęp do analizy* by S. Zaremba [1915-1918]. Even about B. Trentowski he wrote that he is a "very well deserved philosopher […] – if only for the fact that we owe him a very good word: "premise" [in Polish: "przesłanka"]" [Sleszyński 1925-1929. vol. I: 73]. He saw the errors of those authors, but did not condemn them for it indiscriminately, as was the tendency of representatives of the Lvov-Warsaw School. He appreciated P. Porecki, working in Russia, indicating his contribution to the continuation of the works of E. Schröder.

6. Wincenty Lutosławski



There is a place for everybody in the entire Being.

[Lutosławski 1933: 6]

1. *Curriculum vitae*

1.1. Key dates

1863: 6 June – born in Warsaw, of father Franciszek (member of the Fraction of Whites in the January Uprising) and mother Maria née Szczygielska.

1863-1876 – stay in Drozdowo near Łomża.

1869 – death of his mother.

1870 – father builds a family tomb in the Drozdowo Cemetery.

1877-1881 – secondary school in Jełgawa (Mitawa) in Latvia (extracurricular activity: history of literature classes conducted by Father Montwid).

1881-1883 – studies at Riga Polytechnicum (with lectures of Wilhelm Ostwald, among others).

1881 – break with Catholicism (but despite this fact, there was a painting of Our Lady of the Gate of Dawn in his apartment in Kazań).

1883-1884 – travels around Europe (Switzerland, France, Italy, Austria).

1884-1885 – studies chemistry at the University of Tartu where he obtained a candidate degree in chemistry based on a paper titled *Das Gesetz der Beschleunigung der Esterbildung. Beitrag zur chemischen Dynamik.*

1884-1886 – philosophical studies at the University of Dorpat – under the supervision of Gustav Teichmüller – where he obtained a candidate degree in philosophy based on the paper titled *Erhaltung und Untergang der Staatsverfassungen nach Plato, Aristoteles und Machiavelli.*

1884-1896 – custody over step-brothers: Marian, Jan, Kazimierz and Józef (father of Witold, later prominent composer).

1885: April – spiritual awakening (realization of the immortality of the soul) under the influence of the *Symposium* by Plato in Greek.

1885-1886 – romance studies at École des Hautes Études in Paris under the supervision of Gaston Paris, concluded with a paper titled *Les folies de Tristan*; travels to Portugal, Spain and Morocco.

1886 – stay in Zakopane.

1887: 19 March – married to Sofia (Sofitina) née Perez Eguia y Casanova in Madrid.

1887-1888 – stay in Dorpat: commencement of studies on Plato under Teichmüller.

1887 – Master's degree in philosophy at the University of Dorpat.

1888: 19 January – daughter Maria (Manita) is born in Dorpat.

1888-1889 – stay in Moscow: the discovery of two unknown manuscripts by Giordano Bruno (*Ars inventive per 30 statuas* and *De rerum principiis, et elementis, et causis*).

1889 – daughter Izabela is born in Moscow.

1889-1890 – stay in London.

1890-1893 – career as assistant professor Ph.D. at Kazań University (lectures on logic, psychology and the history of philosophy).

1891 – death of his father.

1891: 25 April – daughter Jadwiga born in Kazań (died on 17 September 1895 in Drozdowo).

1893-1894 – stay in Spain, the USA and England (London).

1894-1895 – stay in Drozdowo.

1895-1898 – stay in Spain and England (London).

1897: 10 September – daughter Halina is born in Mera near Corufia (Spain).

1897 – a meeting with Joseph Conrad in a village outside London.

1898 – Ph.D. degree at the University of Helsinki based on a paper called *Über die Grundvoraussetzungen und Consequenzen der individualistischen Weltanschauung.* • Visits from Tadeusz Miciński and Stanisław and Dagny Przybyszewskis in Mera.

1898-1899 – stay in Finland, Sweden, Denmark and Germany (Leipzig).

1898-1905 – a period of recurring depression episodes treated successfully by self-treatment in Kosovo and Dalmatia.

1899-1895 – stay in Cracow.

1899-1900 – career as Privatdozent at the Jagiellonian University.

1900: 27 October – establishing of the Filaret Association in Cracow, transformed into National Philosophy College (Seminarium Filozofii Narodowej).

1900: 12 November – return to Catholicism under the influence of the Bishop of Sejny Antoni Baranowski.

1901-1902 – stay in Switzerland (lectures in Lausanne and Geneva).

1902: 9 March – establishing Adam Mickiewicz Academy in Fribourg, Switzerland, operating since 1903 (and at least until 1905) in London as Polish Student Home (members of the Academy included Jan Czekanowski, Aleksander Majkowski and Kazimierz Przerwa-Tetmajer).

1902-1907 – stay in Cracow and meetings with Stanisław Szczepanowski and Stanisław Wyspiański.

1903 – establishing of *Eleuteria,* transformed (after 1923) into Filaret Association of ELS (*Ecclesia Lex Suprema*) (Filarecki Związek Elsów).

1903-1912 – establishing of *Eleusis*, a fraternity magazine (Greek abbreviation of "ελευτεροι λαου σωτηρησ" – "only free men can liberate nations"); five volumes were published in 1903-1910.

1904-1906 – lectures at the University College in London.

1906 – meeting of Wanda Peszyńska who later became the matron of Żyrardów factory nurseries and his life companion.

1907-1908 – stay in the USA, lectures on messianism and spiritualism (including the Lowell Institute in Boston).

1908-1910 – stay in Warsaw where he participated in a seminar by Henryk Struve.

1910 – Marian Zdziechowski became the curator of Academic ELS Circle (Akademickie Koło Elsów) in Cracow.

1911: autumn – establishing of KUŹNICA (smithy) in Tlemcen, Algeria.

1912-1916 – lectures at the University of Geneva.

1913 – establishing of KUŹNICA in Chateau Barby near Bonneville (France), which was used by 50 people until 1920, mainly Poles but other nationalities as well.

1913-1919 – stay in France and encounter with Cardinal Désiré Mercier.

1913: 10 December – son Tadeusz is born.

1912-1916 – lectures at the University of Paris.

1917-1919 – participated in the creation of the Polish Army in France.

1919 – development of expert reports for the Office of Congress Works of the Polish Delegation to the Conference in Versailles.

1919-1931 – stay in Vilna.

1920 – establishing of Józef and Marian Lutosławskis Committee – brothers murdered by Bolsheviks in Moscow (1918) – for the purpose of "fighting

against the revolt and for patriotic upbringing" [Lutosławski 1920a: VII]; (members in Vilna included among others: Duke Witold Broel-Plater, professor Feliks Koneczny, professor Erazm Majewski and doctor Władysław Zahorski).

1920-1933 – professor tenure at the University of Vilna.

1921 – philosophy course in Poznań.

1922: 22 January – daughter Janina is born.

1923 – philosophy courses in Warsaw and Lvov.

1926 – meeting of Juliusz Osterwa.

1929 – retirement from the University of Vilna.

1931 – stay in Dzięgielów near Cieszyn.

1931-1932 – stay in France (among others in Paris).

1933 – stay in Dzięgielów. • 6-8 January – course on worldviews in Vilna.

The Lutosławski's gravestone in the Salwatorski Cemetery, Cracow

1933-1954 – stay in Cracow.

1946-1948 – lectures at the Jagiellonian University.

1954: 17 April – death in Cracow; he was buried in the Salwatorski Cemetery, Cracow.

1.2. Activity

1.2.1. Educational activity

Lutosławski wrote in 1901:

> I returned to the country in order to spread fire among Polish youth, fire that consumes me from the inside, untamed by long years of studying various academic subjects under foreign tutors or numerous walks among foreign nations – the immortal fire of true faith in God, love for homeland and the hope for Poland's revival through the nobility, courage and sacrifice of Poles [Lutosławski 1901: XXI].

Upon returning to Poland, Lutosławski engaged in NATIONAL UPBRINGING, *i.e.* "ensuring each individual reached the maximum of their personal development and that the entire nation enhances its features that distinguish it from other nations and are the basis of its *raison d'être*" [Lutosławski 1902: 19]. Such upbringing was necessary as "one need to […] be somebody to sacrifice yourself, for those who are nobody and nothing cannot give anybody anything" [Lutosławski 1911b: VIII].

> The life of the nation does not depend on the number of people that form the nation, but on their character and spirit that moves them [Lutosławski 1915: 55].

And to put it even stronger:

> The existence of a nation and its power, he wrote, depends not on the number of bodies, but the quality of souls [Lutosławski 1911b: 67].

After Poland gained independence, he added:

> Protection of the national thought is as important as protection of the borders of the Polish Commonwealth [Lutosławski 1920a: IX].

He advocated preservation of the national art.

> The artist's inspiration itself does not belong to the society, but the society can prevent inspiration and talent from going to waste [Lutosławski 1922: 60].

First and foremost, Lutosławski advocated boycotting the official education system.

> A nation exposed to the fact that every new generation is educated by its enemy must transform pedagogical methods in a way that schools become obsolete – replace the teacher with a book, personal time of the teacher – with a further step by a group of willing people namelessly striving for the creation of best textbooks for self-learners [Lutosławski 1901: LIX-LX].

He attempted to fulfil his pedagogic and philosophical ideas at the academies (boarding schools) he founded, organizations of ELS members (who propagated patriotism and scout-like abstinence: from alcohol, tobacco, gambling and sexual promiscuity), through his intense activity as a lecturer (in the army as well) and vast epistolography.

1.2.2. Political activity

As an expert of the Polish delegation to the Versailles Conference, he supported Poland's territorial claims to pre-partitioning borders [Lutosławski 1917], but with significant expansions.

Hence, he demanded inclusion of the lands historically forming the Grand Duchy of Lithuania on the grounds that the "last official public will of the Lithuanian nation" [Lutosławski 1919: 27] was the May Constitution of Poland of 1791 which eliminated all differences between Lithuania and Poland.

He believed that "since its very beginnings, Vilna was never a Lithuanian city" [Lutosławski 1919: 11], that "the polonization of Lithuania was a spontaneous process" [Lutosławski 1919: 11], that it was conducted despite intensified Russification attempts on the territory in the 19th century. Although the region has a mixed population, but "if a territory is occupied by various nations, the weight of each nation does not depend merely on the number of its people, but the intellectual and social level of its representatives as well" [Lutosławski 1919: 25], and the superiority of the Polish cultural potential on the territory was massive.

Lutosławski expressed far-reaching territorial claims in the east and west as well. In 1920, he wrote:

> Poles who wish to defend Lvov and Vilna must reach their former border posts: Smoleńsk and Kiev [Lutosławski 1920b: 51].

Yet, in 1908, he asked:

> Will only Szczecin and Wrocław be given back [by Germania] to be subject to a more fair Slavic administration? Or will [also] Budziszyn […] [and] Rugia Island, too […] [Lutosławski 1911b: 217]?

He was an enthusiast of the Intermarium geopolitical concept.

> Poles, Ruthenians, Lithuanians, Latvians, Hungarians, Romanians, Czechs and Slovaks can guarantee freedom and independence for each other only by forming a strict union and a strong state to protect freedom from possessive neighbours [*i.e.* Moscow and the Germans] [Lutosławski 1939: 15].

Though he decisively lingered towards conservative views, he did not get involved with any of the groups of the re-emerged Poland. He declared he was "willing to sacrifice life for an important good of the people" but refused to back the People's Party (Stronnictwo Ludowe) and accused its leader Wincenty Witos of "spreading hatred and deception among uneducated people" [Lutosławski 1921]. Later on, he wrote:

> Jealousy and greed are behind the agricultural reform and therefore it leads to double stealing – from those who own the land and those larger in numbers who need cheap farm produce [Lutosławski 1926: 95].

1.3. The psyche

He was an outstanding personality.

He was able to focus entirely on his endeavours. He confessed:

During twelve years of my stay in Vilna, I have never visited churches for reasons other than religious, and did not admire their architecture [Lutosławski 1933: 13].

He participated in many symposiums and congresses (among others in Oxford, Cambridge and Geneva), but remained sceptical towards them. He noted:

There are no scientific discoveries made at congresses [Lutosławski 1912: 252].

Lutosławski befriended among others Jan Baudouin de Courtenay, Jozafat Andrzejowski (from the Towiański circle), Eugeniusz Romer, Józef Unrug and William James whom he considered "one of his closest friends" [Lutosławski 1933: 193]. He kept in touch with Henri Bergson. Generals Stanisław Sosnkowski and Kazimierz Szeptycki confided in him.

He valued Joseph Conrad whose novels – as he wrote – "help to realize the menace of storms stronger than any average traveller's imagination can" [Lutosławski 1933: 130].

The contemporaries had mixed opinions about him.

Sofia Casanova used to describe him as follows:

He was of elevated posture and a strong physique. His eyes were dark; his forehead high; […] he kept his hair short and the entire appearance was of somehow commanding, higher nature, which reflected his character and passion for science, and finally his soul, where the sacred fire of patriotism burned [Casanova 1907. vol. I: 23].

He was a fanatic of will [Casanova 1907. vol. II: 106].

Eliza Orzeszkowa called him the "man of reason", "extremely decent and the best patriot" [Orzeszkowa 1899a: 486-489], "an excellent gentleman", "of great knowledge", with "scientific merits", of "proven purity and courage of intentions and feelings" [Orzeszkowa 1899b: 7]. This is what she wrote about their meeting:

I am very fond of this memory. We were in Białowieża Forest, sitting on a large log overgrown with moss like a plush-upholstered sofa, discussing emigration of intelligent youth from our homeland [Orzeszkowa 1899b: 7].

Bolesław Prus also considered him a "scholar" and a "courageous man" [Prus 1899: 1].

James spoke of him as of a "remarkable Pole", "author of philosophical papers in seven different languages" [James 1920: 103].

Romer valued him as an advocate of the Polish issue in the world. Lutosławski, he recalled, "with great emphasis and unusual self-confidence defended the issue of Gdańsk" [Romer 1919: 225]. He authored "a great dissertation entitled *East Prussia*" [Romer 1919: 260].

> I have been seeing Lutosławski a great deal of time and never have I heard anything wrong about other people from him, and when he complained about our great people […] [he supposedly said:] *Tantula sapientia mundus* regitur [Romer 1919: 335].
>
> I admire his readiness to utterly sacrifice himself and his personality to public work [Romer 1919: 377].

He then melancholically added: "He lectured only in 12 Anglo-Saxon universities" [Romer 1919: 401]. But he noticed his shortcomings as well. He recalled:

> There is something disturbing about this man. Is faith in future life, not really spiritual but based on demons, sincere [Romer 1919: 244]?
>
> He does not succumb to black coffee, but is very wont to drink cognacs… And it hasn't been long since I have heard his preaching of ELS sobriety [Romer 1919: 233].

Same for Władysław Tatarkiewicz, who considered Lutosławski "famous and uncommon" [Tatarkiewicz 1979: 174], but "rather *trubator chori*" [Tatarkiewicz 1979: 148].

Roman Dmowski on the other hand had only negative things to say about him and thought he was "a crazy and therefore dangerous man" [Micewski 1971: 82].

Baudouin de Courtenay criticized Lutosławski even more.

> Lut[osławski] is terminally mentally ill. He suffers from well-developed delusions of grandeur and is a maniac for various bizarre projects. In Cracow, he disguised himself as a highlander, held speeches on Kościuszko Mound and founded the so-called *Professor Lut[osławski] corp de ballet* (*i.e.* a group of supporters dressed up and mentally challenged) [Baudouin de Courtenay 1972: 115].

2. Ontology

2.1. Reality

Lutosławski wrote:

> Philosophy knows one question which has been repeated by everyone who strived to resolve the mysteries of being and life. This question is simple: does life really exist? Deceitfulness of many appearances proves that not all that seems to be existing is a real being. […] Everywhere we go, we see appearances, phenomena that are different from the reality. I can see a rider from afar who seems to be my

neighbour. When he approaches, I realize he is not my acquaintance, but a soldier, judging by his uniform. But this opinion also turned out to be false when I found out that this alleged soldier is nothing but a common thief who stole both the uniform and the horse. Upon closer investigation, it might be proven that this reported thief is a lunatic not knowing what he was doing and thus cannot be held responsible for the theft, therefore he is neither a thief nor a soldier, my acquaintance or on the contrary, this is indeed my neighbour who became a thief, serviced in the army and finally went crazy, so that all the following speculations about him were true. In this way, some appearances can be replaced by others until you reach the actual truth [Lutosławski 1899: 2-3 bis].

2.2. Eleutherism

Lutosławski called his ontological doctrine "ELEUTHERISM" ("ελευθερια" means "freedom" in Greek), the doctrine of "free souls" [Lutosławski 1900: 332]. Upon a question: "What really exists?", an eleutherist would answer: "I do exist and so do other SELFS that are similar to mine" [Lutosławski 1906: 17].

2.2.1. Pluralism and spiritualism

Firstly, Lutosławski's ontology was PLURALISTIC. The world is a MULTIPLICITY of substances and only ATTEMPTS AT UNITY: the unity of laws unifying this multiplicity [Lutosławski 1900: 332].

Secondly, Lutosławski's ontology was a SPIRITUALISTIC ontology. The nature of the substances that form the world is spiritual. This spiritualism combined anti-idealism with anti-materialism.

Idealism, *i.e.* considering one's own mental constructs as "absolute being" [Lutosławski 1924: 36], is particularly attractive to those who work every day with objects that seem permanent: lawyers (who deal with «constant» laws), clerks (who refer to «fixed» regulations) and teachers (who lecture on complete, «fixed» science).

Materialism is a great misunderstanding:

> If anyone attributes thoughts or any kind of spiritual activity to the brain, he makes the same logic mistakes as those who think the heart is the centre of feelings, because feelings influence the heartbeat. This means taking effects for causes and reversing the order of causality [Lutosławski 1909b: 37].

A thought is not created by the brain, it only acts through it: thought puts the mind into «motion» and it's just a tool for the thought.

Human beings are made of the self and body. The self consists of PSYCHEMES: conscious states. The body belongs to the sphere of phenomena: "the external world" towards self.

> If we determine our concepts more closely, we will have to admit that […] what we call the subject of an experience does not have a reality independent from us [Lutosławski 1906: 45].
>
> The acts of the soul – this thing I know as ME, or which I imagine is the SELF of other people – on the body, regardless whether it is my body or any other body, remains equally mysterious or understandable, depending on the point of view, as probably the Sun's gravitational force towards the Earth. It is understandable, because we know it exists and we cannot deny it. It is a mystery, because it cannot be explained by comparison to anything else [Lutosławski 1909b: 79].

The essence of self – "a thinking, feeling and wanting individual" [Lutosławski 1909b: 109] – meant for Lutosławski that it is free ("omnipotent"), indestructible (immortal) and, what he used to say, "bright", radiating love towards "the whole universe in all rays of light, each of them meaning various feelings" [Lutosławski 1906: 87].

The freedom of the soul is a necessary condition of the individual's responsibility – and Lutosławski believed every man was responsible for his actions. Only an immortal soul can have pre-existence and be subject to reincarnation – Lutosławski just believed in palingenesis. He wrote:

> The more we familiarize ourselves with the fact that one personality can manifest itself in different people [*i.e.* has different social roles], the easier it will be to understand that one being can subsequently be personified in various personalities [Lutosławski 1906: 75].

By acknowledging immortal beings as true reality, Lutosławski could claim that:

> Everything that really exists cannot stop existing because by doing that it would deny its very existence [Lutosławski 1909b: 175].

2.2.2. Individualism and actualism

Thirdly, Lutosławski's ontology was INDIVIDUALISTIC.

He strongly dismissed universalism. There is no such thing as universally binding general laws, some sort of "common plan, determined for the entire world once and for all" [Lutosławski 1911b: 25]. An individualist acknowledges general objectives only inasmuch they "result from voluntary compatibility of goals of all individuals that form the population [Lutosławski 1911b: 29]. Following the rule of unanimity by the Polish nobility "in its debates" [Lutosławski 1911b: 26] – when making decisions – spoke according to Lutosławski for the fact that eleutherism is a natural worldview of the Poles.

> The Polish thought separates individuals stronger than anywhere else [Lutosławski 1911b: 33].
>
> A Pole is deemed to live independently, separately, in freedom and love inherited from the forefathers [Lutosławski 1900: 5].

This is why Lutosławski perceived the collapse of the First Polish Commonwealth as "an end to the freedom in Europe" [Lutosławski 1915: 5].

This type of anti-universalism did not have any indeterministic consequences. Lutosławski did not deny the existence of a network of relations between objects, in particular – between selfs.

> Every incident, be it in the life of an individual, an entire nation, or even mankind is related to other incidents which either prepared ground for the present or had the present lead to them [Lutosławski 1915: 3].

Anti-universalism did not have any fatalistic implications.

> OMNISCIENCE remains omniscience if it embraces everything that is, excluding everything that is NOT THERE YET, but is YET TO HAPPEN [Lutosławski 1909b: 226].

Fourthly, Lutosławski's ontology was an ACTUALISTIC ontology. He distinguished the absolute time "which runs even when nothing happens, always evenly", from the historical time "which includes appearances confirmed by some subjects" [Lutosławski 1895: 717]. But absolute time, "void" – is a scientific fiction if "the uniform motion does not exist and if it did, we would not be able to prove its uniformity" [Lutosławski 1895: 718]. "Only the present time is always reality for us" [Lutosławski 1895: 716].

3. Epistemology

3.1. «Multimedialism»

Lutosławski's epistemology in reference to the sources of knowledge was – if one can say so – MULTIMEDIAL.

He distinguished direct cognition from indirect cognition: knowledge from faith (*i.e.* beliefs). He valued the former more.

> He who knows, trusts himself […], while he who beliefs, trusts […] others [Lutosławski 1909b: 15-16].

He acknowledged two basic methods to "solve the mysteries of being": the way of the reason and "poetic inspiration" – "under the influence of

which God allows you to GUESS the truth and knowledge, rather than CREATE it" [Lutosławski 1896: 34].

The rational method – the method of the reason and experience – as well as the intuitive method of cognition complement each other. In particular:

> Every scientific hypothesis was first available as a creative intuition rather than empirical proof [Lutosławski 1910: XXX].

Given the above, he rejected rationalistic reductionism. A rationalist limits cognition to the methods of the reason, "without allowing the possibility of forces and events beyond our understanding".

> Even inspiration is something he considers a necessary effect of certain conditions: something you can gain by systematic effort. This type of rationalism that takes upon explanation of everything can easily reach the opposite end: scepticism [Lutosławski 1924: 39].

Lutosławski thought rationalism to be a natural consequence of idealism.

> When someone values concepts above all as the only existing ideas, his natural activities and interests must occupy the top position in his life, whereas will and feelings will be suppressed by mental interests [Lutosławski 1924: 39].

Lutosławski considered the understanding of one's SELF as a special kind of rational cognition. The self "knows itself only by its own thought" [Lutosławski 1909b: 109].

> The nature of the soul can only be learned by reasoning of the content of one's own consciousness – never by a string of sensual impressions [Lutosławski 1911b: 46].

A special kind of intuitive cognition was religious intuition.

> Faith [*i.e.* here: religious faith] is twofold: blind, based on somebody's clairvoyance, and seeing – of those who directly define spiritual truths [Lutosławski 1939: 136].

At the same time, he observed bitterly that:

> When examining religious facts, the blind ones consider themselves more worthy than the seeing ones [Lutosławski 1912: 309].

3.2. Nomothetism

Lutosławski's epistemology on the tasks of cognition was NOMOTHETIC.

Knowledge is not a group of accidental descriptions but a result of organized actions aimed at understanding the objects examined. TO DESCRIBE an object – is to point out its properties and data in subsequent observations. Whereas to UNDERSTAND an object (to create a concept of the object) – is to find the primary (*resp*. characteristic features) and secondary properties of this object and relations within the former and between the former and the latter ones. In this way, the "position" [Lutosławski 1892: 27] of the examined object in a wider class of objects is determined.

While understanding of any given object requires determination of being relations between its properties, understanding of a language utterance requires determination of the CONSEQUENTIAL relations in which this utterance is embedded. One can say that the more we understand, say, a proposition, the more consequences we can draw from it. Only exposure and evaluation of these consequences form a sufficient basis to accept or reject this proposition. Even Plato was probably aware of this, because:

> [He] moved his idealism to final consequences, and he was afraid of them and gradually withdrew […] to acknowledge the real existence of soul which includes the world of ideas [*scil.* concepts] [Lutosławski 1899: 6].

3.3. Terminology

Knowledge is expressed in words, alas these "are imperfect tools to express deeper thoughts" [Lutosławski 1901: 4].

Language – if it is to be a good tool to express thoughts – should be defined by UNAMBIGUITY of words, SIMPLICITY of meanings and CONCISENESS of utterances. Ambiguity – especially in philosophy – is the "source of constant misunderstandings" [Lutosławski 1901: XXXVII]. "Complicated terminology" usually "attracted shallow minds" [Lutosławski 1933: 165]. Yet, even "great and important truths, just like epochal false concepts, can always be expressed in a concise way" [Lutosławski 1926: 97].

4. Axiology

4.1. Intellectual, moral and emotional areas

The ways to the truth, goodness and beauty – the intellectual, moral and emotional areas – cross paths.

On one hand, "the highest wisdom can only be obtained by the top moral perfection of those who seek it" [Lutosławski 1910: XIV], and "what art

and science have in common is that art lifts the spirit, and a spirit lifted by science often seeks […] expression in art" [Lutosławski 1922: 57].

On the other hand, "appropriate meaning of life […] is exposed not by the reason […], but the feeling and will" [Lutosławski 1899: 9].

> Talent for spotting the truth does not always walk hand in hand with the ability to apply the truth learned [Lutosławski 1922: 47].

Our will is polarized between two extremities: "the good and the pleasure" [Lutosławski 1909b: 261]. But the «true» will must be supported by the mind.

> In order to want something, you need to be very clear about what you want; only then can your will have a fixed direction. He who wants something and knows clearly what he wants is not subject to internal dilemmas of whimsical cravings, passionate desires, overwhelming mood and unjustified fancy [Lutosławski 1925: 13].

Moreover, "it is worth to focus your thought and will only on what is feasible and what depends on us" [Lutosławski 1933: 339].

4.2. Absolutism

In axiology, Lutosławski was an ABSOLUTIST.

Our choices may vary in details, because "not everything suitable for others is good for us" [Lutosławski 1910: XXIV]. However:

> Perceived differences in the ethics of various nations which resulted in doubts regarding the uniform morality of mankind, are differences in dogmatism or customs only – not in morality [Lutosławski 1900: 309].
>
> Those […] who prove relativity of moral laws must seek examples of such relativity in less than reliable descriptions of the life of primitive communities [Lutosławski 1912: 230].

Against the animal instinct, life is not the utmost value, but "internal satisfaction gained through calm CONSCIENCE" [Lutosławski 1900: 242]. The main ethical directive is thus to do always as "your conscience tells you, regardless of the apparent dangers awaiting on this kind of road, not seeking excessive courage because of it" [Lutosławski 1901: 6].

4.3. Optimism

Lutosławski combined absolutism with OPTIMISM.

He distinguished two types of pessimism. One – is a delusion of man who imagines only disappointments in the future based on past disappointments

that happen to everybody. The second one – is a conviction, that "the whole world, the entire existence is absurd and wrong" [Lutosławski 1900: 223].

He considered the first type of pessimism an illness that can successfully be treated.

> Our failures often do not depend on us, unlike the development of talents eliminating such failures [Lutosławski 1900: 247].

Another thing is that "a noble individual can only feel happiness in the surrounding of similar individuals" [Lutosławski 1922: 250].

He considered the second pessimism false. After all:

> There are people who are truly noble and true happiness exists as well […]. Even if it's true that the biggest love is short, the feeling is always, in the moment when it's present, quite real. [And] a feeling the object of which are immortal ideas [such as nation, truth, good or beauty] is permanent and indestructible [Lutosławski 1900: 223].

4.4. Ethical rules of cooperation

Lutosławski's paramount principles of interpersonal relationships included justice, diligence, honesty and kindness.

About JUSTICE, he wrote: "If we want to avoid harm, we must practice justice ourselves" [Lutosławski 1920a: 51].

He advocated RELIABILITY – understood as consequence – not only in thinking, but acting as well. He wrote:

> Fidelity – is conformity of the act and thought, introducing to life a truth understood once and for all. Fidelity includes faith, but not without actions. Faithful is a person who can keep a word given; who is grateful for the grace received and acts upon it without hesitation; who does not breach any agreement, any relation established; who respects the law instigated by himself; who bows willingly to voluntarily accepted power [Lutosławski 1922: 79].

And just as in thinking it is important to realize that what results from primary «axioms» of an adopted system of beliefs, in acting you need to consider the consequences of your actions, particularly if they have an impact on others.

> A man, when marrying, chooses the mother for his future children; a woman, when marrying, chooses a father for her offspring: this choice, however important for the participating parties, is a hundred times more important for those that have

no say in the choice itself and will have to bear the heaviest suffering resulting from the choice [that is form children] [Lutosławski 1900: 243].

Reliability is strictly related to HONESTY.

A diligent person finds lying disgusting and is always honest, though sometimes may not be entirely open [Lutosławski 1922: 241].

For you should not confuse honesty with openness, which in some conditions may simply be harmful – both for the individual as well as the community.

No group, just like no individual can act fully open in external and internal relations, but must consider their own actions according to the consequences they have on others [Lutosławski 1902: 12].

Unlimited openness is not yet hypocrisy, which was firmly condemned by Lutosławski. He said:

It is better to remain evil than to become seemingly good [Lutosławski 1909c: 107].

He thought that KINDNESS should be expressed first and foremost by sacrifice and unselfishness [Lutosławski 1926: 86].

It does not suffice to abstain from doing harm to deserve to be called a decent man [Lutosławski 1909c: 154].

At the same time, he pointed out that the "force of sacrifice strictly depends on the clarity of the goal" [Lutosławski 1912: 279], and that luckily "there is no such hard position in which you are not able to do something good for others" [Lutosławski 1922: 251]. Though he warned to provide help not "to those that beg for it most persistently", but rather "those whom you humbly need to ask to accept support" [Lutosławski 1902: VII].

The highest level of kindness was LOVE and FRIENDSHIP. And love meant an indefinite number of levels.

Every man, even the best one, can be truly perceived as lacking in love [for others], because the levels of love are indefinite and nobody ever loves too much [Lutosławski 1922: 241].

For "not every decent man is a saint" [Lutosławski 1948: 7].

> Love is a privilege of exceptional souls, and the majority needs other incentives to combat inherent egoism [Lutosławski 1911b: 12].

He considered it to be "an active school of love of one's neighbour, mutual tolerance and help" [Lutosławski 1909c: 12] when "several nations coexisted in one country" [Lutosławski 1909c: 122]. Whereas the "value of friendship – he wrote – is measured by the endurance among skirmishes and battles of the human life" [Lutosławski 1922: 231].

4.5. *Arete*

His main virtues included: on one hand – perseverance and bravery, on the other – humility and modesty.

He valued strength – but the strength of character. For "if you wish to control actions, you need to control thoughts and perceptions first" [Lutosławski 1909c: 27]. He juxtaposed persistence against PERSEVERANCE.

> Only a weak man is persistent; the strong one can always make appropriate concessions [Lutosławski 1912: 271].

He coined the following directive:

> You must fight weakness not when it's already controlling you but when you feel the strongest [Lutosławski 1909c: 27].

He valued BRAVERY – because "a fight is an expression of strong feelings, clear perceptions and enormous desires" [Lutosławski 1908: 41].

But he also valued HUMILITY:

> Humility is not a concept of the weak – it is a virtue of significant power [Lutosławski 1912: 71].

And MODESTY – because "people of real merit are modest" [Lutosławski 1923: 23].

He believed that these virtues can be achieved by upbringing and self-perfection. Both the upbringing and self-perfection – if they were to bring expected results – must meet certain conditions.

He acknowledged the importance of spiritual influence over others – both the positive as well as the negative one.

> Those who hate us, harm us; those who love us, make us stronger [Lutosławski 1900: 338].

But UPBRINGING is successful only when it is performed in agreement with the subject of education and when it is gradual; a claim to lecture others against their will is subject to the narrowest of minds [Lutosławski 1939: 104].

> You cannot make anyone become noble through abuse and terror [Lutosławski 1926: 239].
>
> [Especially] be wary of any abuse, even spiritual one, towards the people you wish to help. Therefore, do not abuse your material, mental or spiritual powers in order to suddenly change the destiny of weak and uneducated people. Do not dazzle the poor with your wealth, the uneducated and the stupid with your knowledge and wisdom, cowards with your courage. Awaken their own strengths in them and satisfy their existing and conscious needs. By rescuing suddenly a man from poverty and opening too vast mental horizons we demoralize him and as a result, bring harm [Lutosławski 1933: 340].

In the case of SELF-PERFECTION, he, too, advised to move forward in small – but effective steps. Because "there is an unlimited number of steps towards perfection, and none of them is without value" [Lutosławski 1912: 230]. And "who wishes to climb the top of the mountain does not descend into valleys without a reason" [Lutosławski 1909c: 129]. Also:

> Not harming others is more important on the road to perfection than not harming yourself [Lutosławski 1933: 264].

He also highlighted that:

> There is no significant self-perfection without the service for others and an efficient service for others without working on yourself [Lutosławski 1909c: VII].

The effects of upbringing and self-perfection are best illustrated in CRITICAL MOMENTS when the individual subconsciously exposes the depth of his own spirit, courage or his deepest personal wickedness" [Lutosławski 1922: 61].

5. Politics

5.1. Anarchism

There are two opposite beliefs on how far the power of the state should reach: socialism, which is the power at its maximum – and anarchism, which is it minimum counterpart. You must not confuse anarchism with terrorism.

> A consequent anarchist will not turn to violent measures to carry out his objectives, as then he would expose his will to impose influence by force and would not be an anarchist, which is defined as an opponent of the power [Lutosławski 1899: 4].

Lutosławski advocated thus understood ANARCHISM.

The goal of a politician is to submit to the public power those areas of life that undoubtedly require uniform direction for the entire state – which means everything needed to keep public law and order [Lutosławski 1939: 99].

In particular:

The state cannot serve only for necessary purposes like defending independence and the justice system [Lutosławski 1939: 137].

He opposed omnipotence of the state – for four reasons.
The first reason was of IDEOLOGICAL nature.

Coercion of the state […] destroys individual freedom, creativity and dries inspiration sources that carry the nation's consciousness [Lutosławski 1939: 26].

The state is responsible for protecting creative freedom and not muffling activities of creative individuals [Lutosławski 1920b: 265-266].

[Whereas] the modern state will use every measure to silence more independent individuals [Lutosławski 1901: XLVIII].

There is a basic spiritual similarity between a despot and a slave – the most submissive slave becomes the most ruthless despot when freed [Lutosławski 1915: 39].

[And] tyrants [always] use the same measures for keeping their power. […] The same force is sometimes use to appease: the force of arms, not ideas [Lutosławski 1900: 196].

They do it despite the fact that it proves suicidal. Because:

Power based on harm, oppression, hypocrisy, perjury never is and never will be permanent [Lutosławski 1908: 43].

Generally:

No people who oppress other people can ever be free [Lutosławski 1939: 15].

The second reason was of PSYCHOLOGICAL nature.

Every power is prone to be abused […]. The pleasure to realize that external events can depend on our will is for the majority of people so big that rarely can they refrain from unjust expansion of their influence area [Lutosławski 1900: 199].

The third reason was ECONOMIC.

A free man manufactures more than a slave, [and] the owner of its own workshop more than a clerk [Lutosławski 1920b: 207].

The state is a bad entrepreneur" [Lutosławski 1926: 166] and "can be a bad owner" [Lutosławski 1939: 138]. "The state's interference in economic life always decreases labour profit and capital income" [Lutosławski 1923: 9], and "the state's particular care over labour turns workers into little children" [Lutosławski 1923: 53]. "Benefits for the unemployed given by the state multiply the unemployed" [Lutosławski 1923: 53].

The ministry of labour hinders efficient labour, the ministry of agriculture reform destroys agriculture, the ministry of trade and industry restricts trade and industry [Lutosławski 1926: 121].

Finally, the fourth reason was PEDAGOGICAL.

It is about the fact that the state is "usually a bad teacher" [Lutosławski 1939: 138].

The anarchism of Lutosławski was related to liberalism, hierarchism and parliamentarism.

5.2. Liberalism

The LIBERALISM supported by Lutosławski included two principles: the principle of respect for freedom and the principle of respect for property.

FREEDOM and property are strictly related.

The right of property is the most important basis of personal freedom [Lutosławski 1926: 41].

A man feels free only when he owns something and can fully be in control of it [Lutosławski 1926: 39].

By renouncing our property, we tend to exploit others [Lutosławski 1926: 47].

Lutosławski supported respect for all OWNERSHIP. It is wrong – he wrote – to assume intellectual work is no work at all, and "that its results do not belong to the author, but to everybody" [Lutosławski 1902: 162].

It is good for an author not to reserve copyright to his works – it is a noble thing for a doctor to treat for free, a lawyer – to defend the oppressed free of charge, a teacher to teach for free – but nobody has the right to demand these sacrifices from them for himself [Lutosławski 1902: 168].

Property is not only a necessity of freedom, but of wealth as well.

Disregard for the right to property leads to general poverty [Lutosławski 1926: 169].

5.3. Hierarchism

5.3.1. Anti-egalitarianism

The HIERARCHISM of Lutosławski had two faces: the descriptive and the normative one.

People are not equal and they cannot be [Lutosławski 1926: 35-36].

They differ – and must differ – in wealth, but also nationality, prudence, knowledge, decency and sex.

These differences have always sparked conflicts:

(a) material conflicts – between the poor and the rich;

(b) national conflicts – between neighbouring nations;

(c) intellectual conflicts – "between the dull and the talented" [Lutosławski 1939: 141];

(d) cultural conflicts – between the stupid and the wise;

(e) moral conflicts – between the "honest" and thieves, cheaters, murderers" [Lutosławski 1939: 142];

(f) sexual conflicts – "between a woman and a man" [Lutosławski 1939: 150].

The material differences are – in comparison to other differences – "as superficial as if we distinguished between satiated and hungry people. Whereas the hungry can be satiated and the satiated can be hungry" [Lutosławski 1920a: 7].

The line between these groups can be determined arbitrarily and in a way that distinctively classifies each individual to one of the two classes. […] Inside such artificially set classes, the affiliation of each person to one or the other group changes, as there is constantly a number of poorer people that becomes richer and richer people that become poorer. […] Property is the most frequently changing feature [Lutosławski 1939: 134].

More "essential and more important than the ones resulting from property" [Lutosławski 1920a: 7], are other differences. While no "other particular feature is more differentiating people than their nationality" [Lutosławski 1901: 127].

Yet still:

[It is mostly] the material inequality that causes negative feelings in those who perceive themselves as disabled and envy the privileged ones. This is where all the

attempts to eliminate inequalities come from, social struggles between those who have less and those who have more and dreams of equality achieved by denial, breach or violation of the right of property [Lutosławski 1926: 36].

Therefore, the most important task of an anarchist was considered by Lutosławski to establish a CONSERVATIVE policy – that is an efficient way to "avoid revolution" [Lutosławski 1900: 185]. It's about the fact that:

It is not worth to suddenly change life conditions of people, whom Providence provided with the lowest level of being. The more you give them, the more they demand and almost always finish wrong [Lutosławski 1933: 303].

Besides, complete material equality will never be achieved or maintained [Lutosławski 1900: 214].

People with property change in social revolts, the wealthy become driven to poverty and the poor sometimes achieve wealth by honest or dishonest means, but the inequality remains and grows [Lutosławski 1926: 37].

In the current state of humanity, an equal division of property would mean general poverty and dependency [Lutosławski 1926: 46].

And additionally:

Equality is not at all desired, because we approach it only at the lowest level. If all people were equal in terms of intelligence and education, we would have nobody to learn from. Blessed those who are ahead of us. If we were all equal in terms of property, we would have nobody to earn money from, so let us rejoice in the fact that there are richer from us who enable to earn money, provide us with loans or charity for social and national purposes [Lutosławski 1926: 68].

5.3.2. Anti-communism

Equality and freedom are irreconcilable. Therefore "placing equality next to freedom in the French revolution was false and resulted in bolshevism" [Lutosławski 1926: 68].

It is not a coincidence then that Lutosławski was a fierce opponent of the COMMUNISM – an ideology he considered extremely socialistic, totalitarian, etatist and egalitarian.

The bolshevik craze is a dangerous psychic plague [Lutosławski 1939: 143-144].

Bolshevism is only a faithful and consequent implementation of socialist rules: struggle of false classes and making manufacturing non-private [Lutosławski 1926: 18].

Bolshevism is one big robbery [Lutosławski 1939: 147].

When thieves struggle with decent people, a band of communists taking control over a large country seems the last stroke of evil in this world [Lutosławski 1939: 147].

The alleged dictatorship of the proletariat […] [is] a dictatorship of a group of burglars over a powerless proletariat driven to worse and worse malaise by hunger and poverty [Lutosławski 1920a: 8-9].

Economic justice is not achieved by meticulous control of the innocent, but by strict punishment of the guilty and a positive upbringing of the society [Lutosławski 1939: 144-145].

By levelling the lazy ones with workers, […] talented people with losers, citizens thoroughly educated with uneducated ones – you destroy the construction of the society, which protects even the lazy people, the uneducated and the losers from the poverty and hunger as long as they obey more courageous citizens [Lutosławski 1920a: VII].

The first ones need not to become equal with the other – but they need the latter's CARE.

Being born higher entails more responsibilities and not only privileges [Lutosławski 1939: 84].

Care over the disabled, lazy and criminals – is one of the social tasks, but it cannot and should not exploit social forces in a way to encourage laziness, disability and crime [Lutosławski 1920b: 202].

5.3.3. «Anti-capitalism»

The communists refer to a faulty economic doctrine. Contrary to what they preach, the capital and physical work are not the only decent sources of wealth. The source of wealth is "apart from the work and the capital – organizational and inventive talent" [Lutosławski 1926: 57], that is "creation of the spirit" [Lutosławski 1923: 9].

Lutosławski formulated seven of "the main conditions of general prosperity":

(1) competent, stable government;
(2) the power of the state, which secures long term peace;
(3) efficiency of the judiciary system and the police (safety of life and property; commonly recognized right to property);
(4) completely permanent currency;
(5) high level of schools and public education;
(6) complete freedom of the press and creation;
(7) excellent social organization [Lutosławski 1926: 104].

5.4. Parliamentarism

Lutosławski opposed not only socialism, but democracy as well.

The democratic frenzy threatens our civilization [Lutosławski 1926: 84].

The source of incompetent government is the sejm, selected in general election by uneducated people manipulated by selfish demagogues [Lutosławski 1926: 105].

Mandatory and free of charge education is equally demoralizing as the general election right [Lutosławski 1926: 186].

He distinguished democracy from PARLIAMENTARISM. He emphasized that:

A competent government in a parliamentary state depends both on the mental as well as moral level of the electorate and members of the parliament selected by them [Lutosławski 1926: 72].

He formulated three rules of «competent» parliamentarism: (1) the rule of dependency of political rules from "moral and mental qualifications" [Lutosławski 1926: 111], (2) the rule of limited number of legislative bodies and (3) the rule of "permanency and continuity of the government" [Lutosławski 1926: 73]. The detailed rules were as follows:

(1) A person should not gain any rights by the mere fact that he was born somewhere. […] The state can be well governed only by the best and the wisest citizens and not by people chosen by the uneducated mob [Lutosławski 1926: 239].

(2) Legislative bodies should comprise a limited number of members. […] None of the nations have hundreds of people […] worthy [of legislative] powers [Lutosławski 1926: 76].

(3) People who deserved to occupy the highest position in the government should not depend on the fluctuation of opinion in legislative bodies [Lutosławski 1926: 78].

If the president is good, there is no need to change him – if he is bad, he has to be removed as quickly as possible and not left to squander the country for years to come [Lutosławski 1926: 125-126].

5.5. Patriotism

5.5.1. Messianism

The most important type of community of the «free souls» for Lutosławski was the NATIONAL COMMUNITY.

The individual acts most efficient for the mankind when in symbiosis with the nation he belongs to [Lutosławski 1910: 20].

Only in a united choir which forms a nation, the individual can gain its biggest satisfaction and at the same time, biggest effectiveness of all efforts [Lutosławski 1933: 351].

[In general,] the good and happiness of single citizens depend on the size, power and good government of the Nation [Lutosławski 1923: 5].

For this you need the "national consciousness" – the "feeling of a connection between a conscious individual with individuals most similar to each other" [Lutosławski 1911a: 41]. National consciousness enables to carry out the concept of a citizen – that is an individual who can accept its independence with the necessity to "give up on the given right to keep your own convictions when the majority requires it in the name of brotherly love" [Lutosławski 1911b: 30].

He juxtaposed nation to the TRIBE.

> A tribe is a group of people who have common origins and live in some country of specific climatic and manufacturing features which give the tribe its original character [Lutosławski 1939: 21].
>
> A tribe larger in numbers is called people, and an even larger group of tribes that have the same origin is called a race [Lutosławski 1939: 22].
>
> A nation is a group of people that have common political and cultural goals to fulfil. One nation includes various tribes and even different races. […] The national unity is a spiritual relationship that combines people regardless of their origin, for a conscious serving of the entire mankind. Affiliation to the tribe, people or race does not depend on our conscious will. It is determined first by […] birth and then the environment. But the man can join an existing nation as a spiritual collection […] by the act of free will […]. This is called "national consciousness" [Lutosławski 1939: 23-24].
>
> The life of a nation consists of a series of individual inspirations that form specific spiritual ties between people [Lutosławski 1939: 33].
>
> In order for the national spiritual connection to become exposed, the homogeneity of a tribe must be broken [Lutosławski 1939: 26].

This is the point where he valued MESSIANISM.

> Actually, messianism means demanding that each nation realized their calling and not drowned in national egoism [Lutosławski 1939: 87].

But Lutosławski was far from HYPOSTATIZING the nation. The nation is not some separate being, but "a union of spirits alike, ready to fulfil a calling in the mankind" [Lutosławski 1912: 228].

> This type of expressions like "society's consciousness", the "spirit of the society", are only metaphors – formulas according to which we determine psychic states of groups of individuals; but the groups themselves do not exist independently from the individuals [Lutosławski 1912: 226-227].

Thus:

> «Rejection of personal happiness» for the «society» is not desirable at all. The more happiness there is […], the more powers […] to provide […] for the society's benefit [Lutosławski 1912: 226-227].

Nevertheless, one has to realize that although people are free, "chasing personal profits contrary to public good always leads to personal disaster, which prepares public disaster" [Lutosławski 1923: 12].

5.5.2 Anti-chauvinism

Lutosławski put the «union» with the nation – patriotism – against CHAUVINISM.

> He who loves his nation does not wish harm upon any other nation [Lutosławski 1910: 18].

Also in collective actions, there is a difference between striving to maintain your OWN IDENTITY and attempting to take away the identity of SOMEONE ELSE.

> Possessiveness, the need to control other people is not the same as love for your country [Lutosławski 1920a: 16].

On one hand, though "none of the countries can be locked out from foreign nations" [Lutosławski 1912: 46]:

> For the nation, it is the biggest threat to assimilate foreign elements which endanger the existence of basic features to form its *raison d'être* [Lutosławski 1910: 10].

There is something mysterious about these basic features which determine the nation's identity.

> No Dutch poet, no matter if he was fed on Lithuanian kołduny, drank Polish mead and bathed in Ciechocinek lye – would ever come up with anything similar to *Great Improvization* by Mickiewicz [Lutosławski 1911b: 129].

On the other hand:

> Every nation conscious of its individuality respects the separateness of others, just like Poland always respected the fact that Ruthenia and Lithuania are separate from it [Lutosławski 1920b: 219].
>
> The hatred of Lithuanians and Ruthenians is madness, artificially instilled by Germans [Lutosławski 1920b: 259].

Indeed, there is always:

> The most effective guarantee of our freedom is the freedom of neighbouring countries [Lutosławski 1922: 219].

As illustrated by the Moscow example:

> Each persecution of one nation by another is a mistake. The persecuted nation always strengthens its national consciousness after such mistakes and the persecutors haemorrhage their resources and lose *raison d'être* in humanity [Lutosławski 1910: 66].
>
> A possessive nation rarely contributes to the mankind's heritage [Lutosławski 1910: 11].

After all, no efforts will ever keep empires based on violence intact.

> Even the most perverse and genius individual cannot stop the birth of new nations, will not keep inconsistent elements united [Lutosławski 1911b: 226].

He demanded the struggle for national identity to be both EFFECTIVE and DIGNIFIED at the same time.

> When we assume to fight for a good cause, let's not fight with evil measures [Lutosławski 1912: 271].

Efficient fight is a thoughtful and careful operation. It has to be cunning, because:

> It is dangerous to fight the enemy with his own weapon when […] the enemy outnumbers us. […] To defeat the enemy, you have to have a new weapon of your own kind; a weapon he cannot take away from you and use against you, because […] he is unable to use [it] [Lutosławski 1912: 257-258].
>
> [The fight must be careful, as] when fighting brutality and barbaric ways, there's always the risk of catching the same malady [Lutosławski 1912: 268].

5.6. Conservatism

An important part of patriotism is love for the HOMELAND, which is the "jewel and national treasure": "a deposit you need to carry for future generations" [Lutosławski 1910: 107].

TRADITION plays an equally important part.

> A historic nation has a tradition and should respect it [Lutosławski 1926: 81].

Therefore:

> Poles should know the sacred books of their nation and by this knowledge of common, inspired thought help each other for a better and tighter union in actions aimed at realization of this thought [Lutosławski 1939: 169].

Significant national traditions present the national spirit and our individuality and are thus more worthy of protection if the conditions of national life are harder […]. Tradition, customs – this is like a speech more common than a spoken language, it's a symbolic word that connects people who are one nation and it can win over foreign individuals as long as it captures their hearts and imagination. Sharing wafer at Christmas and eggs during Easter has deeper meaning than just to repeat the symbol used by your ancestors.

It is because of this circumstances that the symbol was for so many centuries and by so many millions of people of one race, one country, practised at the same time of year with the same ceremonial anxious feelings that caused the inherited union of the symbol with a feeling, and therefore it is easier for enemies or feuding brothers to unite over a wafer or a piece of egg rather than even the most logic reasoning and most lofty emotional arguments used in other circumstances [Lutosławski 1912: 77-78].

5.7. Occidentalism

In general, Lutosławski contrasted the WESTERN CIVILIZATION to the EASTERN DESPOTISM. The principles of the Western civilization – according to him – go as follows:

(1) Every nation has a right to choose their government.

(2) None of the nations has the right to rule other nations against their will.

(3) Each individual has rights that should be respected by the state [Lutosławski 1939: 1].

The principles of Eastern despotism are Western principles «reversed».

(1) Every strong state has the right to rob weaker neighbours from ownership, freedom and even life.

(2) […] [The ruler] imposes only temporary and conditional law upon individuals and groups as long as it serves […] [him].

(3) Spiritual aspirations, which divide subjects of one ruler and weaken states should be terminated with all measures available [Lutosławski 1939: 3].

Lutosławski believed that "the development of political systems" that differed so greatly was caused by Christianity [Lutosławski 1933: 157]. But at the same time, he had reservations that "all historical conclusions are of probable character" [Lutosławski 1901: 31].

6. The history of philosophy

6.1. Historical explication

Historic studies play – according to Lutosławski – an important part in philosophical studies. One of the most common sins attributed to philosophers

was "starting philosophy anew" [Lutosławski 1900: 7]: ignoring "the development of human thought in the past" [Lutosławski 1900: 31]. He wrote:

> The seeming independence and contrast of the systems is based on the fact that each great philosopher started a new domain of philosophical science, and by exaggerating the meaning of this domain for the entire philosophy, he entered into conflict with those who practiced other domains [Lutosławski 1900: 9].

Historical studies have their own goals provided they are conducted in accordance with the HISTORICAL EXPLICATION POSTULATE. A historian's responsibility is therefore:

(1) to translate the analysed philosophical text to contemporary language of philosophy;

(2) to conclude from the translation as many logic consequences as possible;

(3) to investigate the authenticity of consequences obtained in the light of contemporary knowledge.

Therefore, it is possible – as Lutosławski observed – to "express and understand what the philosopher we are writing about thought, though he not always clearly stated it" [Lutosławski 1892: 27].

One should also distinguish evaluation of philosophical theses from assessing the philosophers themselves. Philosophical theses are evaluated based on accuracy. Because:

> It is not about whether the thought is new or old, but mainly whether it is true or false [Lutosławski 1901: 22].

Philosophers are assessed usually by their impact. But at the same time:

> The greatness of a thinker for us seems to be measured by the circle of its influence not only on contemporaries, but the following generations as well. Thus we should not be looking for great thinkers in contemporary literature – because we would not possess the measure to assess their greatness [Lutosławski 1901: 99].

6.2. Stylometry

Lutosławski developed – in his work *The Origin and Growth of Plato's Logic* [1897] (*cf.* also [Lutosławski 1891 and 1892] – an original (and complementary to the statistic and lexicographical) method for assessing the chronology of Plato's dialogues (determined by comparing their respective logical theories). It was the STYLOMETRIC METHOD: the measure of common style within works of the same author – in particular between the work of a known and

unknown date – by studying of the so-called stylemes [Lutosławski 1899: 36], *i.e.* characteristic features of a given style (*scil.* characteristic expressions and phrases, word order and sentence length, neologisms).

6.3. Tradition

Lutosławski referenced the indigenous heritage.

He quoted Polish historians of logic: Bartłomiej Keckerman [Lutosławski 1892: 5] – who "despite a German name was Polish and called Poland "*dulcissima patria mia*" [Lutosławski 1892: 35] – as well as Henryk Struve [Lutosławski 1892: 21], also born German. He praised Jan and Jędrzej Śniadecki for writing "clearly and precisely" [Lutosławski 1894: 548]. His inspiration was the "invaluable logic" of Anioł Dowgird [Lutosławski 1906: VII]. He admired Andrzej Towiański, who "exercised ennobling influence over many of his students", who owed him "all their perfection as citizens and professionals" [Lutosławski 1922: 179]. Lutosławski highly regarded Juliusz Słowacki for applying "the way to foresee the past" [Lutosławski 1909a: 14] to produce the Genesis concept of the origin of species. And finally, the "most famous among Polish philosophy professors" was for him Adam Żółtowski [Lutosławski 1933: 315].

Not all the thinkers were cherished in the same way though. Józef Maria Hoene-Wroński earned himself an opinion of "ambitious philosophy troublemaker" [Lutosławski 1933: 200]: "a third-grade German philosopher who wrote in French and wanted to be seen as Polish" [Lutosławski 1933: 199]; he was also critical towards his followers who "are a group of amateurs in Warsaw to consider translations by Wroński the most perfect expression of human thought only because they are difficult to understand" [Lutosławski 1933: 165]. He didn't value Kazimierz Twardowski and perceived him as a "typical German scholar, student of a German philosopher" – Franz Brentano [Lutosławski 1933: 315]. (Incidentally, his impressions from the trip to the USA were written down in a monthly magazine *Przełom* in 1895, were Twardowski also published his adolescent works.)

7. Conclusion

Lutosławski grew to be the leading Polish philosopher at the beginning of the 20th century. Foreign scholars recognized his papers on Plato and thanks to the fact that he has published a lot in English, French and German (he also wrote in Italian, Spanish and Russian). He was famous in Poland because of his extensive lectures and educational work: in particular, he influenced many modernists related to the Young Poland period. After World War II,

his activity was rather hushed over for many decades. And if mentioned, Lutosławski was exposed mainly for the elements of his doctrine, which were an easy target for their «naiveté» or «harmfulness», especially when subject to appropriate preparation – just like his theoretical and practical patriotism, which, despite his own declarations and facts, was labelled as chauvinism.

7. Zygmunt Zawirski

The supposition of an infinite complexity of the structure of the physical world should be regarded as superstition.

[Zawirski 1927/1928]

1. Life

Zygmunt Michał Zawirski was born on September 29, 1882 in Berezowica Mała near Zbaraż, as the son of Jan Buchowiecki of coat (probably) Drogosław, and Kamila née Strońska. His father came from Brest on the Bug; he took part in the January Uprising in 1863 and to escape persecution by the tsarist regime he crossed the Russian-Austrian Partition cordon to settle in Podolia under a different name – Józef Zawirski. It became a new "little homeland" for his family. Zygmunt could and have in mind its residents when – years later – visiting Descartes' homeland, he praised his compatriots for "warmth, kindness and honest, open nature" [Zawirski 1937: 631]. With Kazimierz Ajdukiewicz from Tarnopol and Władysław Witwicki from Lubaczów he was friends until death. In his so far unpublished *Słownik filozoficzny* he mentioned two prominent Ukrainians: Gregory Skovoroda, the eighteenth-century, "first – as he wrote – home-grown Ruthenian philosopher, pantheistic mystic, dealing mainly with issues of morality", and Ivan Mirčuk, twentieth-century exile philosopher.

The Zawirskis had numerous offspring: besides Zygmunt three daughters and five sons.

Zygmunt's adult life breaks down into three periods: Lvov (1901-1927), Poznań (1928-1936) and Cracow (1937-1948).

In the years 1901-1906, Zawirski studied at the Faculty of Philosophy, University of Lvov. He attended, among others, lectures on the history of Greek philosophy by Witold Rubczyński and participated in his seminar (from which he took the idea of A RATIONAL, FAIR AND MERCIFUL POWER), lectures on physics by Marian Smoluchowski (from whom he borrowed the idea of ETERNAL RETURN OF THE WORLDS) as well as lectures in philosophy and the philosophical seminar by Kazimierz Twardowski (whom until his death he considered "one of the most prominent figures among […] the creators of our modern philosophical culture" [Zawirski 1938a: 3]. In 1907, he passed the exam for teacher of propaedeutics of philosophy, mathematics and physics – and for over twenty years he taught in junior high school, including Rzeszów (in the 2nd Gymnasium) and Lvov. In 1908, he married Kamila née Galotzy, with whom he had two sons: Zbigniew and Kazimierz. After completion, in the academic year 1909-1910, of the studies in philosophy in Berlin and Paris – he was awarded his doctorate in 1910 at the University of Lvov before Twardowski, based on his paper *Ilość praw kojarzenia przedstawień*, published in Rzeszów and dedicated to parents [Zawirski 1910]; its first version was created back in 1905 in a seminar of his adviser. He valued the latter until his death, but at his doctoral rigorosum he quoted Kant as a particularly developed philosopher, whom Twardowski was rather reluctant towards. In 1912, he was awarded in the third competition of *Przegląd Filozoficzny* for his dissertation "Przyczynowość a stosunek funkcjonalny" (*NB.* one of the jury members was Jan Łukasiewicz). In 1924 he received habilitation at the Jagiellonian University from Władysław Heinrich based on the dissertation *Metoda aksjomatyczna a przyrodoznawstwo* [Zawirski 1923/1924]; habilitation lecture concerned *Związek zasady przyczynowości z zasadą względności.* In addition to high school teaching, during this period he conducted commissioned lectures in philosophy and psychology: at the General Faculty of the Lvov Polytechnic (1922), at the State Teaching College in Lvov (1923-1936) and Faculty of Medicine of the University of Lvov. In 1925, he obtained a readership at the University of Lvov, in 1927 at Lvov Polytechnic. That year, he became a director of the Psychological Consulting Office in Lvov.

After the death of Władysław Mieczysław Kozłowski, he was appointed lecturer in the theory and methodology of sciences at the University of Poznań, first as an associate professor at the Faculty of Humanities (since 1928), later as associate professor (since 1920) and full professor (since 1924) at the Faculty of Mathematics and Natural Sciences; in the academic year 1934-1935, he also held the post of dean of the faculty. In his department

he accumulated a valuable library, unfortunately destroyed during the war by the Germans. He was a member of the Commission of Philosophy at the Faculty of Philology of Poznań Society of Friends of Sciences. In 1934, he was awarded first prize in the Eugenio Rignano competition, published by the magazine *Scientia* for the work of *L'evolution de la notion du temps* [Zawirski 1936]. His most outstanding student in Poznań was Franciszek Zeidler (1907-1972).

In 1937, he transferred to the Jagiellonian University as full professor of philosophy, first at the Faculty of Philosophy, and after its division – at the Faculty of Mathematics and Science; in the years 1938-1939 and 1945-1946, he was dean of the faculty. In 1936 he took over after Heinrich as editor of *Kwartalnik Filozoficzny,* which he continued until his death; two years later, in June 1938, he was, after Rubczyński, president of the Philosophical Society in Cracow; he held this function until 1945. He cooperated with the Philosophical Committee of Polish Academy of Sciences. On the tragic day of 6 November 1939, he was outside Cracow; thus he escaped deportation to the Nazi concentration camp in Sachsenhausen (as we know, this fate befell 178 scientists from Cracow). During the occupation, he participated in secret university teaching. At the end of the war in 1944, he lost his wife. After the war, after the establishment of the Faculty of Mathematics and Natural Sciences, he headed – until his death – the Department of Philosophy at the faculty; his assistant-volunteer and graduate student was Andrzej Grzegorczyk, later known logician and ethicist.

He took part in the 1st (Lvov 1923), 2nd (Warsaw 1927) and 3rd (Cracow 1936) Congress of Polish Philosophers; 1st (Paris 1935) and 2nd (Copenhagen 1936) Congress of Philosophy of Science; 7th (Oxford 1930), 8th (Prague 1934) and 9th (Paris 1937) International Congress of Philosophy; his death prevented his participation in the 10th (Amsterdam 1948) Congress, to which he managed to send the text of his paper [Zawirski 1948]. Between 1911 and the year of his death, he delivered dozens of lectures at the meetings of, among others, Polish Philosophical Society in Lvov, Poznań Society of Friends of Science, Philosophical Society in Cracow and Philosophical Society in Silesia. After the

The Zawirski's gravestone in the cemetery in Końskie, near Kielce

war, he co-organized the Philosophical Conference in Zakopane (winter 1947-1948). During the trip to Zakopane, he was robbed of the result of recent years of scientific work: manuscript of *Metodologia nauk przyrodniczych* and monograph on patristics.

He died suddenly on 2 April 1948 at the house of his son-doctor in Końskie (in Kielce province) and was buried there. He left the manuscript of *Słownik filozoficzny* developed in the last years of his life. The forthcoming publication was stopped by Communist regime, with regard to which Zawirski harboured for some time false hopes that it would allow for unfettered scientific activities. The traces of these illusions can be found in, delivered on December l, 1945, in the YMCA in Cracow, the reading *O współczesnych kierunkach filozofii* [Zawirski 1947], in which he spoke with certain reverence of communist ideology. The illusions did not last long, since in the manuscript of the entry dedicated to Vladimir Ulyanov (known under the pseudonym "Lenin"), he crossed out "statesman" and wrote: "dictator"…

Bertrand Russell mentioned in his philosophical autobiography that he knows of only six people who studied *Principia mathematica* [Russell & Whitehead 1910/1913] until the end. Three of them – he claimed [Russell 1959: 92] – were Poles. It is not impossible that he had in mind, *i.a.*, Zawirski.

Around 1939, in his *Słownik filozoficzny* Zawirski gave his self-characteristics:

> Polish philosopher […]. Concerned with philosophical problems of natural science and theory of the natural knowledge, moving from the same to cognitive problems in general; he admits to the scientific philosophy program, whose slogan Łukasiewicz put forward at the Second Congress of Polish Philosophers in 1927. Rejecting the rigidity of conceptual apparatus […] he holds, however, that whenever we are forced to modify our primary concepts and principles, this change should be made in such a way that the old concepts and principles are the limit result of the new (or made it possible for the result to be unambiguously assigned and isomorphic with it). The history of mathematics and natural sciences confirms the validity of this position.

From people practicing philosophy, Zawirski required – in the spirit of the Lvov-Warsaw School – a sense of responsibility. He wrote in 1926:

> A philosopher, who […] undertakes […] revision and reconstruction of basic concepts and principles of scientific knowledge undoubtedly progresses to some extent at their own risk and own responsibility, because only the further development of science may fully show the need for such an endeavour [Zawirski 1926: 108b].

And in 1931, he warned "against granting metaphysical meaning too hastily" [Zawirski 1931: 82] to physical theories.

These warnings remain in force to this day.

2. Views

2.1. Methodological postulates

In pursuing science we should, according to Zawirski, be guided by the three postulates: the postulate of MINIMALISM, the postulate of SCIENTISM and the postulate of REDUCTIONISM.

The postulate of minimalism demands from a scientist CAUTION AND OPENNESS. A scholar should not be too quick to settle the issues faced by him, and at the same time be ready under certain circumstances to abandon decisions taken. Recklessness and dogmatism, haste and closed-minded worldview are foreign to science, according to Zawirski.

The postulate of scientism requires of all science – also in philosophy – to use only a-priori-empirical methods, used in the applied sciences: deduction and induction. Zawirski allowed two sources of knowledge: extraspection and introspection; he shared the view that the removal of the latter would lead to a paradox, since empirical data are primarily subjective. Zawirski considered unscientific eidetic and intuitive knowledge, although he saw a source of inventions in intuition. It is not clear what status Zawirski assigned to identification, which he otherwise considered the most important cognitive process.

The postulate of reductionism recommends bringing, wherever possible, (seemingly) different concepts to a common basis: more primitive concepts and principles. In this way, one achieves the unification of language and assertions delivered in this language. A particularly important type of reduction is the reduction of theoretical terms and theses to empirical terms and theses. According to Zawirski, in this case only implicational reduction is possible – and not equivalent.

Zawirski examined in detail the possibility of reduction in three areas: psychology, physics and mathematics.

In PSYCHOLOGY, he tried to demonstrate that all the rules of association of representations can be reduced to the principle of contact (total or partial, external or internal).

In PHYSICS, he rejected the possibility of reducing to other principles of the principle of causality. In particular, he questioned the idea that the causal dependence could be eliminated in favour of inferential or functional independence (which – wrongly? – he considered a one-to-one correspondence) or co-existential, without far-reaching modifications, «stretching» the concepts.

In MATHEMATICS, accepting the weakened logicism, he considered the possibility to bring its (original) concepts to logical concepts – with impossibility of reducing certain rules – in particular mathematical certainties of existence (*e.g.* axioms of infinity or choice). He himself tried to carry out the reduction of probability theory to many-valued logic. He had a doubt, however, whether the probable statements – at least if they are deemed statements about the probability of certain statements – can be treated equally as true and false statements. He also analysed the relationship between classical and intuitionistic logic from this point of view.

2.2. Theoretical procedures

Structure of a theory, also of a philosophical theory, requires well-conducted procedures common across science: PROBLEMATIZATION, EXPLANATION AND SYSTEMATIZATION. Posed problems should be MEANINGFUL, submitted hypotheses – CORRECT, built systems – ADEQUATE.

Zawirski considered the criterion of reasonableness of the problem RELATIVE COMMUNICABILITY. The expressions with which the problem is formulated, should belong to understandable language. It is a liberal criterion. It is not as liberal as the criterion of reasonableness of everyday language: here the reasonable issue is as much as a thinkable issue. It is, however, more liberal, than, for example, the condition of decidability. It admits the existence of meaningful problems, and not decidable: all – and only – such problems can be solved outside science, as long as not in a «morally unacceptable» way.

The relevance of the hypothesis according to Zawirski can be inferred on the basis of four criteria. Relevant hypothesis should be INTUITIVE, LOCAL, CONSERVATIVE AND FALSIFIABLE.

A hypothesis is intuitive if characterized by SIMPLICITY: when applied to the old scholastic rule: *entia praeter necessitatem non esse multiplicanda*. This criterion is met, for example, by deterministic hypothesis in quantum mechanics and theistic hypothesis in ethics (see below).

A hypothesis is local, if LIMITED to a certain field of objects: when not trying to explain everything. (NB. Zawirski does not show how to reconcile it with the postulate of reductionism.)

A hypothesis is conservative when it ALLUDES to previously adopted laws: if it goes beyond the latter, it is best in such a way that they become its borderline result.

The hypothesis is falsifiable, if it can be UPSET – at least indirectly. The absolute requirement for direct upsettability (refutability) is too strong, because it cannot be fulfilled for «molecular» hypotheses, which form the

conjunction of elementary hypotheses and (usually) definitional postulates. In the event of such hypotheses, falsification affects all conjunction and it is not known the falsity of which of its modules decides about the falsity of the whole. The form of molecular hypotheses is sometimes taken on by competing concepts within physics; therefore, it is impossible to construct a (simple?) *experimentum crucis* for them.

Zawirski realized that without it, progress in physics would be "a true miracle" [Zawirski 1938b: 118]. The decision as to the choice, which module of conjunction such an *experimentum crucis* should hit, is basically arbitrary, but postulate of methodological conservatism requires rejection of the basic rules only in exceptional circumstances.

Status of molecular hypotheses is held, according to Zawirski, by corpuscular and wave concept of the structure of the microcosm. The mystery of the complementarity of these concepts can be explained by assuming that the basis of quantum physics is not two-valued logic, but many-valued logic. The two competing hypotheses – with identical logical value, but other than true and false – do not violate the principle of non-contradiction and excluded middle. If so, then the laws of classic (two-valued) logic would not be universal; would apply only in certain areas of reality.

Falsifiers (and verifiers) of explanatory hypotheses – and all general statements – are protocol theses (singular statements). The same protocol theses may justify various hypotheses, even though with a fixed language given empirical facts determine, according to Zawirski, clearly defined protocol theses.

The culmination of procedures related to the construction of a theory is systematization. Systematization involves two procedures: TERMINOLOGIZATION and AXIOMATIZATION. Terminologization is based on ordering a conceptual grid through precisation and classification of concepts. Axiomatization consists in the combination of theory axioms. The system constructed on the basis of axiomatics is adequate if it is consistent with the intended model; building axiomatic system without regard to such a model is considered by Zawirski as irrational. The criterion for system adequacy is a naturalness of terminology and CONSISTENCY, COMPLETENESS and ECONOMY of axiomatics.

To achieve naturalness of terminology, one needs to carefully analyse the appropriate domain. The concepts are not necessarily self-explanatory (intuitive). Obviousness is in fact associated with limited human capabilities: to have intuition of, *e.g.* Riemannian space one needs to have the ability to perceive the whole universe; to have the intuition of relative simultaneity, one needs to have the ability to be ubiquitous. Thus, the concepts may not

be obvious, but should be properly defined (even if reductively or axiomatically), and their objects correctly classified.

Axiomatics can be regarded as consistent and complete when its consistency and completeness are proven. Axiomatics is economical when it contains as few axioms as possible – even at the cost of their non-obviousness. Economy of axiomatics is especially important where (*e.g.* in philosophy, but also in physics) we are dealing with the persistence of different concepts. It is good when the number of assumptions differentiating between these concepts is as low as possible.

Among the benefits brought by axiomatization of theory, Zawirski emphasizes especially three. Firstly, it gives the possibility of in-depth INTERPRETATION: reproduction of the very foundations of axiomatized theory. Secondly, it allows EXTRAPOLATION: the use of the finished system in other disciplines. Thirdly, it gives only one – in his opinion – ability to CONTROL INTUITION: identify primitive concepts through postulates.

2.3. Physical suppositions

Any science, and applied science – especially physics – in particular, assume some most general principles. Their adoption facilitates the understanding of the theories constructed within these sciences.

Such basic physical suppositions according to Zawirski include: hypothesis of RELATIVISM, DETERMINISM AND CYCLISM.

The hypothesis of relativism refers to the relation of properties of data in observation to the properties «as such» of perceived objects. Zawirski initially believed that certain, and then, that ALL properties of objects – including their location in time and space – are relative. Namely they depend on the reference system, in particular on the observer. The perception is in fact a dynamic process resulting in the acquisition by the perceived object of properties, which it would not have not being perceived. None of the reference systems – or observers – is distinguished from a scientific point of view.

Zawirski devoted much attention to the issue of time and space. In this case, he combined general relativism with liberal realism: time and space, even though relative, are not an illusion or «form» of perception (as idealists would have it), but they are not something independent of objects which are «in them», or changes (as realists-substantialists would have it). He defended the view that time, just as space, is characterized by heterogeneity and irreversibility (anisotropy), and is also steady and measurable, continuous and divisible, and finally infinite and «instantaneous».

According to a hypothesis of determinism, state of the world at a given moment (in a given point) is determined by the state of the preceding moment. In epistemological version, determinism says that if we know a momentary state of the world (*e.g.* its «present»), we can «calculate» preceding states («past»). Physical determinism is a theoretical modification of a common-sense principle of causality, according to which every change has a cause in a preceding change. As can be seen, the common-sense field of causal relationship is different from the determinant relationship field. The causal relationship consists of phenomena – in particular the changes taking place over a period of time (the term "momentary change" is considered by Zawirski intuitively absurd). If they are far apart spatially, the cause is earlier than the effect at least by a period light needs to traverse this distance. Thus, a causal relationship can serve as a criterion of absolute (invariant) PRECEDENCE. In contrast, determinant relationship field establishes a set of momentary states of the world, which – it should be stressed – for common sense are elusive abstracts.

Depending on whether it comes to one-to-one correspondent or ambiguous determination, determinism may take the form either of «radical» determinism or statistical determinism. It has already been mentioned that Zawirski rejects the possibility of reducing causal dependence to the functional dependence. Consequently, he also distinguishes between determinism and functional legalism, according to which for every phenomenon one can be formulate a law functionally binding it to other phenomena. This legalism is conceivable even within the magical «theories»; scientific theories seek causal explanations.

Zawirski distinguishes physical determinism not only from common-sense principle of causality and functional legalism, but also of course from physical indeterminism, and the latter – from psychological indeterminism. According to physical indeterminism momentary states of the world would not be determined in any way by preceding states: the world would be complete chaos. According to psychological indeterminism, human behaviour, namely acts of will of an individual, are not determined by anything: they are completely «free». Physical uncertainty principle, which says that it is impossible to accurately determine any momentary state of the microcosm neither confirms nor refutes the epistemological version of physical determinism (making it only non-applicable in practice), although it speaks for rejection of radical determinism for statistical determinism.

The condition of detection of determinant dependencies (determination) and causal dependencies (cause-effect connections) is the relevance of the

hypothesis of cyclism: repetitive nature of certain conditions or changes in the world (global cyclism) or at least in some areas of nature (local cyclism). The historical form of cyclism is hypothesis of continuing (eternal) returns – questionable, according to Zawirski, but not excluded. The hypothesis implies the finiteness of the world and the «ripple» of the degree of its complexity (entropy). The first assumption is inconsistent with traditional notions, but accepted by relativistic physics. The second presumption is incompatible with the second law of thermodynamics, but accepted by kinetics and mechanics, and made probable by phase theorem.

2.4. Philosophical hypotheses

The philosophy satisfying the demand of scientism is the philosophy of science and Zawirski called to engage in such a scientific philosophy. Use of methods of applied science provides philosophy, among others, with cumulativeness characteristic of science and the fact that the "theoretical constructions will correspond to the findings of the detailed sciences" [Zawirski 1945: 109-110]. It does not guarantee its release from unsolvable issues because even applied sciences are not free from them.

Within the scientific theoretical philosophy one must carefully separate ontology (metaphysics) and epistemology. The first is the theory of reality, the second – the language theory of the first.

The fundamental problem of ontology is the issue of EXISTENCE, and epistemology – the issue of TRUTH. The third fundamental problem of philosophy – practical philosophy – is moral: it is a question of HAPPINESS.

Zawirski distinguished between common sense (INTUITIVE) and scientific (IDEAL, PHYSICAL and REAL) concepts of "existence".

If something exists intuitively (for the common sense), it is also independent of perception and as it is presented in it. For this reason, the intuitive notion of "existence" is, according to Zawirski, internally inconsistent.

The scientific concept of "existence" combines similarity of criterion: if the term turns out to be scientifically useless, objects named by this term do not exist «for science». The issue of usefulness is differently resolved in various fields of science. If something exists for logic or mathematics (IDEALLY), it is independent of the other objects (ideal) and non-contradictory towards them. Such an existence is, according to Zawirski, hypothetically acceptable. If something exists for physics (PHYSICALLY), it is measurable. This concept is in Zawirski's opinion too narrow if it had to relate to the reality of nature: not necessarily what cannot be determined in our measurements cannot be determined «in reality». More natural (REAL) is such

a concept of "existence", according to which if something exists, its effects are possible to experience.

Independence and consistency, measurability and experienceability of effects are the criteria of existence (respectively ideal, physical and real); they characterize the concept of "existence", but do not define it. It seems that "existing" (at least initially) meant the same for Zawirski as "necessary"; there is no way, however, according to him, to give the classic definition of "existence in general" or "reality". The real object lasts in time and is functionally associated with other real objects, but "it is not known how [the properties] characterize" [Zawirski 1921: 72] the whole of reality. The issue of definition of "existence" is one of the least clear points of Zawirski's position.

The ontological question of existence is associated with the epistemological issue of truth in such a way that if a certain affirmative judgment is true, then its object exists. Zawirski recognizes the issue of truth according to the postulate of reductionism. Namely, he advocates for the REDUNDANT concept: the statement "Statement *p* is true" has, according to him the same cognitive value, as statement *p*. This definition is not necessarily a criterial definition. Another thing is that any criteria of truth – according to the postulate of scientism – may not be extrascientific, otherwise we are threatened, according to Zawirski, by epistemological vicious circle.

Faith in purposeful, moral order of the world, heading towards happiness of humanity, according to Zawirski, can be explained in the most intuitive (easiest) way with the hypothesis of UNIVERSAL theism: recognizing the existence of God (Leading Moral Will of the World), immortality of the soul and free will. At the same time the desirability, the existence of such an order («God's Cause») is an empirical – according to Zawirski the only valuable – verification of these hypotheses. Zawirski combines universal theism with the postulate of moral activity: he considers the attitude of the observance of poverty, humility and non-opposing the evil – incompatible with the God's Cause. In ethical views Zawirski clearly alluded to one of his Lvov masters (and later a colleague in Cracow) – Rubczyński, the author of *Filozofia życia duchowego* [Rubczyński 1925].

Unfortunately, the work prepared in his last years, which – as may be supposed – could tell us more about Zawirski's thoughts on the subject, has been lost.

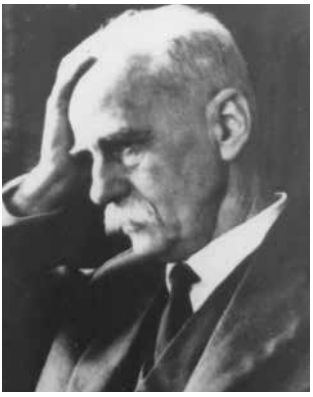
3. Summary

Zawirski's philosophical position can be defined briefly as LEANING towards: (a) minimalism, scientism and reductionism in the methodology; (b) relativism,

determinism and cyclism in the philosophy of physics; (c) liberal realism in ontology (d) phenomenalism in epistemology; (e) universal theism in ethics.

Zawirski was perhaps the most remarkable – and certainly the most well-read philosopher of physics in Poland before Zdzisław Augustynek: a precursor to the analysis of later historical methodology; pioneer (on our soil) of axiomatization of empirical theories, particularly physics; finally, an initiator of a still on-going discussion on the logical foundations of quantum mechanics. He built: an original many-valued logic system with non-classical (having no counterparts in natural language) connectives; he wanted to achieve its application in quantum mechanics by aligning it with the probability theory (and thus – as he thought – with experience).

8. Tadeusz Kotarbiński



The legacy of our thousand-year-old past is
to embrace gems mixed with ruins.

[Kotarbiński 1960: 391]

1. Life

Tadeusz Kotarbiński was born on March 31, 1886 in Warsaw and died there on October 3, 1981; he was buried in the Military Powązki Cemetery, Warsaw. In the Kotarbiński family, there were many artists: Tadeusz's cousin grandfather Wilhelm, father Miłosz, and brother Mieczysław – were painters; uncle Józef was an outstanding actor; mother, Ewa née Koskowska, practiced music.

Even in the days of gymnasium in Warsaw Kotarbiński attended lectures on philosophy – including Stanisław Brzozowski and Adam Mahrburg. In the years 1907-1912 he studied at the University of Lvov under Twardowski (philosophy) – and his most senior disciples: Jan Łukasiewicz (logic) and Władysław Witwicki (psychology), and – under Stanisław Witkowski (classical philology). After receiving his doctorate in 1912 – on the basis of dissertation *Utylitaryzm w etyce Milla i Spencera* – he was a teacher of Latin and Greek in Mikołaj Rey Gymnasium in Warsaw.

After regaining independence – in 1918 – he was appointed lecturer in philosophy at the University of Warsaw; one year later, he became an associate professor, and in 1929 – full professor of Warsaw University. He taught at the university until his retirement in 1961 – also in 1939-1944, when the school had to go underground, and in the early years of the communist regime, which in 1951 deprived him of the department of philosophy, leaving him only less "ideological" department of logic.

The Kotarbińskis' gravestone in the Military Powązki Cemetery, Warsaw

In the years 1945-1949, as rector, he managed the organization of the University of Łódź.

Throughout his life, he took an active part in the philosophical movement: in 1915 he belonged to the founding members of the Institute of Philosophy, then he was chairman of the Warsaw Philosophical Society (1917-1939) and the Polish Philosophical Society (up to 1977). He was a member of the Scientific Society of Warsaw (1921-1951) and the Polish Academy of Learning (1946-1951) until their termination by the communists; he was also a full member of the Polish Academy of Sciences since its inception (1952). He received many awards, attained many honours (he received honorary doctorates from seven universities, he was a foreign member of five Academies and many scientific societies), held a lot of dignities (including the years 1957-1968, when he was president of the Academy of Sciences, and the years 1960-1963, when he was chairman of the *Institut International de Philosophie*) – most, perhaps, in the post-war period, when the authorities tried to capitalize on his former leftist sympathies and atheistic and materialistic (but not «dialectical») worldview. No real impact on the main direction of academic life in the country went hand in hand with the rather façade distinctions which he was awarded; but certainly his great intellect and personal integrity and scientific reliability cooled down the team of disposable «apparatchiks» who were to instil in Poland the «only right» philosophy imported from the East.

In the most evocative and best way, Kotarbiński was described by Jerzy Pelc:

> A characteristic person, in appearance more old-fashioned than the figures of his peers, thanks to Sarmatian moustache. A manner harmonized with the appearance: old-time gallantry in behaviour, in the moments of merriness hearty, uncontrollable laughter. Humour without bile, wit without malice, seriousness without pomposity; he rejects irony in principle – as unnoble [Pelc 1966: 313].

2. The main body of work

The first book publication by Kotarbiński was *Szkice praktyczne* [Kotarbiński 1913], in which the main ideas of praxeology appeared. His *Elementy teorii poznania, logiki formalnej i metodologii nauk* [Kotarbiński 1929] have educated several generations of Polish intelligentsia. Many of our lawyers learned from

his textbook *Kurs logiki dla prawników* [Kotarbiński 1951]. *Wykłady z dziejów logiki* [Kotarbiński 1957b] and *La logique en Pologne* [Kotarbiński 1959] have been an important contribution to the history of logic. *Traktat o dobrej robocie* [Kotarbiński 1955] began praxeology as an independent scientific discipline. *Rozmyślania o życiu godziwym* [Kotarbiński 1966b] brought a summary of his ethical views.

1990 saw the publication of the first volume of his *Dzieła wszystkie* [Kotarbiński 1990-2003]. Kotarbiński wrote more than a half thousand of works.

3. Views

3.1. Semiotics and methodology

In logic, he dealt creatively mainly with semiotics and methodology.

He decided the central problem of semiotics – the problem of sense – in such a way that he considered sensible all and only those statements which that do not contain onomatoids or are translatable into such statements. In the first case, he spoke about the fundamental (literal) sense, and in the second – about the shortened-substitute sense. He opposed onomatoids – or pseudo-names – to genuine names, *i.e.* names of concrete phenomena, more precisely – things, AND ultimately – bodies.

He was a supporter of semantic reism, *i.e.* the directive to use only a language whose sentences are meaningful in terms of method laid down above. He believed that, in particular in the philosophy, the use of such language – the reistic language – will prevent many idle disputes, especially ontological, thus, for example hypostasing, or assigning the existence to objects, of which statements devoid of (reistic) sense or used only in the shortened-substitute sense are said. The issues subject to such disputes prove to be incorrectly posed.

He accepted the classical concept of truth: the statement is true, if it is how it says it is. He rejected the nihilistic idea, that is the idea that statements stating the truthfulness of a given statement, are synonymous with the statement itself. He believed that it is so only if the word "true" is used verbally, *i.e.* if the statement, whose truthfulness is decided (*e.g.* a statement claiming that *a* is *P*), is indicated by putting it in quotes (and thus using the expression "*a* is *P*"). However, if the word "true" is used in real terms, *i.e.* if the statement, whose truthfulness is decided, is stated otherwise (*e.g.* using the expression "the first sentence of this paragraph"), the "truthfulness" can no longer be thus eliminated.

He initially combined the classical concept of truth with logical indeterminism, *i.e.* rejection of the principle of excluded middle, if it was to

proclaim that every statement is either true or false. Although all truths are eternal, not all – are perennial. Truths are parennial, *i.e.* if any statement is true now, it will remain true forever. But there are statements which are not eternally true, and so being true now they have not been true always before. Not being false either, they were then undefined. If a statement is indeterminate, both it and its negation are possible. If it is determined, it is true or false. On the other hand, if it is true, it is necessary, and if it is false, it is impossible.

From the methodological issues – he dealt with, among others, analysis of the reasoning process which he ultimately considered "substantiating thinking". Among the reasonings, he identified – on the one hand – deductive reasoning (*i.e.* inference and proving), in which the logical consequence is (fully) substantiated using a accepted reason, and reductive reasoning (*i.e.* verification and explanation), in which the logical reason is justified (only in part) by a accepted consequence. On the other hand – he divided reasoning into progressive (*i.e.* inference and verification), *i.e.* that in which a consequence of a given reason is sought, and regressive (*i.e.* explanation and proving), *i.e.* that in which a reason of the consequence is sought.

He pointed to new foundations of classification of the sciences into theoretical and practical. He thought namely, that both the theoretical and practical sciences aim to establish true and justified statements about objects of a certain area: in particular, to establish laws. In general, he argued for criticism, *i.e.* postulate of acceptance only of sentences justified due to the knowledge held. He distinguished practical from theoretical science on the grounds that practical sciences determine certain truths in order to provide a description of a procedure leading to the formation of certain things, and that in these sciences, manipulative actions prevail (*e.g.* an experiment) over intellectual ones.

He considered praxeology to be the most general practical science. In contrast, this certainly one of the greatest Polish philosophers of the twentieth century, at first even refused philosophy the name of a well-distinguished area of knowledge – and called into question the legitimacy of the use of the word "philosophy". Not being able to convince anyone to abandon the word, he took to introduce some order there, at least conceptually. He considered four concepts of philosophy the most important: the practice of philosophy can be identified either with the creation of a metaphysical worldview, or the exploration of practical self-knowledge, or with indicating an ethical MODEL, or with building a theory of knowledge. The first understanding of philosophy coincided with what he called the "great philosophy",

namely the creation of large systems; the last – with what he called "little philosophy", namely philosophical analysis. He himself actually practiced analysis, but believed that philosophy does not end there: after the analysis the time comes to create the system.

3.2. Epistemology and ontology

In the theory of knowledge, Kotarbiński followed presentationism, which he called "radical realism". The world is knowable directly: the objects of knowledge are given directly and not through the sensual data (contents). He combined presentationism with objectivism: the world exists independently of whether it is or not it is cognized.

He was an empiricist – he considered the experience the ultimate foundation of knowledge. His empiricism was of extraspectionist nature. The basis of knowledge is external experience: the statements on introspection are reducible to statements on extraspection. He proposed that the statements like "*A* experiences that *p*" are paraphrased using a literally reistic statement "*A* experiences so: *p*". These statements are literally reistic as they lose the onomatoid "that *p*": *A* is a genuine name of "experiencing body" and "*p*" is a description of how – not what – *A* experiences (*e.g.* seeing something). Introspective statement can provide, among others, knowledge about how other people experience – not me alone. We can understand the statement claiming that someone different from us experiences so-and-so only as a shortened statement "*A* experiences as I would, if I experienced so: *p*". It is therefore an imitationistic concept of introspection. The experiencing here is made independent of existence of the experienced object: one does not need to accept the existence of that *p*, some sensory data, in order to experience as experiences someone experiencing in the manner described by the statement "*p*".

In the theory of objects, Kotarbiński was an advocate of a certain form of nominalism, namely – concretism. According to nominalism, there is exactly one ontological category: the category of individuals. Concretism adds: these individuals are concreta. In other words: every object is a thing. Yet another way: there are only concreta – there are no abstracta. In particular, there are no general objects: universals. He argued as follows. Something that would be a universal (*e.g.* a man in general) due to some individual objects (here: the people) should have all and only the properties common to these objects. Suppose that a certain property (*e.g.* being an author of *King Spirit*) is the specificity of one of these objects (here: of Juliusz Słowacki). According to the (ontological) law of excluded middle, our universal has

the specificity or does not have it. It cannot have it, however, because it is not a common property of individual objects that fit into the universal. It cannot also not have it, since then it would have the property of not having this specificity, and this again is not a common property of these objects, if it is not assigned to the distinguished object.

Concretism had reistic interpretation for Kotarbiński: every concretum is a thing. Reistic thesis – that there are only things – has become one of his most famous views. To ontological reism, in turn, he gave the form of somatism: every thing is a body. Thus, there are only bodies. Bodies are time-spatially expansive and limp objects. If one agrees, in turn, that the totality of – and therefore collection of all – bodies is matter, it is usually because the totality of bodies is also a body, somatism is a kind of materialism.

Initially, he combined materialism with indeterminism, and more precisely with anti-predeterminism. He opposed the thesis that what takes place at a certain time, is strictly determined by what had happened earlier. It seemed to him that if it was how predeterminists want it, it would be impossible to act truly creatively. Later he departed from this view and concluded that – according to determinism – each event is determined by a set of earlier facts, jointly creating a sufficient condition for this event. An important component of this condition – *i.e.* such a component, without which the other components of the set would not constitute a sufficient condition of the event – he identified with the cause of this event.

3.3. Praxeology and ethics

It is surprising that reist Kotarbiński devoted so much time to action, that is something, which from the standpoint of reistic doctrine – does not exist, because it is not a thing. At the same time, he analysed this action in a language by no means reistic. Moreover, after reism, praxeology – the theory of effective action – is most often tied with the name of Kotarbiński, who is rightly regarded as one of its main authors.

Underlying praxeology is practical realism, *i.e.* the postulate of sobriety in action: reckoning with reality in making any action – with what was, what is, and what can be.

The most important components of praxeology – as the theory of effective action – are practical directives, *i.e.* material normative statements of the form: "To achieve this-and-this then-and-then, it is good to do that-and-that". The phrase "it is good" is understood in those directives either as a sufficient condition (that is a synonym for "enough"), or as a necessary condition

(*i.e.* synonymous with "should"). And to do something – is the same as – to undertake a series of simple acts involving exerting intentional and arbitrary (*i.e.* having its source in arbitrary impulse) pressure on something, thus making – and therefore causing – the creation of something.

Let us assume that the practical directive specifies that a condition for achieving a thing in certain circumstances is to do some other thing. The theoretical basis for such a directive is the belief of existence of causal connection between the occurrences of both of these things. Causing the intended THING requires the use of specific materials and tools, that is – in general – a specific technical base. In turn, doing a thing, which is a condition for causing the intended thing, is a sequence of deliberate (intentional) actions.

Praxeology provides a theory of organization of such actions. They are assessed in terms of effectiveness – possibly varying degrees. Effective action is an action leading to the desired effect; an action detracting from that effect – is countereffective. Other actions are – from this point of view – ineffective (or non-countereffective).

Praxeological assessment of actions also applies to their rationality. A materially rational action is an action with a true theoretical foundation; methodologically rational – an action whose theoretical base is sufficiently justified.

Thus construed effectiveness of actions and rationality of both types are – as can be seen – mutually independent.

Norms are one thing (*e.g.* "Do not do this-and-this!"), and normative statements are another. Normative statements, regardless of whether they are the ones already mentioned – material – or emotional (like "Doing this-and-this is a good/bad thing"), are declarative sentences, subject to evaluation in terms of truthfulness and reasonableness. The norms, on the other hand – although subject to evaluation in terms of legitimacy – are devoid of logical value. We do not ask whether they are true or false, but whether they are valid or not.

Kotarbiński advocated (meta)ethical absolutism: despite the volatility of norms, there are absolute moral criteria, allowing deciding which norms are applicable and which – not. Ethics is independent in particular of a worldview – including the religious worldview. Kotarbiński himself was an atheist, but he distinguished atheism, *i.e.* the rejection of God's existence, from impiety, *i.e.* insulting the feelings of believers – and certainly he was not impious.

Justification of moral criteria is provided by elementary moral intuitions whose source is the conscience, assessing whether human behaviour is "venerable" (*i.e.* morally good), or – "disgraceful" (*i.e.* morally wrong).

Kotarbiński's primary ethical standard was: behave as a brave, trustworthy (or responsible) guardian would – be courageous, sacrificial, righteous and composed in the fight against the existing evil and preventing evil greater than the existing one. This norm also had its own, more relaxed version in the form of four recommendations: (1) like doing something, (2) love someone, (3) do not be a scoundrel and (4) live seriously.

4. Response

4.1. Genesis

The roots of semantic reism lie in what Kotarbiński heard from the mouth of one of his teachers – Witwicki – and what he reported:

> [Witwicki] called for the things themselves, demanding that all abstracta be supported by concreta, any generalization be illustrated with examples and that these examples grow before our eyes as if alive [Kotarbiński 1956a: 81].

The physicalism programme proclaimed at that time in the Vienna Circle – especially in the version of Rudolf Carnap – approached semantic reism. Physicalists also made reasonableness of statements dependent on their translatability into a distinguished language: of things (like Carnap) or sensations (as some others neopositivists). There was, however, an important difference: from the point of view of neopositivism, the thesis of ontological reism would have to be considered meaningless in empirical terms, and thus briefly: senseless.

In the classification of reasoning, he initially followed Łukasiewicz, but ultimately he accepted the understanding of "deduction" and "reduction" offered by Fr. Jan Salamucha.

The direct source of ontological reism was logical: calculus of names developed by Stanisław Leśniewski, which he called "ontology".

The impulse for his interest in praxeology was probably the work philosophy of Brzozowski and analysis of actions and products, carried out by Twardowski; no doubt, also pedagogical and organizational activity of the latter – activity framed in rare regularity – has become practical verification for Kotarbiński of his concept of efficient action. Anticipations of independent ethics can be found in Władysław Biegański's works.

4.2. Criticism

First, the criticism was directed at Kotarbiński's logical indeterminism. Leśniewski (1913), convinced him that relativization of truthfulness to time is unacceptable. The statements of the form "Statement "Something is

such-and-such" is true in such-and-such time" are useful when possible to translate into statements of the form "Statement "Something is such-and-such in such-and-such a time" is true".

The destructive criticism befell, above all, ontological views of Kotarbiński. After World War II, it came also from the communist doctrinaires, and boiled down to the conclusion – otherwise legitimate – that reism is not identical with their ideology. But even before, reism had been subjected to substantive criticism.

Firstly, significant internal shortcomings of reism have been indicated.

Kotarbiński's arguments against abstracta proved unconvincing. Marian Borowski [1922] and Roman Ingarden [1972] – and later Jan Woleński [1987] – drew attention to the fact that Kotarbiński based his arguments against general objects on the mistaken assumption that universals are assigned the same properties (of the same order), as properties assigned to individual objects falling under those universals.

Kazimierz Ajdukiewicz [1930] demonstrated that reism is an analytical thesis. Namely, it can be expressed by the statements "Each object is a thing", and this statement in reistic language is meaningful when the name "object" is a genuine name, that is – a name of a thing. Ajdukiewicz also noted that a reist cannot express in his own language a belief in the nonexistence of abstracta, because the statement of the form "There are no abstracta" cannot be considered a statement with even a shortened-substitute sense. The case was put on a knife's edge by Stanisław Ignacy Witkiewicz, pointing out to Kotarbiński that since reism is a convention, one might as well take the view that there are for example only the properties or – rejected by reists – contents (sensual data).

Secondly, it turned out that reism is not an adequate ontology due to the mathematical and physical theories. The consequence of adoption of reistic argument is recognizing as "pointless" a large part of mathematics – including a part of the set theory based on the concept of an infinite set. This notion does not have a reistic interpretation: no assertion about those sets can be transposed into the equivalent assertion about things.

Klemens Szaniawski [1976] and Zdzisław Augustynek also raised an objection that reism – and in any case, somatism – comes into conflict with modern physics, which considers as real not only the bodies (corpuscles), but also fields (waves). Fields, meanwhile – from the point of view of reism – are abstracta and thus hypostases.

Already, the criticism by Ajdukiewicz and Ingarden made Kotarbiński abandon ontological reism in favour of semantic reism, and a liberal one

at that, as it did not refused reasonableness to unrealistic propositions, but rather recommended «as far as possible» to avoid such propositions.

4.3. Continuation

Formulation of the classic concept of truth given by Kotarbiński was the reference point of the semantic definition of truth by Alfred Tarski [1933]. Reflections on absolutism in relation to the truth indirectly contributed to discovery of trivalent logic by Łukasiewicz: he assigned to indefinite statements the third – besides truthfulness and falsity – logical value.

Marian Przełęcki [1984] came to the conclusion that semantic reism is defendable on the condition that it is considered either as a certain terminological convention as regards "reasonableness" or a criterion of a minimum ontological commitment of theories.

An interesting attempt to save semantic reism was made by Bogusław Wolniewicz [1984]. He suggested that the sentences with reistic shortened-substitute sense should be considered not only statements directly translatable into reistic literally meaningful statements, but also statements belonging to any theory for which it is possible to give axiomatics in reistic language.

Psychologization of imitationism, *i.e.* basing the reduction of introspection to extraspection on structural psychology was postulated by Zbigniew Jordan [1935].

Modification of the original version of ontological reism was made by Janina Kotarbińska [1967]. According to her, one should distinguish two understandings of the word "exist": essential and fundamental. In essential understanding – there are only those objects to which names refer (also pseudo-names); with fundamental understanding – there are only things. As a result of this distinction, the recognition that every statement of the form "This-and-this object is at that-and-that" implies the existence of this-and-this object, does not force the recognition that this object exists in a fundamental way (that is, as a thing).

In contrast, Czesław Lejewski [1979] tried to defend the original argument of ontological reism in particular against the alleged tautologism – believing that, contrary to Ajdukiewicz the statement "Each object is a thing" is not an analytic statement, since the name "object" has a different (poorer) connotation than the name "thing".

There were also attempts to «put into practice» some ideas of praxeology – in particular, the slogan of good work. If they did not bring the expected results, it was probably because they fell on deaf ears of state-controlled economy, fully subordinated to dogmatic ideology.

5. Students

As a teacher, Kotarbiński taught above all the responsibility for words. As a debater, he was a master of what might be called the "idealizing recapitulation". He could so interpret someone else's statement – even his opponent's – that it became BOTH clearer and more justified than in its original form.

Kotarbiński was the second great teacher within the Lvov-Warsaw School: in Warsaw; he fulfilled the role played in Lvov by Twardowski. His disciples include such eminent scholars as Maria and Stanisław Ossowski and Pelc, Pszczołowski, Szaniawski and Przełęcki.

6. Summary

Karol Irzykowski called him "Socrates of Warsaw" – and this phrase characterizes Kotarbiński's personality most succinctly. In logic – his postulate to de-hypostasize scientific language went down in history. In metaphysics, reism was the most original, but only imitationistic theory of introspection was left in its original form. In axiology, the lemma of reliable guardianship turned out to be the soundest.

9. Stanisław Leśniewski

I believed one should change the direction of travel
and to go from the station of ONTOLOGY
through SET THEORY to the station of LOGIC,
not *vice versa* as I supposed until now.

[Leśniewski 1919: 786]

1. Life

1.1. Timeline[21]

1886. • 28.03. He was born in Serpukhov (south of Moscow) – from father, Izydor Wincenty Leśniewski coat of arms Griffin (1863-1915), an engineer employed at the construction of the Trans-Siberian Railway, and mother, Helena Palczewska. • He was baptized in the St. Stanislaus church in St. Petersburg. • After his mother's death, his father married again – *ca.* 1890 – with Łucja Katarzyna Kierbedź (1862-1950), niece of engineer Stanisław Kierbedź; father's second wife allegedly contributed to spoiling the relationship between son from the first marriage and father. • Stanisław's half-siblings were: Witold (1892-1918), Wacław (1894-1916), Wanda (1896-1928), Wincenty (1899-1920), Olgierd (1901-1920) and Czesław (1903-1976). • His cousin was Helena Leśniewska (1898-1993), known as Mother Pia from the Congregation of the Ursuline Sisters.

[21] I have established many previously unknown details from Leśniewski's biography with the help of his family – including Wacław Pożaryski, relative of the Prewysz-Kwintos, and Leśniewski's nephews Krzysztof Leśniewski, especially Ewa Malicka – and thanks to Fr. Józef M. Bocheński, Andrzej Grzegorczyk and Henryk Hiż. Some details come from Leśniewski's biography published by Arianna Betti on *Polish Philosophy Page*, edited by Francesco Coniglione (http://www.fmag.unict.it/polhome.html).

1895. He enrolled in the Real School in Troickosavsk (now Kyakhta in Buryatia).

1899. He got promoted to the fourth grade and moved to the third grade of Classical Gymnasium in Irkutsk (Siberia).

1903. He dropped out in the seventh grade of the Gymnasium.

1904. He was awarded the extramural high school diploma in that Gymnasium.

1904-1910. • He studied at the universities of Leipzig (1904-1906), where he attended, among others, Wundt and Volkelt lectures, in Zurich and Heidelberg, and in Munich (1909-1910), where he participated in classes conducted by, among others, Cornelius, Geiger and Pfänder. • His father's family – from 1905 to 1915 – lived in Tsarskoye Selo near St. Petersburg. • During one of the visits with his father in St. Petersburg, he met Leon Petrażycki.

1910. • He came to Lvov, where he attended lectures by, among others, Kazimierz Twardowski and Jan Łukasiewicz. • He became a member of the Polish Psychological Society in Warsaw.

1911. He lived in Paris.

1912. • 23.07. He obtained his doctorate at the University of Lvov for the thesis "Przyczynek do analizy zdań egzystencjalnych" [Leśniewski 1911b]; rigorosum included philosophy and mathematics – as an optional subject; he was examined by Twardowski and Mścisław Wartenberg (philosophy) and Józef Puzyna and Wacław Sierpiński (mathematics). • He received an award of the Philosophical Society of Academic Reading Room in Lvov for the academic year 1911/1912 – for two readings of "O zasadach wyłączonego środka" ["On the Principles of Excluded Middle"]. • He met Łukasiewicz in person. • He intended to seek a readership in Russia and thus prepared for the exams required to obtain a master's degree at the Faculty of History at the University of St. Petersburg. • He married Zofia née Prewysz-Kwinto (1893-1958), of the old landowning family (supposedly of Spanish origin) coat of arms Drya from Kimborciszki in Lithuania. The wedding took place in a nearby church in Smołwy. A colourful description of the wedding penned by Janina Jankowska-Orynżyna was preserved. • He spent the winter months of 1912/1913 with his wife in San Remo.

1913. He travelled around Europe (including Switzerland and Berlin); he also visited St. Petersburg again. • He arrived in Warsaw and taught mathematics at Sabina Tegazzo-Chmielewska's boarding school for girls in Warsaw and Wanda Pawlicka's boarding school for girls in Klarysewo near Warsaw. • He became a member of the Polish Philosophical Society in Lvov.

1914. He stayed in Kimborciszki. • After the outbreak of World War I, he left for Moscow.

1915-1918. He was a teacher of mathematics (algebra) in secondary schools of the Polish Committee in Moscow: Władysław Giżycki's mixed school and Anna Jakubowska's school for girls. One of his students at the Giżycki's School was later poet – Konstanty Ildefons Gałczyński. As another student of the Giżycki's School later recalled, in the "Lion's" (as students called Leśniewski) classroom there was total anarchy: "Everyone was doing what they wanted" [Hoppe 1961: 49]. • He taught at the Higher Science Courses for Teachers in Moscow. • He was a member of the Association of Polish Teachers and the Polish Scientific Society in Moscow. • He participated in the work of the Moscow Mathematical Society, which he praised for having the best-known blackboard he had ever seen – running around the entire room. • He obtained the exclusive right of translation into Polish of *Logische Untersuchungen* by Edmund Husserl (the translation never happened). • He was a tutor for children of the Prewysz-Kwinto family in Kimborciszki and neighbouring Lipniszki. He took express train to Kimborciszki; through the merits of his father – he was able to get off in Turmont, not too distant from Kimborciszki, even though according to schedule the train should not stop until Dźwińsk; this aroused universal admiration.

1918. He became a member of the Warsaw Institute of Philosophy. • Since June, he was an assistant clerk in the Department of Higher Education of the Ministry of Religious Denominations and Public Enlightenment. • He taught logic at Warsaw schools for girls run by Anna Jakubowska, Jadwiga Kowalczykówna, Cecylia Plater-Zyberkówna and Zofia Sierpińska and in the Courses of the Catholic Association of Polish Women.[22] • On 7th November, the Faculty of Philosophy, University of Warsaw, entrusted him with "substitute" teaching of philosophy of mathematics. • On 14th December, he presented two papers: *Podstawy ogólnej teorii mnogości* [Leśniewski 1916] and "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b] as the basis for habilitation at the University of Lvov.

1919. • 8.03. Twardowski gave him a mail message that the Committee of the Faculty of Philosophy at the University of Lvov composed of: Marcin Ernst (dean), Sierpiński (reviewer), Wartenberg and Twardowski – with regard to Wartenberg's reservations – had proposed to transfer the habilitation to the University of Warsaw, under the pretext of stay of the

[22] According to the testimony of W. Pożaryski – during World War I Leśniewski also taught at the Edward Rontaler's Gymnasium in Warsaw's Mokotów district.

concerned person and the reviewer in Warsaw. Ultimately, the habilitation did not take place. • 30.06. Faculty of Philosophy, University of Warsaw, passed his appointment *primo et unico loco* to the newly created special Department of Philosophy of Mathematics. • 1.10. He took a position as associate professor of the philosophy of mathematics at Warsaw University.[23] • In Warsaw, he lived in a house at 12 Brzozowa Street, owned by the Professors' Cooperative (the Kotarbińskis lived under the Leśniewskis).

The Leśniewski's gravestone in the Old Powązki Cemetery, Warsaw

1919-1921. During the Polish-Russian war, he worked as a decoder for the Cipher Bureau of the General Headquarters of the Polish Army.

1920. • 20.07. In the face of the Russian military offensive (approaching the Bug), he reported, together with Łukasiewicz and Tadeusz Kotarbiński – as the press informed – "at the disposal of the Commander in Chief with a request to be appointed […] to active military service at the front"; according to the press all three went to the front. • The Polish-Russian war killed Leśniewski's half-brother, Olgierd. • He became – with Łukasiewicz – a member of the Editorial Board of the journal *Fundamenta Mathematicae* (they both resigned from membership in the Editorial Board at the beginning of 1928).

1921. He was a member of the jury for the competition of *Przegląd Filozoficzny* for a dissertation on general objects. The competition received only one paper, titled "Zagadnienie przedmiotów ogólnych w filozofii i próba jego rozwiązania" ["The Issue of General Objects in Philosophy and an Attempt to Solve It"]; the jury did not award the prize.

1924. He took a several months' trip to France and Italy. In Paris, he worked in the National Library, in Rome – in the Royal Library.

1925-1927. Among his students, there was Czesław, his "brother close to heart" (later an economist).

1936. • 5.03. He took a two-month trip around Europe; visiting, among others, Vienna, Dresden, Berlin, Leipzig, Munich and Nuremberg. • 6.06. He came to Kimborciszki for the summer. • 27.09. He received a position of professor at the University of Warsaw.

[23] Interesting fact: Leśniewski's salary in 1934 was 882.08 zlotys per month (net).

1939. He was deputy dean of the Faculty of Mathematics and Natural Sciences at the University of Warsaw. • 13.05. He died in Warsaw from thyroid cancer – after an unsuccessful operation. He was buried in the Old Powązki Cemetery. His grave has a shared gravestone with the tomb of Ewa née Koskowska, the wife of Miłosz Kotarbiński, the philosopher's mother. • All his – many – logical manuscripts have been forwarded by his wife to Bolesław Sobociński.

1944. During the Warsaw Uprising, Leśniewski's apartment was bombed, and all his manuscripts, also those kept by Sobociński burned. Some of them have been partially restored by Sobociński after World War II.

1.2. Personality

Leśniewski had a low voice. He was a broad-shouldered man; ill with hyperthyroidism – already in his twenties he suffered from obesity. He was a heavy smoker, big coffee connoisseur and passionate consumer of chocolate. ("Mereology was born from chocolate" – he said jokingly.) Usually he worked in the cafe and at home; he kept close a big jug of coffee, which he drank in large quantities. In the study, above his favourite armchair, hung his portrait by Władysław Witwicki (the photograph of this study has been preserved).

He combined pedantry with … laziness.

He was very talkative; he had a "propensity for infinite discussions" [Kotarbiński 1958a: 295].

With his many years of experience teaching junior high school, he complained about the level of secondary education. Sierpiński emphasized his "outstanding teaching abilities": "He teaches clearly and accessibly, introducing his listeners to strict scientific thinking".[24] "He taught willingly and with the greatest of ease" – confirmed Kotarbiński [1958a: 302]. Anecdote has it that he spoke so clearly that Quine, who listened to several Leśniewski's lectures in Warsaw, was able to understand them, even though … he did not know the Polish language at all. During the university lectures, he told an abundance of jokes. On the many-valued logic of Łukasiewicz, he said that it is unacceptable, but … he regrets

[24] This quotation – and other citations relating to Leśniewski's works from the period closed by *Fundamentals of the General Set Theory* – are attributed to W. Sierpiński, although they come from an unsigned document "*Curriculum Vitae* and Evaluation of Scientific Works of Dr. Stanisław Leśniewski" annexed to "Justification for the Need for an Extraordinary Chair of Philosophy of Mathematics at the Faculty of Philosophy of the University of Warsaw" originating June 30, 1919 and stored in the Archives of Historical Records in Warsaw (reference number 3956).

not inventing it. He had a private playful logical terminology he used with relish during lectures (*e.g.*, he called a bound variable an "objątko" ["small clamp"]).

A contemporary and friend of Leśniewski – Kotarbiński – once said about Leśniewski that he was "the only genius whom the fate let […] [him] meet for many years in almost daily dealings" [Kotarbiński 1958a: 307]. Łukasiewicz wrote about him:

> Prof. Leśniewski has a very creative mind. The fact that he created three great deductive theories, which had not existed before him in this form, is the best proof of that. […]
>
> With his great creative ability prof. Leśniewski combines, an extremely precise, accurate, penetrating, critical mind, which is rare and extremely distinctive to him. One can be sure that in his deductive inferences one will not find any errors.[25]

He was a merciless critic. We read in Łukasiewicz:

> His criticisms are usually devastating, *e.g.* comments on the theory of deduction in *Principia* [by Whitehead and Russell].

Czesław Znamierowski, who met Leśniewski in Leipzig, recalled years later:

> After each lecture of the great celebrities of that time, he showed them in a few inquiries and comments how vague and ambiguous are the arguments of these authors [Znamierowski 1967: 36].

This offended Wartenberg, who wrote in strong terms about Leśniewski to Twardowski:

> He is a juggler and magician, who using dialectics, turns upside-down everything he grabs, seeing in it his originality and flaunting it (*cf.* [Jadczak 1997: 106].

Leon Chwistek was very critical of Leśniewski. Also, Twardowski had objected to the criticism practiced by Leśniewski. He wrote:

> Those who act according to Leśniewski's model very arbitrarily demand analysis, where it is convenient; but when someone demands of them, where it is inconven-

[25] All J. Łukasiewicz's statements come from his "Paper on Works of Prof. S. Leśniewski Read at the Meeting of the Committee [for the Appointment of Associate Professor of the Philosophy of Mathematics, Dr. Stanisław Leśniewski – Professor of that Subject] dated 23 October 1934", preserved in the Archives of New Records in Warsaw (Ministry of *Religious Faith* and the *Public Enlightenment*, reference number 3956).

ient they refer to «intuition». And [when] the opponent in the discussions is also trying to refer to «intuition», they answer: "We do not understand what, according to you, is to be intuitively given" [Twardowski 1997: 149].

He was a man of extremes. Kotarbiński described it so:

> Either extreme "yes" or extreme "no", aversion to half-measures, disgust with the pettiness, any littleness, tendency to sudden impulse, a sudden turn, a radical break of companionship, spontaneous antipathy towards insincere feelings, principled manner and intolerance towards exceptions [Kotarbiński 1958b: 295].

This was reflected, among others, in his political views. They evolved from the extreme left (during his stay in Moscow he was supposedly a member of the pre-communist party, namely the Social Democracy of the Kingdom of Poland and Lithuania), through socialist-coloured Piłsudskyite views (since the war with the bolsheviks) – to the extreme right (during the period of the so-called sanation).

In some circles, he was considered an anti-Semite. According to the term by one of his students, Henryk Hiż – if he was an anti-Semite, then, first of all, "late" (in the last years of his life) and not "doctrinal", but rather "emotional" and "selective". He acted with great reluctance towards some people of Jewish origin, but some – for instance Alfred Tarski, who, by the way, was not easy to live with – he highly valued at the same time.

In his father's family, he was called "Staś-professor" – as opposed to the cousin, Staś-captain (1897-1966), who was a sailor.

Leśniewski's marriage was successful – though childless, and some close aides believed his wife to be "bland". Leśniewski himself referred to her as "wifey"; she called him "Stasio"; they treated each other with great tenderness and concern. To his wife, he dedicated *Podstawy ogólnej teorii mnogości* [Leśniewski 1916]. The Leśniewskis were music lovers. They spent summer holidays in the Tatras. They knew them well – especially the Western Tatras – although they only hiked on shepherds' paths, not practicing climbing. Normally, they rented a highland hut on Gubałówka in Zakopane; they also frequented Piwniczna and Wisła-Głębce.

1.3. Writings and readings

All his preserved published works were collected in two volumes of *Pisma zebrane* [Leśniewski 2015]; the majority of them appeared also in the English version in two-volume *Collected Works* [Leśniewski 1992].

Leśniewski took an active part in philosophical life: at first mostly as a lecturer, later mainly as a discussant (and a strict critic of others' talks).

This is a list of texts by Leśniewski as well as his contributions to discussions, presented in chronological order.

28.11.1910. The voice in the discussion on reading I. Halpern's "Metafizyka: dzieje jej nazwy, pojęć, prądów" ["Metaphysics: History of Its Name, Concepts, Trends"] (Polish Psychological Association, Warsaw – hereinafter abbreviated "PPA").

12.5.1911. Reading of "Problemat istnienia w oświetleniu norm gramatycznych" ["The Problem of Existence in Light of Grammatical Norms"] (PPA).

23.10.1911. Reading of "Zagadnienie przedmiotów sprzecznych a teoria języka" ["The Problem of Contradictory Objects and the Theory of Language"] (PPA).

1911/1912. Two readings of "O zasadach wyłączonego środka" ["On the Principles of Excluded Middle"] (Philosophical Circle of Academic Reading Room in Lvov).

25.04.1913. Reading of "Problemat tworzenia prawdy" ["The Problem of Creation of the Truth"] (PPA).

11/12.1913. Six public readings of "Paradoksy logiki i matematyki: 1. Zasada sprzeczności w logice współczesnej; 2. Paradoksy logiki i matematyki; 3. Rozwiązanie paradoksów (a) Meinonga, (b) Nelsona i Grellinga; 4. Rozwiązanie paradoksu Berry'ego; 5. Rozwiązanie paradoksu Russella; 6. Rozwiązanie paradoksu Epimenidesa" ["Paradoxes of Logic and Mathematics: 1. The Principle of Contradiction in Contemporary Logic; 2. Paradoxes of Logic and Mathematics; 3. Solution to the Paradoxes of (a) Meinong (b) Nelson and Grelling; 4. Solution of Berry's Paradox; 5. Solution of Russell's Paradox; 6. Solution of Epimenides' Paradox"] (PPA).

26.01.1914. Reading of "O pewnej własności wszystkich klas" ["On Certain Property of All Classes"] (PPA).

11.05.1914. Reading of "Przyczynek do krytyki teorii mnogości" ["Contribution to the Critique of Set Theory"] (PPA).

16/21.04.1915. Reading of "Przyczynek do krytyki podstaw teorii mnogości" ["Contribution to the Critique of the Foundations of Set Theory"] (PPA).

3.03.1916. Reading of "Zagadnienie wolnego od sprzeczności systemu teorii mnogości" ["The Issue of the Set Theory System Free of Contradiction"] (Polish Scientific Circle, Moscow – hereinafter abbreviated: "PSC").

19.04.1916. Reading of "Проблемы с аксиомами и основными определениями теории множеств" (Moscow Mathematical Society).

26.09.1916. Reading of "Praca w dziedzinie logiki w Polsce w okresie ostatniego dziesięciolecia" ["Works in the Field of Logic in Poland During the Last Decade"] to the memory of W. Weryho (PSC).

24.12.1917. Reading of "Antynomie nauk formalnych a język" ["Antinomies of Formal Sciences and Language"] (PSC).

1918. Readings from the cycle *Podstawowe zagadnienia filozofii współczesnej* [*Basic Problems of Contemporary Philosophy*]: "Relatywizm i absolutyzm" ["Relativism and Absolutism"], "Teoria poznania czy metafizyka" ["Epistemology or Metaphysics"] and "Na drodze do nowej logiki" ["On the Way to the New Logic"] (Polish Circle of Scientific Self-Help, Moscow). • Reading of "Filozoficzne podstawy marksizmu" ["The Philosophical Foundations of Marxism"] (Polish Democratic Club, Moscow). • Co-authored paper (to the paper by Kotarbiński) on the paper by Z. Kobrzyński "O zasadzie względności w logice symbolicznej" ["On Principle of Relativity in Symbolic Logic"] (Warsaw Philosophical Institute – hereinafter abbreviated: "WPI").

13.04.1918. The voice in the discussion on the papers by W. Świętosławski "Sytuacja obecna szkolnictwa polskiego w Moskwie" ["The Current Situation of Polish Education in Moscow"] and J. Grabowski "Udział nauczycielstwa w Kolegium Oświatowym Wydziału Kultury i Oświaty przy Komisariacie Polskim" ["The Participation of Teachers in the Education College of the Department of Culture and Education at the Polish Commissariat"] during a rally of Polish teachers of secondary and folk schools (Polish Committee, Moscow).

9.06.1918. Reading of "O pewnym twierdzeniu z zakresu teorii stosunków" ["On a Certain Theorem from the Domain of the Theory of Relations"] (WPI).

28.06.1918-25.06.1919. Comments to the first chapter of *Prinicipia mathematica* by Whitehead and Russell (WPI).

7.04.1920. The voice in the discussion on reading by T. Kotarbiński "Czy wydziały filozoficzne uniwersytetów mają być wydziałami nauczycielskimi?" ["Should Philosophical Faculties of Universities Be Teacher Training Faculties?"] (First Congress of the Scientific Circle of J. Mianowski Fund in Warsaw – hereinafter abbreviated "SC" – dedicated to matters of organization and development of Polish science).

10.01.1921. Reading of "O podstawach ontologii" ["The Foundations of Ontology"] (PPA).

7.03.1921. Reading of "O stopniach funkcji gramatycznych" ["On the Degrees of Grammatical Functions"] (WPI).

10-13.05.1923. The voices in discussions on readings by K. Ajdukiewicz "O stosowaniu kryterium prawdy" ["On the Application of the Criterion

of Truth"], L. Chwistek "Zasady czystej teorii typów" ["Principles of Pure Theory of Types"] and "Zastosowanie metody konstruktywnej do teorii poznania" ["Application of the Constructive Method to Epistemology" and R. Ingarden "Czy i jak można wykazać obiektywność spostrzeżenia zewnętrznego" ["Whether and How One Can Demonstrate the Objectivity of the External Perceptions?"] (First Polish Philosophical Congress, Lvov).

12.11.1923. The voice in the discussion on reading by T. Kotarbiński "Prawdziwość i fałszywość definicji" ["The Veracity and Falsity of Definitions"] (PPA).

8.12.1924. The voice in the discussion on reading by J. Łukasiewicz "O pewnym sposobie pojmowania teorii dedukcji" ["On a Certain Way of Understanding the Theory of Deduction"] (PPA).

23-28.09.1927. Readings of "O podstawach teorii klas" ["On the Foundations of Theory of Classes"], "O podstawach ontologii" ["On the Foundations of Ontology"] and "O podstawach logistyki" ["On the Foundations of Logistics" (Second Polish Philosophical Congress, Warsaw).

18.02.1928. The voice in the discussion on the paper by J. Łukasiewicz "O definicjach w teorii dedukcji" ["On Definitions in the Theory of Deduction" (Warsaw Philosophical Society).

22.03.1930. Reading of "O podstawach ontologii" ["On the Foundations of Ontology"] (Warsaw Scientific Society – hereinafter abbreviated: "WSS").

21.11.1931. Reading of "O definicjach w tak zwanej teorii dedukcji" ["On the Definitions in the So-Called Theory of Deduction" (WSS).

11.03.1933. The voice in the discussion on the paper by J. Łukasiewicz "Z dziejów metody naukowej" ["From the History of Scientific Method"] (SC).

26.01.1938. The voice in the discussion on the paper by J. Łukasiewicz "Geneza logiki trójwartościowej" ["Genesis of Three-Valued logic"] (SC).

2. Views[26]

2.1. Anti-irrationalism, logicisation and digressiveness

Ajdukiewicz believed that the property distinguishing the representatives of the Lvov-Warsaw School has been consistent ANTI-IRRATIONALISM.

[26] The text of the following presentation takes into account the number of substantive and editorial comments submitted by its first three readers: Professor Janusz Czelakowski, Professor Anna Brożek and Professor Kordula Świętorzecka (both ladies are otherwise my students). I am very grateful to them for these remarks and I also apologize for not making use of them all. This was mainly because in some cases I have not been able to free myself from my own logical and philosophical intuitions.

Leśniewski was certainly an anti-irrationalist and even – one might say – a dogmatic anti-irrationalist.

All representatives of the Schools also advocated for – let's call it so – a program of LOGICISATION of philosophy (and more generally, science), *i.e.* the logical reconstruction of philosophical terminology (originating from natural language) and logical reconstruction of entire philosophical concepts.

Leśniewski was a supporter of logicisation in both its forms.

In the "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b], we find one of the earliest in the history of philosophy clear wording of the program of logical reconstruction of natural language. Leśniewski presented the advantages of such reconstruction in a graphic manner:

> «Scientific» language included in «artificial» frame of strict conventions, is a better tool of reasoning than language, melting in vague contours of "natural" habits, implying often incurable contradictions in a sense in which the "artificially" regulated pool of the Panama Canal is a better navigation path than "natural" rapids on the Dnieper [Leśniewski 1913b: 218].

He considered the practice of philosophy – and, more generally, science – in natural language, as "colloquials" (according to his playful expressions) do it, an anachronism; this was one of the reasons why renounced his first – "colloquial" in his self-evaluation – works.

Leśniewski's works had one more formal and technical characteristic – distinguishing him from among the representatives of the School; this characteristic was a tendency to DIGRESSIVENESS. Almost all his works are full of digressions: remarks, comments, notes, additions *etc.*, where the digressions are often small essays on their – never trivial – topic.

2.2. Notation

Leśniewski used individual notation in his works, which – in his opinion – was better suited to the implementation of the program than the traditional notation. However, he changed this notation in over a quarter-century of his research activity. To avoid the wrong impression that these notation changes were brought upon by some major changes of substance, in this presentation of Leśniewski's views the notation is uniform, and in some cases replaced with the symbolism more approaching modern habits.

Thus, for example, the notation fairly widely accepted today replaced Leśniewski's original symbols relating to sentential connectives. The notation of mereological formulas has been simplified. Leśniewski recorded *e.g.* the formulas "*a* is part of *b*" – in such a way that he took "is" as a logical

connective and the word "part" treated as the name-forming functor from the name '*b*'; here the expression "is part" (impossible to analyse further) was treated as a logical connective in such formulas. To mark the syntactic structure of sentences rather than the Peano-Russell's «dot» symbolism, a more transparent bracket symbolism was applied.

Although Leśniewski himself and his followers and commentators use in the case of names, *resp.* name variables, very diverse symbols: *A*, *B*, … *a*, *b*, … *x*, *y*, … – which sometimes leads to confusion and *a fortiori* to misunderstandings – here they are harmonized; this is, it seems, consistent with Leśniewski's view that there is exactly one semantic category of names.

	Notation	Sense
1	α, β, γ, δ, ε, ζ, η, θ	*Propositional variables.*
2	… α_i, α_j, α_k, …	*Propositional constants (determined sentences).*
3	~ α	*Propositional negation*: It is not true that *a*.
4	α ∨ β	*Alternative* (normal): α or β.
5	α ↔ β	*Equivalence*: α always and only if β (in short: α, when β).
6	α → β	*Implication*: If α, then β.
7	α ∧ β	*Conjunction*: α and β.
8	*a*, *b*, *c*, *d*, *e*, *f*, *g*	*Name variables.*
9	… a_i, a_j, a_k, …	*Name constants (determined names).*
10	*k*	*Name variable relating to the set (group or multiplicity).*
11	*r*	*Name variable relating to the relationship.*
12	*s*, *t*, *u*	*Name variables relating to moments (periods).*
13	*w*	*Name variable relating to the property.*
14	∧*a*	*Generalizator*: For each *a*: …
15	ex *a*	Existence: *a* exists.
16	ob *a*	*Object*: *a* is an object.
17	*a* ε *b*	*Being*: *a* is *b*.
18	*a* part *b*	*Part*: *a* is part of b.
19	*a* compl *b*	*Complement*: *a* complements *b*.
20	*a* el *b*	*Element*: *a* is an element of *b*.
21	*a* ingr *b*	*Ingrediens*: *a* is an ingrediens of *b*.
22	*a* sub-coll *b*-ków	*Subset*: *a* is a subset of *b*'s.
23	*a* ∈ *b*	*Belonging*: *a* belongs to b.
24	*a* gen *b*	*General object*: *a* is a general object in respect to *b*.
25	*a* = *b*	*Identity*: *a* is identical with *b*.
26	*a* coll *b*-ków	*Set*: *a* is a set of *b*'s.
27	*a* extr *b*	*Externality*: *a* is outside *b*.

	Notation	Sense
28	non-*a*	*Name negation*: non-*a*.
29	*a* + *b*	*Sum*: sum of *a* and *b*.
30	*z*	expression belonging to the category of sentences
31	*n*	expression belonging to the category of names
32	*F*, *G*	functor [generally]
33	*z*/*nn*	logical connective of two name arguments

Note: In verses 3-7, for the Greek letters, one may substitute any propositional formulas (constant or variable), in row 14 for the letter '*a*' – any name variable, in rows 15-29 for Latin letters – any name formulas (constant or variable).

In addition, quotes were diversified: «…» – is an indicator of the metaphorical use; "…"– is an indicator of material supposition of constant expressions (but not letters identifying constants). There is a difference in functioning of the quotation mark including constant and variable letters: '…'. For example – consider the inscription: '*a*'. Quotes in this inscription cover the propositional variable; the considered inscription should however be understood not as the name of the letters equiform with the letter inside quotation marks, but in such a way that, for example, sentence (a) "Sentence '*a*' is true" – means as much as – (b) "Sentence inserted in place of the present in the sentence (a) propositional variable is true."

2.3. Semiotics

2.3.1. Descriptive and teleological theory of sense

Leśniewski maintained that:

> Issues concerning the meaning of words can be twofold: [a] problems of descriptive or genetic theory of meanings and [b] problems in the field of teleology of meanings (questions of advisability of granting a certain word this or other meaning) [Leśniewski 1911a].

He himself dealt with both issues of the theory of meaning, especially descriptive problems and issues of teleology of meanings.

The general background of Leśniewski's semiotic views (he himself instead of the term "semiotics" used the term "semasiology") was NOMINALISM.

Leśniewski took the view that there is only one type of objects – namely concretes-individuals (see below). Therefore, the language describing reality should not contain expressions, which relate to objects other than individuals.

He identified the expressions themselves with individual inscriptions *resp.* sounds. There are equiform *resp.* equisonant expressions, but there is no such thing as expression-types. He also rejected the existence of expression-potentials: one may only speak of expressions actually «produced».

No wonder that standing in such a position, Leśniewski was critical, on the one hand, to the view of his teacher, Twardowski, that there is something like a judgment, being a semantic correlate of sentences-types – on the other hand, to the semantic concepts of his disciple, Tarski, which allowed for speaking, *e.g.* of the infinite set of consequences, among which one inevitably would have to find sentences never written *resp.* spoken by anyone.

2.3.2. Categorial grammar

Leśniewski was the one to give the main impetus to creating categorial grammar.

It is a SEMANTIC equivalent of the simple theory of types by Chwistek, which is to simplify the ramified theory of types by Russell. The latter was designed to prevent the antinomy of the class of all classes that are not own elements (see below, section "Antinomies"). Antinomiality of this concept lies in the fact that such a class both is and is not its own element. On the basis of the theory of types, each object belongs to a particular type; for example, it is an individual, a set of individuals, a set of sets of individuals and so on. Relevant types also include the properties of objects of a particular type. There are endless such types – of an ever higher degree. There is a principle (let's call it so) of typical homogeneity that no object – under the threat of nonsense – may be assigned properties that belong to different types. The phrase "set of all sets not being own elements is its own element" breaks this rule and is therefore the nonsensical formulation.

Leśniewski believed that the task of preventing the said antinomy if fulfilled a lot better by his proposed theory of semantic categories, because it does not prejudge anything about the structure of reality, which in fact we know very little about (Leśniewski accepted, as we recall, only one type of objects – namely individuals). It is in fact the theory of types of expressions, and the user of language to which these expressions belong, has a «daily» direct contact with those expressions. Leśniewski identified three semantic categories of expressions (both constant and variable): sentences, names and functors. Functors – the term "functor" was invented by Kotarbiński – are expressions used to construct compound expressions. If we want to characterize closer what and from what we construct using a given functor, we use the symbol of a fraction whose numerator we mark as a semantic

category of expression built using this functor, and the denominator – semantic categories of expressions which this functor links, *i.e.* semantic categories of its arguments. So, the role of a logical connective from the name and propositional argument is played *e.g.* by the expression "believed that" in the sentence "Kotarbiński believed that Leśniewski was a logical genius". Leśniewski accepted that functors can be divided into categories of higher order – depending on how many arguments they have and to which semantic category these arguments belong. It is worth noticing that Leśniewski's systems (which will be discussed below) do not contain functor-forming functors and quantifiers are not assigned any specific semantic category. Quantifiers in Leśniewski's view are multifunctional, as they can bind variables of different semantic categories: names (as in ontology and mereology), propositions (as in protothetics), or functors (as in ontology and protothetics).

The counterpart of the principle of typical homogeneity in the theory of types in categorial grammar is the principle according to which each expression (with a certain sense) belongs to exactly one semantic category.

2.3.3. Semantic functions of expressions

2.3.3.1. Denotation and connotation of a name

The relationship between the expression and to what the expression refers Leśniewski called "symbolizing". He distinguished symbolizing from connotating.

Leśniewski initially took the view that the name connotes certain properties.

In the case of proper names, the situation – according to Leśniewski – is as follows. Suppose that a_i is a proper name. Under this assumption, a_i connotes the property of having the name a_i. Proper name "Stanisław Leśniewski", for example, connotes the property of having the proper name "Stanisław Leśniewski".[27] The situation is similar in case of names of properties. Suppose that w_i is such a name. Then, w_i connotes the property of identicality with entities symbolized by name w_i. The name "redness" for example connotes the property of identicality ("being completely equal") with entities symbolized by the name "redness".

What is symbolized by names is only objects (let us add – in accordance with Leśniewski's metaphysical position – only individuals) which have properties connoted by these names – with the exception that no expression symbolizes itself nor those expressions that have any common constituents with

[27] On whether and what proper names connote – until today there has been no agreement between semioticians. Some see a vicious circle in Leśniewski's position regarding proper names.

this expression. For example, the phrase "English expression" written here means any English expression – with the exception of expression identical to a sequence of words in fifth and sixth place of the sentence and with the exception of such expressions "English expression" like for example this, which is part of this-here numerically expression: the expression "English expression". Given these caveats, we can say that no connoting expression can be in a symbolic relation with itself.

The names – and more generally, expressions – which are internally contradictory, do not symbolize anything. Also, the names which do not connote any property do not symbolize anything. Such names are, *e.g.* the word "being" and "object" because these words are indefinable – without falling into a vicious circle or regressing to infinity; so one cannot indicate what they would connote.

Leśniewski eventually resigned from using the connotating category (and *ipso facto* connotation) in the description of the semantic function of names. The reasons for this resignation were primarily metaphysical: as concretist Kotarbiński noted with satisfaction – Leśniewski came to the conclusion that in the literal sense of the word "exist" no properties exist – and therefore the names cannot connote anything.

2.3.3.2. Sense of sentences

Leśniewski imposed the following condition on the symbolizing function, performed by the sentences:

> Any sentence is supposed to symbolize possession by an object, symbolized by the subject, of attributes connoted by the predicate. […]
>
> Failure to meet this condition leads to inadequacy of the symbolization. Typical cases of inadequate symbolization – are: failure to designate material supposition (*e.g.* in the sentence "Paris is a proper name", whose adequate symbolization would be a sentence "The word "Paris" is a proper name"), the use of so-called real definitions, *i.e.* not definitions of expressions, but the alleged definitions of objects symbolized by these expressions, or purported definitions of notions (as it would be in case of alleged definition of "Man is a mammal with two arms and legs", provided instead of the actual definition "The word "man" connotes the property of being a mammal with two arms and legs") [Leśniewski 1911b: 343].

Among the sentences, Leśniewski distinguished analytic propositions and synthetic propositions. He defined them – at a time when he still used the concept of connotation – in the following sequence:

(1) The sentence "*a* is *b*" is an analytic sentence when '*b*' does not connote any property not connoted by '*a*'.

(2) The sentence "*a* is *b*" is a synthetic sentence when '*b*' connotes, among others, some of the properties not connoted by '*a*'.

2.3.3.3. Symbolization functions of existential sentences

Leśniewski devoted particular attention to symbolizing functions of existential sentences. He dedicated his thesis: "Przyczynek do analizy zdań egzystencjalnych" [Leśniewski 1911b] to this issue. Sierpiński wrote about this thesis:

> In his first paper t[itled] "Przyczynek do analizy zdań egzystencjalnych" […], the author reflects on the question of the truth or falsity of sentences like "*x* exists" and "*x* does not exist". He brings them to inherent sentences of the type "*x* is *y*" and "*x* is not *y*", and standing on the position that the true sentence symbolizes the possession by an object, designated by the subject, of attributes, connoted by the predicate, and assuming that "existing" = "being" = "object", and that "object" connotes nothing, because it cannot be defined as the most general term – comes to the conclusion that any [negative] existential sentences taken in a literal sense are false.

In detail, it looked as follows.

Leśniewski as an existential sentence had a sentences of the form:

(3) *a* exists.

(4) *a*-s exist.

(5) *a* does not exist.

(6) *a*-s do not exist.

Sentences (3) and (4) – are positive existential sentences; sentences (5) and (6) – are negative existential sentences. Leśniewski treated the expression "exists" (*resp.* "exist") as a synonym for the expression "is a being" (*resp.* "are beings"), and the expression "being" – as synonymous with the expression "existing object".

Therefore, he considered sentences (3)-(6) synonymous consecutively with sentences:

(7) *a* is a being.

(8) *a*-s are beings.

(9) *a* is not a being.

(10) *a*-s are not beings.

Since names '*a*' and '*a*-s' symbolize beings having properties w_i, w_j, …, sentences (7)-(10) can be paraphrased as follows:

(11) Being with properties w_i, w_j, … is a being.

(12) Beings having properties w_i, w_j, … are beings.

(13) Being with properties w_i, w_j, … is not a being.

(14) Beings having properties w_i, w_j, … are not beings.

Particular cases of sentences (13) and (14) are the sentences, in which one of properties w_i, w_j, … – is a property of not-being-being (and therefore non-existence). Suppose that it is property w_i; then we have:

(15) Being having a property of not-being-being and property w_j … is not a being.

(16) Beings having a property of not-being-beings and property w_j … are not beings.

An example of sentences with scheme (15) and (16) are respectively sentences:

(17) Non-existing man does not exist.

(18) Non-existing people do not exist.

Now one can see at a glance that sentences like (11) and (12) are analytic, because their predicates do not connote ANYTHING, and therefore they ALSO do not connote properties not-connoted by their subject. Analytical sentences are also sentences of the type (15) and (16) – *e.g.* sentences (17) and (18) – because their predicates connote something (*i.e.* not-being-being), which is also connoted by the subject.

2.3.3.4. Logical value of existential sentences

The conclusion to Leśniewski's considerations is as follows.

All the positive existential sentences – as analytical – are true. However, all the negative existential sentences are false. If they are analytic – like sentences like (15) and (16) – they are false because their subject ("being having the property of not-being-being, *etc*." or respectively "beings having a property of not-being-beings, *etc.*") is internally contradictory. If they are synthetic – as the other negative existential sentences like (13) and (14) – they are false because their predicate attributes the property of being-non-being to a being.

These conclusions seem to be incompatible with popular intuitions. Leśniewski explained this discrepancy with the fact that sentences like (3)-(6) are sometimes used inappropriately to symbolize what has an adequate symbolization in sentences:

(15) A certain being is the object of *a*.

(16) Certain beings are objects of *a*.

(17) No being is the object of *a*.

(18) No beings are objects of *a*.

And sentences above can be true or false – depending on what the name '*a*' symbolizes.

In this situation, it is understandable that Leśniewski opposed reduction of any sentences to existential sentences. Suppose that a reduction is permissible – and consider the sentence:

(19) Paris is not in China.

Synonymous to sentence (19) would then be a sentence:

(20) Paris, which is in China, does not exist.

According to reasoning above the sentence (20) – as negative existential sentence – is false because it states that:

(21) Being, which is Paris, which is in China, is not a being.

Sentence (21) is internally contradictory, and so – false. Meanwhile, the sentence (19) is a true sentence. If so, then neither sentence (20), nor sentence (21) is an adequate paraphrase of sentence (19).

It is worth noting that Leśniewski, warning against inadequate symbolization, did not put forward the postulate of its elimination from the language. He wrote:

> The task of the science of sentences is […] not to eliminate from language […] the hackneyed inadequacy of verbal symbolization, but to realize […] the planes and directions of inadequacy [Leśniewski 1911b: 345].

2.3.4. The issue of truth

2.3.4.1. Relativization of truth to the system

According to Leśniewski, reflections on truth and falsehood on the ground, as he said, of "colloquiality" cannot be conducted in a responsible manner. Responsible analysis of this issue requires relativization to a particular deductive system.

Consider a string of formulas: ⟨'α_i', 'α_j', …⟩. Ask whether any formula of this sequence, for example 'α_i', is a true sentence. Before answering this question – we must determine whether the formula 'α_i', is a sensible formula. Suppose that in the formula 'α_j' the expression 'a_j' occurs, which is defined by the formula 'α_j', taking in the string: ⟨'α_i', 'α_j', …⟩ – the position after the formula 'α_i'. If this is the case, then if in the formula 'α_i' there is an expression 'a_j', the formula 'α_j' is not reasonable; formulas containing the expression 'a_j' are only reasonable when follow the definition 'α_j'. One consequence of thus stating the matter is the need to recognize the definition as nonsensical due to all preceding formulas. Only in formulas following the formula 'α_j' the expression defined by the formula 'α_j' can be used sensibly.

2.3.4.2. Necessary conditions of truthfulness. Eternity and perenniality of truth

As we remember, Leśniewski accepted the convention that sentence symbolizes the possession by a certain object, namely the object symbolized by

the subject of the sentence, features connoted by its predicate. He considered the consequences of this convention to be two «formal» truth-conditions of sentences, formulated in the "Krytyka logicznej zasady wyłączonego środka":

(22) If the sentence 'α' is true, the subject of the sentence 'α' signifies something.

(23) If the sentence 'α' is true, the predicate of the sentence 'α' connotes something.

In other words:

(24) If the subject of the sentence 'α' does not signify anything, the sentence 'α' is false.[28]

(26) If the predicate of the sentence 'α' does not connote anything, the sentence 'α' is true.

According to ALETHIC ABSOLUTISM – the truth is a constant property (*scil.* value) of certain sentences, *i.e.*:

(27) Λ'α' {∨*t* (at the moment *t*: sentence 'α' is true) → [Λ*s* (moment *s* is earlier than moment *t* → at the moment *s*: sentence 'α' is true) ∧ Λ*u* (moment *u* is later than moment *t*) → at the moment *u*: sentence 'α' is true)]}.

Speaking freely: the truth is eternal and perennial.

That view is usually linked to the recognition of the PRINCIPLE OF BIVALENCE, according to which there are only two logical values of sentences, *i.e.* truthfulness and falsity. Therefore, we have:

(28) Λ'α' (sentence 'α' is true ∨ sentence 'α' is false).

2.3.4.3. Free creativity and indeterminacy of the future – and the truth

Polish philosophers in the early twentieth century made an attempt to show that the problem of truth is coupled tightly with the issue of indeterminism (Łukasiewicz) and the issue of creativity (Kotarbiński): namely, if indeterminism is accurate and free creativity possible – one must reject both alethic absolutism and the principle of bivalence.

In Łukasiewicz's opinion, it cannot be ruled out that indeterminists are right – and that there are future states of things with regard to a certain moment which at this moment are undetermined, *i.e.* in the past with respect to this moment there have not been (so to speak) appropriate determinators, *i.e.* sufficient conditions for the occurrence of these undetermined states of affairs. Suppose, then, that in the past with respect to moment t_i in which

[28] Some argue for another convention; namely, they assume that if the subject of the formula 'α', being a sentence according to the grammatical sense, does not signify anything, then the formula 'α' is neither true nor false. (Formula "α" is, therefore, essentially not a sentence according to the logical sense.) Leśniewski believed such a convention to be unacceptable – under the convention, according to which an internally contradictory sentence is false.

the sentence 'α' is true, no determinators occurred of the state of affairs stated by the sentence 'α'. Thus, at no time earlier than the moment t_i is the sentence 'α' true. Thus, under these assumptions – in short – not every truth is eternal. And since at no time earlier than the moment t_i is the sentence 'α' false either, the sentence 'α' must be assigned a third logical value different from truth and falsity – *e.g.* indeterminacy.

Kotarbiński believed that an example of thus undetermined states of affairs are the effects of creative acts performed by artists – before these creative acts are completed. The idea is that only someone who brought into being a sculpture using free act – the act which without free act of the sculptor could not have happened spontaneously – can be considered the creator of the sculpture.

In his dissertation "Czy prawda jest tylko wieczna, czy też i wieczna i odwieczna?" [Leśniewski 1913a], Leśniewski tried to justify the view that neither indeterminism nor the existence of free creativity enforce rejection of neither alethic absolutism, nor the principle of bivalence.

The proof of alethic absolutism given by Leśniewski is based on the principle of (non)contradiction. On the basis of this principle, it is impossible to «create» a truth, that is to make the sentence, which did not have the characteristics of truthfulness, begin having it at some point.

At the same time, Leśniewski shows that the eternity of truth does not exclude the existence of free creativity. Leśniewski reconstructed as follows the reasoning of Kotarbiński, which was to evidence the contrary – that eternity of truth excludes the free creativity.

If the truth is eternal, then (recall) we have:

(29) Λ'α' [∀*t* (at the moment *t*: sentence 'α' is true) → Λ*s* (moment *s* is earlier than moment *t* → at the moment *s*: sentence 'α' is true)].

There is a dependence as follows:

(30) Λ*t*Λ'α' (sentence 'α' is true at the moment *t* → it is impossible that sentence '~α' is true at the moment *t*).

Let us agree that:

(31) Λ*a*Λ*t*Λ'α' (it is impossible that sentence '~α' is true at the moment *t* → it is impossible that the artist caused at the moment *t* that ~α).

Now assume that:

(32) Sentence 'α' is true at the moment t_i.

From (29)-(32) it results that:

(33) Λ*a*Λ*s* (the moment *s* is earlier than the moment t_i → it is impossible that the artist *a* caused at the moment *s* that ~α).

As the free creation, Kotarbiński understands the work which meets the following condition:

(34) Λ*a*Λ*t*Λ'α' [artist *a* created at the moment *t* that α → (it is possible that artist *a* caused at the moment *t* that α ∧ it is possible that artist *a* caused at the moment *t* that ~α)].

On the basis of definition (34) – and assuming (32) – (33) shows that:

(35) Λ*a*Λ*s*Λ'α' (moment *s* is earlier than moment t_i → it is impossible that the artist *a* created at the moment *s* that α).

Suppose now that a sentence states that a certain object is a sculpture of the head of Niobe from Nieborów, and that this is a true sentence on May 11, 2015 year. According to (35) no artist could create this sculpture before that date. Because the latter is false, one must – according to Kotarbiński – reject the thesis (29) of the eternity of truth.

Leśniewski disputes the conclusion (35) not because thesis (29) is false, but rather because he questions the premise (31).

2.4. Antinomies

2.4.1. Antinomies and paradoxes

A special place in the works of Leśniewski is taken by the issues of antinomies. As mentioned in the paper "O podstawach matematyki" – "from […] 1911 […] problems relating to the "antinomies" have become for more than eleven years, the most insistent theme […] of [his] thoughts" [Leśniewski 1927-1931: 183].

On the one hand – the existence of the antinomies was for him a proof of frailty of language of science, on the other hand it was an incentive to invent original logical systems which would not be antinomial.

An "antinomial question" means the decision question (*i.e.* like "Is α?") such that a positive answer proper to this question, for example 'α_i' entails a negative answer (proper) to this question, that is '$\sim\alpha_i$'. Therefore, an antinomial question cannot be given a true answer; hence, Leśniewski calls it a "pseudo-problem".[29]

Leśniewski analysed Russell's, Meinong's, Nelson-Grelling's and Epimenides' antinomies.

2.4.2. Russell's antinomy (classes of classes not being their own elements)

Suppose that:

(1) Class k_i is a class of classes not being their own elements.

[29] Sometimes antinomies are called "paradoxes"; it would be better to distinguish them and talk about paradoxes in the case of sentences as to which – in terms of their logical value – our diagnosis based on observation differs from the diagnosis referring to the procedures of proving (usually those sentences are considered paradoxical which we believe from observations to be false, but which we should consider true on the basis of proof).

Russell's antinomy – is the question:

(2) Is class k_i its own element?

Suppose that:

(3) Class k_i is its own element.

Then of course class k_i is not a member of class k_i. Thus, we have:

(4) If class k_i is its own element, class k_i is not its own element.

Now, suppose that:

(5) Class k_i is not its own element.

As such – class k_i is an element of class k_i.

Thus, we have:

(6) If class k_i is not its own element, class k_i is its own element.

Theses (4) and (6) prove that question (2) is an antinomial question.

In his dissertation "Czy klasa klas nie podporządkowanych sobie jest podporządkowana sobie" [Leśniewski 1914], Leśniewski demonstrated that there is no class k_i – more specifically, that no object is class k_i.[30] Therefore, sentences (3) and (5) have subjects which represent nothing; therefore these sentences – both – are false.

Sierpiński read the solution to the antinomy proposed by Leśniewski as follows:

> The essence of the solution [to Russell's paradox by Leśniewski] is a rejection of the axiom that if an object is part of class of objects *a*, it is itself an object *a*. The solution to this paradox was for the author an introduction to the development of set theory, avoiding this paradox.

Leśniewski's reasoning can be reconstructed as follows.

Assumption (1) is the definition of the form:

(7) $k \varepsilon k_i \leftrightarrow \sim (k \varepsilon k)$.

If in the definition (7) in place of 'k' we substitute 'k_i', then we have an antinomial consequence:

(8) $k_i \varepsilon k_i \leftrightarrow \sim (k_i \varepsilon k_i)$.

According to Leśniewski *definiens* of the definition of type (7) should guarantee the non-emptiness of the subject of *definiendum*. Such assurance is adding – in this case – to the *definiens* an element:

(9) $k \varepsilon k$.

But when we do it, we can see that the *definiens* becomes self-contradictory:

(10) $k \varepsilon k_i \leftrightarrow [k \varepsilon k \wedge \sim (k \varepsilon k)]$.

No object is then k_i – *i.e.* $\sim (k_i \varepsilon k_i)$.

2.4.3. Meinong's antinomy (of contradictory objects)

Let us ask if there are contradictory objects.

[30] This claim was included – as thesis XXVI – in [Leśniewski 1916].

Assume that they do not exist. Then:

(11) No object is a contradictory object.

In other words:

(12) A contradictory object is not an object.

But generally, we have:

(13) If *a* is (not) *b*, that a certain object is *a*.

If no object were *a*, then no sentence on *a* could be true. Thus – if (12) and (13), then:

(14) A certain object is a contradictory object.

As it turns out: answer (11) that no object is a contradictory object, entails the inference (14) that a certain object is a contradictory object – so the second acceptable (correct) answer to the output question.

It is therefore «logically necessary» – in particular in science – to recognize the existence of contradictory objects.

Leśniewski – in "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b] – proposes the following solution to this antinomy. Recognition of the dependence found in sentence (13) does not lead to recognition as true of sentence (14). The point is that, in light of this dependence sentence (12) cannot be true. This is because the subject of this sentence does not mean anything; if so – sentence (12) is false and the sentence claiming that there are contradictory objects should be rejected.

2.4.4. Nelson-Grelling's antinomy (of non-suicides)

Will a man who kills all non-suicides, but does not kill any suicide, will kill himself?

According to the creators of the antinomy – each (proper) answer to this question leads to its negation, so it must be false.

Suppose that:

(15) A man who kills all non-suicides, but does not kill any suicide, will kill himself.

But:

(16) If someone kills himself, he is suicidal.

From (15) and (16), we have:

(17) A man who does not kill any suicide, kills a certain suicide, namely himself.

Suppose now that

(18) A man who kills all non-suicides, but does not kill any suicide, will not kill himself.

But:

(19) If someone does not kill himself, he is a non-suicide.

From (18) and (19), we have:

(20) A man who kills all non-suicides, kills a certain non-suicide, namely himself.

Leśniewski in "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b] expressed the belief that if Nelson-Grelling's antinomy is based on the principle of excluded middle, and this principle is – as can be demonstrated (see below) – false, the antinomy based on it loses its antinomiality.

In concise terms of Kotarbiński, Leśniewski's solution was based on the fact that:

> [Leśniewski] proved […] in general that contradictory is the assumption of the existence of such a class of *b*-s and such a relationship *r*, that it should be ascertained that: there is such *a* that *a* is *b* and remains in relation *r* to itself and *a* is in relation *r* to each *c*, being *b* and not remaining in relation *r* to itself, and is not in relation *r* to any *c*, which is *b*, and remaining in relation *r* to itself [Kotarbiński 1958b: 303].

So, the point is that:

(21) No object is a man who kills all non-suicides, but does not kill any suicide.

For such an object would be a contradictory objects: thus the phrase "a man who kills all non-suicides, but does not kill any suicide" does not symbolize anything, and consequently all the sentences in which it acts as a subject, are false sentences.

2.4.5. Epimenides antinomy (of liar)

Leśniewski reconstructs this – as he says – "brilliant", "loveliest" antinomy as follows. (It is worth noting that this reconstruction is free from defects in the original wording: "I am lying now", where occasionalisms "I" and "now" occur and the word "lie" instead of "speaking false".)

Now, Epimenides at time t_i utters sentence:

(22) The sentence uttered by Epimenides at time t_i is false.

Let's signify – for brevity – the sentence uttered by Epimenides at time t_i with symbol: 'α_i'. Thus, formula (22) can be reduced to the form:

(23) 'α_i' is false.

Ask now whether 'α_i' is true or false.

Suppose that 'α_i' is true. If so, sentence (22) is also true, and therefore (23). However, if it is true that 'α_i' is false, then 'α_i' is false. Therefore – if 'α_i' is true, then 'α_i' is false.

Suppose now that 'α' is false. If so, sentence (22) is false, and thus (23). However, if it is false that 'α_i' is false, then 'α_i' is true. Therefore – if 'α_i' is false, 'α_i' is true.

In "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b], Leśniewski proposes to remove the antinomy by adopting a convention banning the use of self-referential expressions, *i.e.* banning signifying by a given expression NUMERICALLY itself. This convention is:

> The connoting expression '*a*' symbolizes any object having the features connoted by the expression '*a*' – except the expression '*a*' itself and those expressions which have any common constituents with the expression '*a*' [Leśniewski 1913b: 200].

Reducing Leśniewski's pedantic argument, we may say that on the basis of the above convention, from the fact that 'α_i' is true (*resp.* false), we may conclude that true (*resp.* false) is every sentence uttered by Epimenides at time t_i – with the exception of sentence (22), as it is the (only) sentence uttered by Epimenides at time t_i. Therefore, one cannot follow the steps of antinomial reasoning.

2.5. Methodology

2.5.1. Theory and technology

Leśniewski postulated to strictly distinguish between scientific research and transmission of the results of that research to other people and use of these results in practice. They have behind them completely different skills – and therefore researchers' education should be separated from education of teachers and technologists. The exception here would be at most psychology, in which aspects of research, teaching and technology «overlap».

That was the reason he advocated separation from universities (as research institutes) pedagogical and technical institutes.

2.5.2. Classifications and definitions

Among classifications, Leśniewski identified scientifically effective classifications (referring in this to Petrażycki).

Now, the classification is scientifically effective when one can deliver true propositions and create scientific theories on all and only objects belonging to respective elements of division.

In "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b], Leśniewski opposed the classical definition – to semantic postulates, or *de facto* axiomatic definitions, setting "their role in language".

Only to definitions, he dedicated his dissertation "Über Definitionen in der sogenannten Theorie der Deduktion" [Leśniewski 1931]. Łukasiewicz wrote about it:

> Three […] [papers] seem to be in the acquis of prof. Leśniewski less important than others: these are the dissertations […] ["Über Funktionen, deren Felder Gruppen mit Rücksich auf diese Funktionen sind" [1929a] "Über Funktionen, deren Felder Abelsche Gruppen in bezug auf diese Funktionen sind" [1929c] and "Über Definitionen in der sogenannten Theorie der Deduktion" [1931]; the content of the first two] is axiomatic research in the field of group theory, […] and the last dissertation […] aims to establish a directive for constructing definitions in the so-called theory of deduction. These dissertations are less important as they are not in direct connection with the main theme of scientific research, to which the author devoted 20 years of his life.

Note that in the first two cited dissertations, Leśniewski demonstrates that the axiomatics of theory of certain special sets, respectively called "groups" and "commutative groups" ("abelian groups") can be reduced to a single axiom.

2.5.3. The definition of "definition"

In "Über Definitionen in der sogenannten Theorie der Deduktion", Leśniewski set himself the task to formulate a purely syntactic definition of "definition" – so that by using the analysis of the structure of a formula one could decide whether it is a definition or not. This proved to be a very difficult task; eventually, sought precise syntactic definition of "definition" (a definition Leśniewski was wont to call "terminology explanation") received the following form:

> I speak about object *a* that it is a definition of *b*, compared to *c*, using *d*, and with reference to *e*, if the following conditions are met:
>
> (i) *d* is a sentence with respect to *c*;
>
> (ii) the first word belonging to *b* is not a variable;
>
> (iii) if an object *f* is the same object as *c*, or is a thesis of the system whose thesis precedes *c*, and an object *g* is a word belonging to *f*, the first word that belongs to *b* is not an expression equiform with *g*;
>
> (iv) if an object *f* is a word belonging to *b*, an object *g* is a word belonging to *b*, and *f* is an expression equiform with *g*, then *f* is the same object as *g*;
>
> (v) if an object is a variable which belongs to *d*, it is equiform expression with a word belonging to *b*;
>
> (vi) if an object is a word belonging to *b*, and is after the first word belonging to *b*, it is an expression equiform with a variable belonging to *d*;
>
> (vii) implicant of *b* in *negatum* of *e* is an expression equiform with *b*;

(viii) implicant of *d* in implicant of *e* in *negatum* of *a* is an expression equiform with *b* [Leśniewski 1931: 763].

While:

Object *a* is *negatum* of *b* when the following conditions are met:
(i) *a* is an expression;
(ii) *b* is a complex of the objects being either *a* or the first word belonging to *b*;
(iii) *b* is not a word;
(iv) the first word belonging to *b* is an expression equiform with the eleventh word of [Łukasiewicz's] axiom [see below] [Leśniewski 1931: 751].

On the other hand:

Object *a* is an implicant of *b* in *c*, when the following conditions are met:
(i) *c* is a complex of objects being either *x*, *b*, or the first word belonging to *c*;
(ii) the first word belonging to *c* is an expression equiform with the first word of [Łukasiewicz's] axiom [see below];
(iii) *a* is after the first word following *c*;
(iv) *b* follows *a* [Leśniewski 1931: 752].

An example of the definition – in the above sense – is the formula:
(1) *NCCF*ααα*NC*α*F*α.
This formula, written in Łukasiewicz's notation – in the notation used here corresponds to the formula:
(2) ~ {[*F*(α) → α] → ~ [α → *F*(α)]}.
This is because it is the definition of a class of words following in it the ninth word in relation to (Łukasiewicz's) axiom:
(3) *CCC*α*C*β*CCCN*γ*C*δ*N*ε*CC*γ*C*δζ*CC*ε*C*δ*C*εζη*C*θη.
using the sixth word, and in relation to a class of words occurring after the sixth word.
While the formula:
(4) *NC*α*F*ααα.
is not a definition of the class of words following in it after the third word, in relation to said axiom, using the third word, and with respect to this formula.
The axioms (3) and (4) in the notation used here have the form:
(5) ⟨[α → (β → α)] → {{[~ γ → (δ → ~ ε)] → **[**[γ → (δ→ζ)] → [(ε→δ) → (ε→ζ)]**]**} → η}⟩ → (θ→η).
(6) ~ [α → *F*(ααα)].
As you can see, the price for precision and syntactic nature of that definition – was its exceptional complexity.

2.6. Formal logic

2.6.1. Intuition

Two things characterized Leśniewski's approach to formal logic: radical intuitionism and radical perfectionism.

Like his master, Twardowski, Leśniewski was, first, an opponent of «symbolomania». He was an INTUITIVIST in the sense that, according to him, logical theories should not be asemantic structures, but systems having an intuitive interpretation. The formalization is not «mathematical game», as the radical formalists would have it, but technical means to strictly submit views on reality. The logic that best fits the reality is the classical logic (extensional and bivalent). With this attitude, Leśniewski certainly contributed to the development of semantic research in the Lvov-Warsaw School.

He was also an INTUITIVIST in the sense that he thought that formalization can reduce intuition to a *minimum,* but does not allow eliminating «visual» intuition, understood as referring when adding theses to the system on the basis of obviousness based on "counting expressions" and "carrying out often complex combinatorial considerations on various expressions" [Leśniewski 1934].

2.6.2. Perfection

Secondly, Leśniewski was a PERFECTIONIST – and in this regard set the tone for the entire logic practiced by representatives of the Lvov-Warsaw School – as he sought to ensure that axiomatic systems created by him were fully and explicitly defined: regarding the dictionary, regarding the rules of construction and inference and regarding the axiomatics.

Significant in this respect is criticism, which Leśniewski applied to *Principia mathematica* by Russell and Whitehead, criticizing them for ambiguity of symbolism used in this work:

(A) According to Leśniewski, the role of symbol '⊢' used there is not clear: whether they are the symbols indicating that what follows them is an axiom *resp.* a thesis of Russell-Whitehead system (if it were so, these symbols would be used inconsistently by Russell and Whitehead), or whether it is, *e.g.*, an intensional functor of assertion, "it states that" which, along with its argument creates a sentence being an axiom *resp.* a thesis of Russell-Whitehead system (which would make logic the theory of beliefs of creators of this system).

(B) The sense of the symbol of negation is also unclear: namely, whether formula '~α' should be interpreted as synonymous with the sentence "It is not true that α" or the sentence "Sentence 'α' is false" (with this interpretation the symbol 'α' in formula '~α' would occur *in suppositione materialis*).

A similar ambiguity concerns a symbol of alternative: the formula 'α ∨ β' – expresses both the same as "α or β", or the same as " 'α' is true or 'β' is true."

The consequence of that criticism was a postulate: (a) of rigorous distinction between language and metalanguage in logic and (b) of elimination from the language of logic of intensional functors.

2.6.3. Desintensionalization

An example of intensional functor is the phrase "It is possible that α".

Leśniewski justified the need for the elimination of intensional functors from the language of logic – or the need for DESINTENSIONALIZATION – with the fact that, in his opinion, there is no intuitively and formally satisfactory intensional logic system.

Desintensionalization method involves replacing intensional functions with their extensional equivalents which may be included in the normal extensional logical calculus.

2.6.4. Specificity of formal systems

Leśniewski created two original logical systems: protothetics, that is a counterpart of propositional logic – and so (not very fortunately[31]) called ontology, which is a version of the name calculus.[32]

These systems, along with mereology, devised as an alternative theory to set theory (see below) were supposed to be a new – compared to traditional logical calculi, and traditional set theory – basis of mathematics, *i.e.* be the systems where it can be interpreted. So far – however, it failed to show that the whole mathematics can be «immersed» in Leśniewski's systems.

Łukasiewicz wrote about it as follows:

> All [the main dissertations by prof. Leśniewski concern] different sides of one large issue: on what logic basis mathematics should be reinforced, in order to remove the so-called antinomies, and thus demonstrate its consistency. This is the same issue that Hilbert set himself and the solution to which he seeks with the help of the whole staff of collaborators, trained in mathematical logic, like Ackermann, Bernays and others.

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[31] Ontology – in the meaning of Leśniewski – can be considered as a formal theory of only the part of the traditional ontological problems at most.

[32] Leśniewski himself called protothetics and ontology "his system of logic" in the request to the Ministry of *Religious Faith* and the *Public Enlightenment* of 30 September 1935 [Leśniewski 1935: 811]. Mereology can therefore be considered as formalized metaphysical theory. Meanwhile, calling all three of these theories – *i.e.* protothetics, ontology and mereology – "Leśniewski's systems" became widespread and they are usually presented jointly under that name.

> In order to solve this problem, prof. Leśniewski has developed three deductive theories, the complex of which he considers to be one of the possible foundations of the whole of the mathematical sciences. These theories are: (1) a theory, which he calls protothetics […]; (2) a theory, which he calls ontology; (3) a theory, which he calls mereology. […]
>
> The first two theories belong to logic and correspond, according to the author, in terms of their content to the logical system, contained in the work of Whitehead and Russell *Principia Mathematica*. The latter theory is rather mathematics than logic.

The specificity of Leśniewski's systems includes:

(a) the fact that free variables do not occur therein;

(b) the use of particularizator (*scil.* particular quantifier) "for a certain …" only as a "typographical shortcut" of the expression with generalizer (*scil.* general quantifier) "it is not true that for each … it is not true that";

(c) treating the definition of a given system as its theses, from which theses can be derived impossible to derive without these definitions (*eo ipso* approval to use the creative definitions).

Recall that deductive systems are expected, among others, to be non-contradictory; desirable properties are also considered completeness and decidability. The system is at the same time non-contradictory when the class of theses in this system is the same as the class of its (well-formed) formulas.[33] The system is complete, when for each properly constructed propositional formula in the language of this system it is so that the formula itself or its negation is the thesis of this system. Finally, the system is decidable if there is an effective – or including a finite number of steps – method of determining whether the sentences expressed in the language of this system are its theses.

Leśniewski – along with his disciples – devoted a lot of attention to examining whether the various versions of his systems meet these expectations.

He also tried to find the most optimal axiomatics for his systems. In choosing axioms he was guided by the principle that of the two axiomatics, the axiomatics better in structural terms is the one:

(a) which is independent, *i.e.* such that none of the axioms can be deduced from the others by rules for transformation used in the system;

(b) in which there are fewer primary terms;

(c) which consists of fewer axioms;

(d) whose axioms are shorter;

(e) which contains less multiform variables;

(f) whose axioms are organic, *i.e.* such that no axiom is their proper part;

[33] In other words, there is no such (properly built) propositional formula in the language of that system that both the formula and its negation is the thesis of this system.

(g) which is the most homogeneous categorially, *i.e.* which has the lower number of semantic categories of primary terms;

(h) which is canonical, *i.e.* composed of one equivalent axiom – such that quantifiers external to the equivalence bind only the variables of its left argument.[34]

2.7. Prototheticsa

2.7.1. Prototheticsa and classical propositional logic

About prototheticsa – named for the fact that it is to cover prototheses, namely the most primary theses – Łukasiewicz wrote:

> It is a propositional calculus, expanding the so-called theory of deduction by introducing universal quantifiers and propositional variables, as also by adding new directives or rules of inference. […]
>
> The author presents the principles of prototheticsa in the German paper ["Grundzüge eines neuen Systems der Grundlagen der Mathematik. Einleitung und §§ 1-11"], published in *Fundamenta Mathematicae* […]
>
> In […] [this] paper, the author embraces the entire prototheticsa in a single axiom, from which all the theses of this theory can be deduced with the help of five directives. As the primary term of prototheticsa he assumes equivalence. In ordinary propositional calculus, which is the so-called theory of deduction, equivalence is not sufficient to define all logical functions. If we, however, introduce general quantifiers and variable functors, one can then, using the equivalence, define not only negation, but – as has been shown by Dr. A. Tarski in his doctoral dissertation – also conjunction, and thus all other logical functions. This result of Dr. Tarski is the foundation for prof. Leśniewski, who assumes equivalence and not *e.g.* implication as primary term of prototheticsa due to the fact that equivalence is the most convenient term for recording definitions.
>
> The author considers this function first in terms of the theory of deduction, for the first time axiomatizing the so-called equivalence theory of deduction and carrying proof of its axiomatizability (pp. 15-30). Then he discusses the history of the formation of the axiom of prototheticsa together with the directives. (Axiom is given on p. 59.) The final part of the paper is devoted to formulation of the directives, of which he adopts five; directive of substitution, detachment, distribution of quantifiers, construction of definitions and extensionality. He seeks to formulate these directives as closely as possible and to this end, he introduces 48 explanations of terminology, formulated to shorten the discussion in a special symbolic language.
>
> This paper, which was to cover the whole foundation of mathematics, was not continued due to the publishing difficulties.

Classical propositional logic is expressed in a language which does not contain any quantifier symbols. However, in prototheticsa there are quantifiers

[34] Of course, then the conditions (a)-(e) and (g) are empty satisfied.

binding variables belonging to the category of sentences, propositional connectives from one or more propositional arguments and functor-forming functors from one or more functor arguments, where the functors have different orders, starting with the first, *i.e.* functor-forming functor, whose arguments are propositional functors; functor constants are propositional functors of truth and falsehood.

Each formula of classical propositional logic has its counterpart in prototetic. Consider for example the following tautology of classical propositional logic:

(1) $(\alpha \rightarrow \beta) \leftrightarrow \sim (\alpha \wedge \sim\beta)$.

The prototetic thesis corresponding to tautology (1) differs from tautology (1) in that all the propositional variables are bound with generalizers:

(2) $\Lambda\alpha\Lambda\beta\ [(\alpha \rightarrow \beta) \leftrightarrow \sim (\alpha \wedge \sim\beta)]$.

Generalizers are here to replace metalinguistic comments, which accompany tautologies of classical propositional logic, and which state that after substituting sentences for propositional variables – keeping the principle that the same sentences are substituted for equiform variables – tautology always transforms into a true sentence. One can generally say that each equivalent of tautology of the classical propositional calculus in protothetics is formed by preceding this tautology with generalizers binding on all propositional variables occurring in that tautology.

On the other hand, not every prototetic formula can be expressed in the language of classical propositional logic. Such formulas include, for example, prototetic definitions of "conjunction", "falsehood" and "truth" and the principle of extensionality:

(3) $(\alpha \wedge \beta) \leftrightarrow \Lambda\alpha\ [\alpha \leftrightarrow (F\alpha \leftrightarrow F\beta)]$.

(4) $\mathrm{Fls}\ \alpha \leftrightarrow \Lambda\alpha\ (\alpha)$.

(5) $\mathrm{Ver}\ \alpha \leftrightarrow (\mathrm{Fls}\ \alpha \leftrightarrow \mathrm{Fls}\ \alpha)$.

(6) $\Lambda\alpha\Lambda\beta\ [(\alpha \leftrightarrow \gamma) \leftrightarrow \Lambda F\,(F\alpha \leftrightarrow F\beta)]$.

Therefore, prototetic can be regarded as a generalization of classical propositional logic.

2.7.2. Versions of prototetic

Leśniewski (and his co-operators) developed several versions of prototetic, differing in, among others, primary terms. As examples may serve two equivalence systems, called by Leśniewski "system S_1" and "system S_5" – and one implication system S_4.

In the output (weakest) equivalence version of prototetic (S_1), Leśniewski adopts the following axiomatics:

(7) Λα Λβ Λγ [[(α ↔ γ) ↔ (β ↔ α)] ↔ (γ ↔ β)].

(8) Λα Λβ Λγ [[α ↔ (β ↔ *r*)] ↔ [(α ↔ β) ↔ γ]].

(9) Λ*G* Λα ⟨Λ*F* [*G*(α,α)] ↔ ⟨{Λγ [*F*(γ,γ) ↔ *G*(α,α)] ↔ Λγ {*F*(γ,γ) ↔ *G* [[α ↔ Λβ(β)],α]}} ↔ Λβ [*G*(β,α)]⟩⟩.

(Occurring in the axiom (9) – and in similar contexts – functors '*F*' and '*G*' are any propositional functors from two propositional arguments, which corresponds in reality to two-argument relations between states of affairs stated by propositional arguments of those functors.)

In this system, the following transformation rules apply:

(A) Detachment rule, according to which if theses of the system are both certain equivalence and one of its arguments, the second argument may be attached to the system.

(B) Substitution rule under which, if the system thesis is a certain equivalence a thesis may be attached to the system that results from this equivalence by substitution in place of its arguments of any equivalence.

(C) Quantifiers distribution rule, according to which if the system thesis is equivalence under the generalizer, a thesis may be attached to the system that results from the previous one by transferring all or only some quantified variables front left and front right argument of output equivalence. For example, the axiom (1) with this principle may be converted into thesis:

(10) Λα Λβ Λγ [[(α ↔ γ) ↔ (β ↔ α)] ↔ Λβ Λγ (γ ↔ β)].

(D) Definition attachment rule. One may attach to the system a definition that (meeting strict conditions): (a) is an equivalence containing *definiendum* as its left argument; (b) is made up of generalizer and the equivalence underneath it containing *definiendum* as its left argument.

(E) Rule of using quantifiers, which together with the other principles allows performing all necessary operations on generalizers.

(F) Extensionality rule, according to which "one may add to the system a new thesis 'α_i' beginning with the general quantifier, including variable functors of any «semantic category», if the system already contains the theses, which could be obtained from the thesis 'α_i' if – for these variables – some constant functors were substituted in the place of those variables for which the method to define for all «semantic categories» was previously strictly determined" [Leśniewski 1929b: 524].

Using these rules, one may derive from the axiomatics of system S_1 all the laws of classical propositional calculus, and also the extensionality principle and (which is philosophically important) the principle of bivalence.

Axiomatics of the implication prototethic system S_4 includes two axioms:

(11) Λα Λβ [α → (β → α)].

(12) Λα Λβ Λγ Λ*F* ⟨*F*(γ, α) → { {*F*[γ,[α → Λδ(δ)]] → *F*(γ,β)} }⟩.

The shortest constructed by Leśniewski axiomatics of the prototheticequivalence system (S_5) – with suitably modified and explicit transformation rules has the form of the following axiom:

(13) Λ*F* Λα Λβ Λγ Λδ Λε ⟨(α ↔ β) ↔ Λ*G* ⟨*F*[α,*F*[α,Λζ(ζ)]] ↔ { Λζ [*F*(β,ζ)] ↔ {*G*[[(γ ↔ *δ*) ↔ *ε*],β] ↔ *G*[[(*δ* ↔ *ε*) ↔ γ],α] } }⟩⟩.

From this axiom, Leśniewski derived explicitly 422 theses!

So far, non-contradiction of prototheticand completeness of so-called elementary prototheticc (in which quantifiers bind only functors of the first order among functor-forming functors) have been proven; the latter is the work of a student of Leśniewski – Słupecki.

2.8. Ontology

Łukasiewicz characterized Leśniewski's ontology as follows:

> It is a name calculus, referring to the logic of Aristotle, but significantly extending this logic by introducing individual names and sentences, name negation, conjunction and alternative, and by adding quantifiers and related directives. This theory in terms of its content comes closest to the calculus of classes as presented by Schröder, including his theory of individuals. […]
>
> In his dissertation […] "Über die Grundlagen der Ontologies" prof. Leśniewski presented the axiom and directives of […] [ontology]. As the primary term of ontology, the author assumes the function of the type "*a* is *b*", with the word "is" being the constant functor, and the words '*a*' and '*b*' being the name variables. The only axiom of ontology, dating from 1920, sums up in one sentence the intuitions, which the author connects with the meaning of the expression "*a* is *b*". This expression according to prof. Leśniewski means: *a* exists and there is only one *a*, and if something is *a,* it is *b.* Directives of ontology are formulated again with terminology explanations, similar to the explanations for directives of prototheticc. The final part of the thesis deals with outlining further simplifications of the axiom of ontology, made by the author and by B. Sobociński, M.A.

Ontology – says anecdote – was invented "on the bench in Saski Garden" in 1920 or 1921. It is a kind of logic of names superimposed over prototheticc. In particular, ontology dictionary – beyond the terms applicable to prototheticc – includes: functor of category *s/nn,* term variables and functor variables. The primary term of ontology is the word "is" – Leśniewski marks it with the symbol 'ε'. This is what justifies the name of this system, as it relates to the Greek equivalent of "is," or the word "εστι"; and the participle of the verb reads in Greek: "ον"; we can therefore say that so construed

ontology is the theory of "what is". It refers to the meaning where "is" occurs in the individual sentences like "*a* is *b*" ('$a \varepsilon b$'). As we know, sentences of this structure are those, in which "is" has different functions:

(a) Leśniewski is a logician.

(b) Warsaw is the capital of Poland (but until the end of the First Commonwealth Cracow was the capital, first actually, then formally).

(c) Every logician is fallible.

The functor of ontology occurs only in sentence (a); in sentence (b) "is" has a temporal sense, *scil.* is the abbreviation for the phrase "is now"; while in the sentence (c) is part of the functor "every … is", so it has a reliant meaning (*scil.* is a syncategorematic expression). In turn, sentence (a) can be interpreted in two ways, namely, as equivalent of sentences, sequentially:

(d) Leśniewski belongs to a set of logicians.

(e) Leśniewski is identical to one of logicians.

(Note that in sentence (d) functor is the phrase "is identical to" and not – the word "is".) In accordance with the intentions of Leśniewski-nominalist – an adequate interpretation of sentence (a) is sentence (e).

Detailed semantic intuitions which Leśniewski associated with so understood "is" are captured by a sequence of six claims.

(1) Certain a is $b \leftrightarrow \bigvee c\ (c\ \varepsilon\ a \wedge c\ \varepsilon\ b)$.

(2) a is $b \rightarrow$ ob a.

(3) Each a is $b \leftrightarrow \bigvee c\ [c\ \varepsilon\ a \wedge \bigwedge c\ (c\ \varepsilon\ a \rightarrow c\ \varepsilon\ b)]$.

(4) A is the same object as $b \leftrightarrow (a\ \varepsilon\ b \wedge b\ \varepsilon\ a)$.

(5) At most one object is $a \leftrightarrow \bigwedge b \bigwedge c\ [(b\ \varepsilon\ a \wedge c\ \varepsilon\ a) \rightarrow b = c]$.

(6) a jest $b \leftrightarrow \bigwedge a\ \left[a\ \varepsilon\ b \wedge \bigwedge c \bigwedge d\ [(c\ \varepsilon\ a \wedge d\ \varepsilon\ a) \rightarrow c = d]\right]$.

By using the term "is", Leśniewski defined, among others, the terms "exists", "object" and "identity".

And thus:

(7) $\bigwedge a$ [ex $a \leftrightarrow \bigvee b\ (b\ \varepsilon\ a)$].

(8) $\bigwedge a$ [ob $a \leftrightarrow \bigvee b\ (a\ \varepsilon\ b)$].

(9) $\bigwedge a \bigwedge b\ [a = b \leftrightarrow (a\ \varepsilon\ b \wedge b\ \varepsilon\ a)]$.

In the light of these definitions – Leśniewski exists when something is-identical-with Leśniewski; Leśniewski is an object when he is-identical-with something; Leśniewski is identical with a certain object, when at the same time is-identical-with this object, and that object is-identical-with Leśniewski.

Kotarbiński so explained the genesis of the idea of ontology:

> From the old, pre-logistic texts, as gleanings of reading the initial parts of the *Logic* by Mill, his memory preserved this definition of truth conditions of a simple sentence of subject-predicate: this sentence is true always and only if the object

> signified by subject has the characteristics connoted by the predicate. A revolutionary breakthrough consisted in forsaking the features and the relationship of connotation. Having gotten rid of these interpolations, we obtain a formula: simple sentence of subject-predicate structure is true always and only if the object signified by the subject is an object signified by the predicate. […] Adding the caveat of individuality of the subject […] we receive […] the only axiom of ontology [Kotarbiński 1958b: 301-302].

Ontology axioms originally consisted of the following axiom:

(10) $\Lambda a \Lambda b \{a \varepsilon b \leftrightarrow \left[\Lambda c (c \varepsilon a \rightarrow c \varepsilon b) \wedge \mathsf{V} c (c \varepsilon a) \wedge \Lambda c \Lambda d [(c \varepsilon a \wedge d \varepsilon a) \rightarrow c \varepsilon d]\right]\}$.

According to this axiom – a necessary and sufficient condition that *a* is *b* (*e.g.* that Leśniewski is a logician), is that at the same time:

(a) if certain *c* is-identical-with *a,* then this *c* is-identical-with-one-of *b*-s (*e.g.* if someone is Leśniewski, he is a logician);

(b) certain *c* is-identical-with *a, scil.* there exists – in the sense defined above – at least one *a* (in our case: there is at least one Leśniewski);

(c) if certain *c* is-identical-with *a,* and certain *d* is-identical-with *a,* then this *c* is identical-with the *d, scil.* there is at most one *a* (respectively: there is at most one Leśniewski).

Finally – as was announced in the paper "Über die Grundlagen der Ontologie" – this axiom has been reduced to the form:

(11) $\Lambda a \Lambda b \left[(a \varepsilon b) \rightarrow \mathsf{V} c [(a \varepsilon c) \wedge (c \varepsilon b)]\right]$.

This axiom states, speaking freely, that *a* is *b* when there is *c* such that at the same time *a* is-identical with *c* and *c* is-identical with *b* (in our case: Leśniewski is a logician, when there is someone that both Leśniewski is that someone and that someone is a logician).

The ontology has rules similar to the rules of protothetic (including equivalent of extensionality rule).

It has been shown that the elementary ontology (*scil.* with quantifiers only binding name variables) is non-contradictory (namely Kruszewski did). Furthermore, a proof was also given (by Iwanuś) of decidability of elementary ontology.

2.9. Metaphysics

2.9.1. Metaphysical problems

Leśniewski – in the first phase of his philosophical work, *i.e.* around the time until the outbreak of World War I – dealt intensely with classical metaphysical problems, particularly the issue of existence (*resp.* generally, of being), the so-called highest principles concerning what exists, *i.e.* the

ontological principle of non-contradiction and the ontological principle of excluded middle, and the issue of truth. Another thing is that in the second stage of his career, usually called "logical phase," he distanced himself from the works of the first phase; however, the results, which he achieved in this work, though perhaps with methods imperfect from the perfectionist point of view of the second phase, and on the basis of the later questioned assumptions were never cancelled by Leśniewski. In fact – he accepted these results, albeit in a different formulation, throughout his whole life.

2.9.2. Concretism

2.9.2.1. Individuals

As already mentioned, Leśniewski took the view that there are only concreta (*scil.* individuals).

Initially, he allowed the existence of concreta-individuals, but also – concreta-features and concreta-relationships. When it comes to (temporal) individuals, he was aware that it is essential to distinguish between spatial segments of a given individual (or parts thereof), and temporal segments of the individual (or its phases) – from the individual itself, as respectively the total of spatial and total of temporal segments. He expressed this point in considering the matter of the meaning of proper names in his work "O podstawach matematyki" [Leśniewski 1927-1931]. And so the name "Warsaw" should be, strictly speaking, used to signify a city from the beginning to the end of its existence, not a temporal segment of this city. One must take into account additional ambiguity of names like "a_i from period t_i": sometimes they mean a temporal segment of object a_i (*cf.* the name "Warsaw from 1830"), and sometimes a whole object, being a_i in period t_i (*cf.* the name "rector of the University of Warsaw from January 1923", which DOES NOT signify the temporal segment of rector of the University of Warsaw from this period).

Leśniewski later radicalized his reductionist position and denied the existence of not only general objects but also the so-called – as he expressed it – characteristics and relationships, because "nothing […] prompts [him] to believe in the existence of such objects".

2.9.2.2. Abstracta

On general objects, he spoke three times: in the dissertation "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b], in the Russian version of the dissertation "Próba dowodu ontologicznej zasady sprzeczności" contained in the booklet *Логические разсуждения* [Leśniewski 1913c], and dissertation "O podstawach matematyki" [Leśniewski 1927-1931].

In the first two publications, his statements were identical. As Sierpiński put it:

> *Логические разсуждения* is a translation […] of the papers ["Przyczynek do analizy zdań egzystencjalnych" and "Próba dowodu ontologicznej zasady sprzeczności"] into Russian, with some modifications and additions. First of all, there is added a general proof of the non-existence of "general objects", that is, those that possess all and only characteristics common to all given objects. This proof is also included in the next paper, "Krytyka logicznej zasady wyłączonego środka".

The starting point of this proof was – according to Leśniewski – the definition of "general object" of the form:

(1) Object *a* is a general object with regard to group *k* of individual objects, when object *a* has [all and] only those characteristics which each individual object belonging to group *k* has.

Consider now on the basis of this definition an (alleged) general object – *e.g.* triangle-in-general. It is true that, for example:

(2) Triangle-in-general does not have the property of equilaterality.

This is because not all individual triangles falling under triangle-in-general have the property of equilaterality. But the triangle-in-general does not have a property of not having a property of equilaterality – for the same reason: not all individual triangles have the property of not having the property of equilaterality. Now assume that:

(3) If *a* does not have the property of not having the property *w*, then *a* has the property *w*.

If so – and if triangle in general does not have the property of not having the property of equilaterality – then:

(4) Triangle-in-general has the property of equilaterality.

From (2) and (4) it follows that:

(5) Triangle-in-general at the same time does not have property of equilaterality and has the property of equilaterality.

In light of (5), triangle-in-general is the internally contradictory object, and no object is an internally contradictory object, that is – triangle-in-general, like any internally contradictory object, does not exist.

This reasoning can be repeated for each internally contradictory object. Consequently, there are no general objects.

In the third of these positions, namely the work "O podstawach matematyki", Leśniewski paraphrased definition (1) as follows:

(6) If object *a* is a general object with regard to the objects belonging to group *k*, object *a* is *k* and object *c* belongs to group *k*, then object *c* is *k*.

From (6) it follows that:

(7) If there are at least two different objects belonging to group *k*, then there is not a general object with regard to the objects belonging to group *k*.

Leśniewski's reasoning can be represented schematically as follows (all variables are bound with generalizers, which we will omit for simplicity):

(8) [*a* gen of *k*-s ∧ (*a* ε *b* ∧ *c* ε *k*)] → *c* ε *b*.

(9) [*a* gen of *k*-s ∧ (*a* ≠ *d* ∧ *d* ε *k*)] → *d* ≠ *d* [the consequence of (8)].

(10) [*a* gen of *k*-s ∧ (*a* = *d* ∧ *c* ε *k*)] → *c* = *d* [the consequence of (8)].

(11) [*a* gen of *k*-s ∧ *d* ε *k*] → *a* = *d* [the consequence of (8)].

(12) [*a* gen of *k*-s ∧ (*d* ε *k* ∧ *c* ε *k*)] → [*a* gen of *g*-s ∧ (*a* = *d* ∧ *c* ε *k*)] [the consequence of (11)].

(13) [*a* gen of *k*-s ∧ (*d* ε *k* ∧ *c* ε *k*)] → *c* = *d* [the consequence of (12) and (10)].

The consequence of thesis (13) is to be precisely thesis (7).

Therefore, only such general objects, under which one individual object would fall or under which no such object would fall would not be exposed to the allegation of internal contradiction – and *eo ipso* non-existence.

2.10. Mereology

About mereology, we read in the paper by Łukasiewicz: "[It] is a kind of a general set theory".

The first lecture on mereology is included in the *Podstawy ogólnej teorii mnogości* [Leśniewski 1916]. Sierpiński wrote about this paper as follows:

> It contains a very original and fruitful axiomatics of sets and is a matter of great interest to all those remaining in closer contact with these issues.
>
> In several recent years, more or less successful attempts at axiomatization of set theory have been taken by various authors (Zermelo, Russell, Schoenflies). One such attempt is also the paper […] *Podstawy ogólnej teorii mnogości* […]. The author aims to provide such a system of definitions and axioms which would be consistent with intuition and which would, not narrowing the scope of the concept of multitude, remove the antinomy, [Russell's] allowing however to obtain all of these assertions of set theory that are necessary to its applications. The only undefined mathematical term, which the author uses, is the word "part": the content of this expression is determined by the author using two simple axioms (asymmetry and transitivity). The terms "set" and "element" adopted so far in set theory without definition, are defined by the author (indirectly by using the word "part"). Based on his axioms and definitions, the author brings a whole series (58) of theses of the general set theory. […] The proofs contained in this paper, are impeccable in terms of mathematical rigour; system is easy and transparent. Whatever position one might take on the views […] of Leśniewski on the basic concepts of set theory, it must be admitted that his work is an interesting and important contribution to the analysis of these

concepts and their mutual relationship. It will have to be taken into account by anyone who takes a new attempt at axiomatics of set theory.

The most complete lecture on mereology was given by Leśniewski in the paper "O podstawach matematyki" [Leśniewski 1927-1931]. Here is what Łukasiewicz wrote about it:

> The author began [its] print in the *Przegląd Filozoficzny* in 1927. So far, the work, besides "Introduction" includes eleven chapters. Noteworthy above all is Chapter I, in which the author subjects to blunt criticism verbal comments, added by Russell to the so-called theory of deduction, and contained in the famous work *Principia mathematica.* Noting the confusion to which these comments may lead, the author establishes that sentences like '~α', 'α ∨ β', 'α → β' should be interpreted in words by the phrases "Not-α", "α or β "," If α, then β" rather than read, *e.g.* in this way: "'α' is false", "Either 'α' is true, or 'β' is true", "From 'α' results 'β'" *etc.* Chapter II disposes of Russell's paradox, regarding the "class of classes which are not their own elements" and provides a solution to this antinomy. In an interesting note contained in this chapter (p. 183), the author shows that there are no so-called general objects, thus taking a clear «nominalist» position in the famous dispute about universals. Chapter III deals with the different ways of understanding the words "class" and "set", where the author fights very vigorously the introduction to science of «empty» classes and sets. Starting with Chapter IV to Chapter X, the author deals with mereology, while first reiterating the content of his older dissertation on the foundations of general set theory, printed in 1916, and later discusses further supplements and transformations of this theory until 1921. In an interesting note, attached to Chapter IV (p. 286 *et seq.*), prof. Leśniewski discusses the relationship of his theory from 1916 to a related «theory of events» set up by Whitehead in 1919. The last Chapter XI contains the beginnings of ontology.

Mereology is a certain («concretist») counterpart of set theory – namely the theory of sets in the collective sense, not in the distributive sense, as is the standard set theory. Leśniewski believed that mereology – as opposed to set theory – is free from decisions that were unacceptable from the perspective in which it is believed that the theses of the theory, with axioms at the helm, are true sentences, not just some fictions useful to achieve some purposes. Such unauthorized decision was, for example – according to Leśniewski – an assumption that: (a) the set whose only element is object *a* is different from object *a;* (b) if object *a* is part of a set of objects *b,* then *a* is *b*; (c) the product of disjoint sets is an empty set, so in essence a theoretical fiction (as a set, to which nothing belongs).

The most striking difference between the distributive set and the collective set lies in the fact that the relation referred to by the primary term of set theory "… belongs to …" (symbolically: ∈), is a non-transitive relation,

and the relation to which the original term of mereology refers "… is a part of …" (in short: part), it is a transitive relation. In fact mereology enforces axiom (11) (see below) – while in set theory we have:

(1) $\sim\Lambda a\Lambda b\Lambda c\ [(a \in b \wedge b \in c) \rightarrow (a \in c)]$.

For example: if Leśniewski belongs, *e.g.*, to a set of logicians k_i, and a set of logicians k_i belongs, *e.g.*, to set k_j, which includes only a set of logicians k_i and a set of Poles k_k, then Leśniewski does not belong to the set k_j; but if one of Leśniewski's thumbs is part of Leśniewski's right hand, and this is part of Leśniewski himself, then this thumb is also part of Leśniewski.

Using the primary term of mereology, one can define, among others, the terms "… is an ingredient…" (ingr), "… is a class …" (cl), "… is an element of …" (el), "… is a set of …" (coll), "… is external to …" (extr), "… is a complement … to …" (compl) and "sum of … and …" (+).

And so:

(2) $\Lambda a\Lambda b\ [a \text{ ingr } b \leftrightarrow (a \in b \vee a \text{ el } b)]$.

(3) $\Lambda a\ \big[A \text{ cl of } b\text{-s} \leftrightarrow \Lambda c\ [c \text{ ing } a \rightarrow \mathsf{V}b\mathsf{V}d\ (d \text{ ingr } c \wedge d \text{ ingr } b)]\big]\}$.

(4) $\Lambda a\ \big\{a \text{ col of } b\text{-s} \leftrightarrow \{\text{ob } a \wedge \Lambda c\ \{\big[c \text{ ing } a \rightarrow \mathsf{V}b\mathsf{V}d\ [d \text{ ingr } c \wedge (c \text{ ingr } b \wedge b \text{ ingr } a)]\big]\}\big\}$.

(5) $\Lambda a\Lambda b\ \big[a \text{ el } b \leftrightarrow [b \text{ cl of } c\text{-s} \wedge \mathsf{V}c\ (a \in c)]\big]$.

(6) $\Lambda a\Lambda b\ \big[a \text{ extr } b \leftrightarrow [\text{ob } a \wedge \Lambda c\ (c \text{ ing } b \rightarrow c \text{ non-ing}^{35}\ a)]\big]$.

(7) a sub-col $b \leftrightarrow [\text{ob } a \wedge \Lambda c\ (c \text{ ing } a \rightarrow c \text{ ing } b)]$.

(8) $\Lambda a\Lambda b\ [a \text{ compl } b/c \leftrightarrow [b \text{ sub-coll } c \wedge A \text{ cl of } d\text{-s} \wedge \Lambda d\ (d \text{ el } c) \wedge \text{d extr b}]$.

(9) $\Lambda a\Lambda b\Lambda c\ \big[a \in b{+}c \leftrightarrow [a \text{ cl of } (b \text{ or } c)\text{-s} \wedge b \text{ extr } c]\big]$.

There are different axiomatics of mereology. Axiomatics adopted in *Podstawy ogólnej teorii mnogości* [Leśniewski 1916] – historically first – is as follows (where "part" is read: is a part of):

(10) $\Lambda a\Lambda b\ (a \text{ part } b \rightarrow b \text{ non-part } a)$.

(11) $\Lambda a\Lambda b\Lambda c\ [(a \text{ part } b \wedge b \text{ part } c) \rightarrow a \text{ part } c]$.

(12) $\Lambda a\Lambda b\Lambda c\ [(a \text{ cl of } c\text{-s} \wedge b \text{ cl of } c\text{-s}) \rightarrow a \in b]$.

(13) $\mathsf{V}a\ (a \in b) \rightarrow \mathsf{V}c\ (c \text{ cl of } b\text{-s})$.

Intuitions behind this axiom are as follows: Nothing is part of its own part. A part of a part of something is a part of this object. Classes of the same objects are identical with each other. If there are any objects, there is also a class of those objects.

The most important theses with proof in mereology – in the system from the mentioned *Podstawy ogólnej teorii mnogości* [Leśniewski 1916] there is a total

[35] Symbol "non-…" we read: "… is not …". Generally, Leśniewski distinguished the formula "*A* is not *B*" from the formula "It is not true that *A* is *B*".

of 59 theses (in paper "O podstawach matematyki" [Leśniewski 1927-1931] – 198 theses, then supplemented to 263 and enhanced by several dozen of others) – are theses XXVI and XXVII:

(14) $\sim \bigvee a\ [a \text{ cl of } b\text{-s} \wedge \bigwedge b \sim (b \text{ el } b)]$.

(15) The thesis "$\bigwedge a \bigwedge b\ [(a \text{ el } b \wedge b \text{ cl } c\text{-s}) \rightarrow \bigvee c\ (a \in c)]$" is false.

Their significance lies in the fact that they make it impossible to construct Russell's antinomy on the ground of mereology.

At the beginning of the twenties, Leśniewski built the other axiomatics of mereology in which primary terms were those entered into the system of 1916 using the definitions (2)-(9) (see above).

Of theses proven in one version of protothetic from the twenties, it is worth noting the thesis which says that:

(16) $\bigwedge a\ [A \text{ cl of } b\text{-s} \rightarrow \bigwedge b\ (b = a \vee b \text{ part } a)]$.

It is apparent therefrom that a class having exactly one part is identical with that part.

It has been shown (Clay and – in another way – Lejewski) that mereology is non-contradictory.

2.11. The so-called highest principles of being and thought

2.11.4. The principle of non-contradiction

In the paper, which has had a huge impact on Leśniewski and many other philosophers of the Lvov-Warsaw School, *i.e.* in the dissertation *O zasadzie sprzeczności u Arystotelesa* [Łukasiewicz 1910], Łukasiewicz tried to, among others, justify the view that the principle of non-contradiction cannot be explained otherwise than (as he put it) in practice. The principle of non-contradiction states – in one version – that it cannot be simultaneously true that α and $\sim\alpha$; in other words, two sentences, one of which is the negation of the other, cannot be simultaneously true; in ontological version: no object can have and not have the same characteristics. And it is adopted because it allows, among others, a judge to conduct the following reasoning:

(1) The prosecution alleges that the accused committed the offence (α).

(2) The defender claims that the accused did not commit the offence ($\sim\alpha$).

(3) If the prosecution proves that α, then the claim that $\sim\alpha$ is untrue.

Therefore:

(4) The accused should be punished.

If the principle of non-contradiction did not apply, demonstration by the prosecution that p would not force us to reject the defender's claim that $\sim\alpha$, as untrue. There would therefore be no grounds to punish the accused.

Leśniewski rejects the point of view of Łukasiewicz. Sierpiński puts it as follows:

> In "Próba dowodu ontologicznej zasady sprzeczności" […], he combats the thesis of impossibility to prove the ontological principle of contradiction declaring that no object can have an attribute *w* and not have the attribute *w*, and carries the proof of this principle, based on linguistic conventions defining a symbolic function of a sentence like "*a* is *b*" and a symbolic function of the word "not". The dissertation [also] includes much thought about the meaning and equivalence of expressions. It has a character of the polemics with the work of Łukasiewicz *O zasadzie sprzeczności u Arystotelesa*.

Leśniewski bases the proof of principle of non-contradiction in "Próba" on the following four assumptions:

(5) No internally contradictory sentence, *i.e.* stating that an object at the same time has and does not have a certain property, means anything.

(6) If a sentence does not mean anything, it is not true.

(7) If a sentence is not true, the sentence contrary to it is true.

(8) If a sentence is true, the sentence contrary to it is not true.

The assumptions (5)-(8) show that it is impossible for two contradictory sentences to be both true.

"Próba" [Leśniewski 1912] was the first to explicitly use semantic paraphrase method, which consists in the fact that the sentence discussed is replaced by other sentences, equivalent in meaning, and then the resulting paraphrases are analysed. (In this case, the paraphrase was to have a form of an affirmative subject-predicate sentence.) This method (with numerous amendments) was later often used by philosophers from the circle of the Lvov-Warsaw School, among others, by Ajdukiewicz. In addition, the author introduced to this paper an important concept of "linguistic conventions", *i.e.* the rules, according to which strict language (especially – scientific language) should be built.

2.11.5. The principle of excluded middle

Sierpiński wrote about the dissertation "Krytyka logicznej zasady wyłączonego środka" [Leśniewski 1913b] as follows:

> In this paper, the author distinguishes between the principle of excluded middle in the general formulation, for any pair of contradictory sentences, and the "rule of contradictory sentences" – for a pair of sentences with the signifying subject. Based on the results of his previous works, he shows that the first of these rules is false, [and] the second is true.

The logical principle of excluded middle states that:

(9) At least one of the two contradictory propositions must be true.

According to Leśniewski, this principle is false, as shown by the existence of contradictory sentences, none of which is a true sentence. There are two types of such sentences: the sentences with subject signifying nothing (see *e.g.*: "Every centaur has a tail" – "A centaur does not have a tail") and existential sentences (*e.g.* "Man exists" or "Man does not exist"), which, according to Leśniewski are – as we remember – always false, because their predicate connotes nothing.

Having thus rejected the logical principle of excluded middle, Leśniewski proposes to recognize a weakened version of the principle:

(10) If one of the two contradictory propositions is false, the second of those sentences is true, if only its subject and predicate connote something.

This principle has its own ontological version, which states that:

(11) If one of the two states of affairs ascertained by contradictory sentences does not occur, then the second of these states occurs, provided that there are objects symbolized by the subject and predicate of these sentences.

2.12. Axiology

Leśniewski did not speak on axiological topics. His ethical views can be inferred from a brief mention by Kotarbiński:

> From Russia, [he came back] as if devoid completely of the social activism streak. […]
>
> He was once a vegetarian probably for ethical reasons, but one day he decided to satisfy himself with meat and that was that. […] I suppose that that was a time of major transformation: a romantic, idealistic boy, thirsty of triumph of moral values and professing a philosophy of not doing harm to anyone, any living being – suddenly turned into a sceptic who told himself that he would not remake the world, and decided to do what he wanted, considering any attempts to improve the world as evidence of naïvety [Kotarbiński 1958b: 301, 297].

His youthful attitude of *non-violence* even towards animals – later resulted in, bordering on love, affectionate attachment to the dog, which had the status of a true member of the household.

At the same time, he was sensitive to the issue – as Kotarbiński put it – of "rights of the individual in the community" [Kotarbiński 1958b: 306].

3. Impact

The only graduate student of Leśniewski was Alfred Tarski (Leśniewski joked that 100% of his doctoral students were geniuses). But he had a sig-

nificant influence on a great bunch of people gathered around him and Łukasiewicz. This group included: Zygmunt Kobrzyński (1893-1944?), Janina Hosiasson-Lindenbaumowa (1899-1942), Alfred Tarski (1902-1983), Mordchaj Wajsberg (1902 - after 1939), Adolf Lindenbaum (1904-1941), Mojżesz Presburger (1904-1943?), Jerzy Słupecki (1904-1987), Stanisław Jaśkowski (1906-1965), Bolesław Sobociński (1906-1980), Jerachmiel Bryman (1908-1941?), Czesław Lejewski (1913-2001) i Henryk Hiż (1917-2006), as well as Zygmunt Kruszewski (d. after 1939), Jerzy Billich, Mieczysław Choynowski, Stanisław Mutermilch and Wacław Sadowski. All of them, to a lesser or greater extent, developed Leśniewski's ideas.

Some of his classes – in the academic year 1927/1928 – were attended by Ajdukiewicz. He developed Leśniewski's theory of semantic categories, constructing very clear indicator notation for each category, and also offered a simple method for testing the syntactic consistency of expressions interpreted in categorial grammar language.

Łukasiewicz predicted in 1934:

> The tendency [of prof. Leśniewski] to precision and perfection is so great that it occasionally causes some negative symptoms. As a result of the pursuit of excellence, prof. Leśniewski belatedly began announcing its results, and as a result of the pursuit of accuracy some parts of his work put such high demands on readers that they deter them from examining them in depth. This applies in particular to clarification of terminology needed for the strict wording of the directives. Because of these extremely difficult parts, prof. Leśniewski's works are not yet known and recognized abroad to the extent they deserve. […]
>
> From the theories […] [built by prof. Leśniewski], especially ontology, as an extension of the logic of Aristotle, will get lasting significance in the future, if not among the basic teachings of mathematics, at least on the basis of general logic. This is evidenced by the interest, which even today ontology incites among philosophers, if I may mention here the work of prof. Kotarbiński *Elementy teorii poznania, logiki formalnej i metodologii nauk*.

More than half a century later Czesław Lejewski stated:

> After the war, Leśniewski's students, with a philosophical rather than mathematical past sought to promote and continue the traditions of «leśniewskianism». Due to these endeavours, interest in theories of Leśniewski is shown today by an increasing number of lecturers in philosophy at some universities in the United States, Great Britain, Austria, Switzerland, Italy, Japan and Latvia, which seems to indicate that the philosophy of the philosophy apostate is not without future [Lejewski 1990: 180].

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Leśniewski's scientific achievements have so far been variously estimated. The most critical was the opinion of Andrzej Grzegorczyk, who believed that Leśniewski's systems cannot compete with the simpler modern systems of mathematical logic; for example, they do not so easily undergo metalogical studies [Grzegorczyk 1955].

Now, regardless of whether his systems are able to play the role provided for them by Leśniewski himself in the field of mathematics, they have an autonomous value. This applies in particular to mereology, which is simply a formal theory of one of the main ontological relationships – and relationships derivative to it.

Kotarbiński wrote about Leśniewski:

> He was […] accustomed to the fact that the greatest coryphées of applied thought can become embroiled in error… Is it not evidenced by the antinomies which Russell could not resolve properly?… And did Russell not demonstrate to Frege the contradictions in his published several-volume system – Frege, this most accomplished of logicians (as Leśniewski was prone to such an assessment) [Kotarbiński 1958b: 303]?

The doubts expressed above do not change our overall assessment of the work of Leśniewski – which Kotarbiński has expressed in its starkest form saying about him simply that "he was a man of genius" [Kotarbiński 1958b: 307].

10. Kazimierz Ajdukiewicz

Not only rare and brief moments,
when our far-fetched goals are achieved,
but also weekdays devoted to action have their charm.
The better somebody is able to find this charm,
the more his work will be play for him
and the more he will be satisfied in life.

[Ajdukiewicz 1948a: 77-82]

1. Life

Kazimierz Ajdukiewicz's city was Lvov. Ajdukiewicz's wife – Maria née Twardowska – once said: Lvov was, for both of us, the most beautiful city on Earth. And she said – that they felt best in Lvov at the time of Franz Joseph, and not only because they met at that time.

Ajdukiewicz was born in Tarnopol on December 12, 1890, but in 1900, after a short stay in Cracow, where he graduated from elementary school, he moved to the then capital of Galicia and stayed there on and off for over 40 years – until 1945. In Lvov, in 1908, he graduated with distinction from Franz Joseph Gymnasium, then – in the years 1908-1912 he studied philosophy (under Twardowski and Jan Łukasiewicz), mathematics (Władysław Sierpiński) and physics (Marian Smoluchowski). In Lvov, in 1912, he earned a doctorate based on the thesis written under Twardowski *Aprioryzm przestrzeni u Kanta a zagadnienie genezy charakteru przestrzennego wyobrażeń* [*Apriorism of Space in Kant and the Problem of the Origin of the Spatial Nature of Images*]. In Lvov, in 1912, he started his first job – in Stefan Batory Gymnasium, and thus *de facto* in the same high school in which he received the certificate of maturity, and in the years 1922-1925, he was a teacher, among others, at

The Ajdukiewicz's gravestone in the Old Powązki Cemetery, Warsaw

Pedagogical Seminary and a university lecturer as a private assistant professor. In Lvov, finally, in 1928, he was appointed to the chair of philosophy, created for him, and headed it until closing of Jan Kazimierz University in 1939 – after the occupation of Lvov by the Russians.

For 10 years – from 1945 until 1955 – he lived and worked in Poznań. There he was appointed to the Department of Theory and Methodology of Science, converted then into the Department of Logic, at the Faculty of Mathematics and Natural Sciences – and in the years 1948-1952, he served as rector of the University of Poznań. It was no coincidence that one of the streets in Poznań was named after him.

He had two Warsaw episodes – relatively short, but very important both for Ajdukiewicz and for Polish science. First, he received habilitation at Warsaw University in 1921 with a thesis *Z metodologii nauk dedukcyjnych* [Ajdukiewicz 1921]; shortly after he took over three years (1925-1928) one of the departments of philosophy, University of Warsaw. Secondly, he moved to Warsaw from Poznań in 1955 and remained there until his death: it was the most scientifically prolific 8 years of his life. In Warsaw, he headed one of the two university departments of logic, and at the same time – since 1956 – the Department of Logic at the newly created Institute of Philosophy and Sociology of the Polish Academy of Sciences.

Ajdukiewicz ended his life in Warsaw, where he died on April 12, 1963, and where he was buried in the Old Powązki Cemetery.

2. Views

2.1. Interests

The main – or better: central area of Ajdukiewicz's scientific interest was logic.

However, he also dealt with issues of other – in fact almost all other – philosophical disciplines, namely the issues of epistemology, ontology and ethics, and also the history of these disciplines. The only philosophical discipline, which is only marginally represented in his scientific work, is aesthetics. Some kind of compensation for this gap is perhaps the fact that

he was passionate about one of the objects of aesthetic research, namely music – he was an uncommon connoisseur (especially of Beethoven's music and opera music) and a good interpreter (he played the piano) – and that he sought aesthetic experience practicing mountaineering for many years.

It is impossible to say what the most important result of Ajdukiewicz's research was: not because he did not have great achievements in the field of his philosophical disciplines – but because the list of those achievements is very long and it is difficult to find a criterion by which they could be ranked in terms of importance. Therefore, if one wants to somehow do justice to Ajdukiewicz' contribution to Polish science, there remains nothing else than to indicate at least some of the items on the list – with the proviso that they are just small and disordered fragments of this list.

Here they are.

2.2. Formal logic

It is sometimes said that logic is a theory of consequence. But the relationship of consequence may be recognized differently – *e.g.* as a syntactic or semantic relation. In the first case, a sentence is the consequence of another when possible to deduce from the latter by means of suitable rules. In the second case – when the conditional having a predecessor in the latter, as the successor in the first sentence is logical truth, or substitution of some tautology. Ajdukiewicz was probably the first who saw the relationship between these two types of consequences and expressed it in a thesis, which later took the form called "deduction theorem" and espousing – in simpler terms – that if a sentence is a syntactic consequence of another sentence, it is also its semantic consequence.

The most mature form of deductive system is considered to be formalized axiomatic system, *i.e.* a system for which axioms, or original theorems, and the rules of deduction, or rules for deriving claims from other claims, are set out explicitly. Ajdukiewicz – as, speaking cautiously, one of the first – clarified the conditions which such a system should meet, and manners of establishing whether those conditions are met in a given case. The idea was that the axioms of the system were non-contradictory and mutually independent, and that the system itself was complete (that is – in its original terminology – adequate). Axioms, therefore, should not contain such a pair of sentences that one of them would be the negation of the other – nor a sentence that could be deduced from the others, and also should be so chosen to make it possible to deduce from it every sentence of the system or the negation of that sentence.

Apart from short episodes when what today is called "propositional calculus" was at least taken into consideration, or the theory of the relationships between simple sentences examined without going into their syntactic structure – the dominant form of formal logic until the nineteenth century was syllogistics, or the theory of the relationships between simple sentences occurring precisely due to their structure, which is what today we would call "name calculus". In its traditional form syllogistics was an axiomatic system, but from today's perspective it was imperfect: its axiomatics was incomplete – and some deduction rules used (that is – as it was said – reduction of modes to other modes) were merely intuitive. Ajdukiewicz formulated explicitly the rules of deduction for syllogistics, reconstructed in the language of predicate calculus, and gave its full axiomatics, containing – as he wrote – the assumptions sufficient to prove tautologicality of all tautological syllogistic formulas (that is the correct modes) and sufficient to prove non-tautologicality of all non-tautological formulas (or incorrect modes).

2.3. Logical semiotics

The second – after formal logic – part of logic *lato sensu* is logical semiotics, that is logical theory of the language. It is worth noting that Ajdukiewicz introduced the term "logical semiotics" in this sense to the philosophical terminology. Ajdukiewicz's achievements in the field of logical semiotics belong to all its sub-disciplines: syntax, semantics and pragmatics.

When it comes to syntax, Ajdukiewicz's merit was to develop a simple description of the structure of any expressions made using two complementary concepts: the operator and its arguments – and to develop a clear notation for such a description. The easiest way to introduce Ajdukiewicz's idea in this case is by way of example. Consider the sentence "Ajdukiewicz praised hard-working life", which is otherwise an allusion to the title of his beautiful article "Pochwała życia pracowitego" [Ajdukiewicz 1948]. If we agree that the main operator of this sentence is the segment "praised", further arguments of this operator are segments "Ajdukiewicz" and "hard-working life", while in the latter segment, the operator is the expression "hard-working" and its argument the expression "life" – then Ajdukiewicz would denote syntactic positions of segments of this sentence as follows: "praise" – (1,0) "Ajdukiewicz" – (1,1), "hard-working life" – (1,2), "hard-working" – (1,2,0), and finally "life" – (1,2,1).

As in the case of the consequence, characterized in two ways, syntactically and semantically, also in the case of the structure of compound terms, Ajdukiewicz described it not only due to the syntactic positions of their

segments, but also due to the semantic categories of those segments – in this case using the notions: sentence, name and functor and its arguments. And also this time he invented a proper notation. Semantically categorial description of the sentence "Ajdukiewicz praised hard-working life" would be as follows: segments "Ajdukiewicz ", "hard-working life" and "life" – are names, segment "praised" – is a logical connective from two name arguments (as this enables the names "Ajdukiewicz" and "hard-working life" to create the sentence "Ajdukiewicz praised hard-working life"), and segment "hard-working" is a logical connective from one name argument (as it enables the name "life" to create "hard-working life"). Ajdukiewicz wrote down semantic categories of the entire sentence and each of its segments as follows: sentence – *s*; name – *n*; functor "praised" – *s/nn*; functor "hard-working" – *n/n*. A string of indicators of simple segments of our example sentence would be: *n*, *s/nn*, *n/n*, *n*.

Ajdukiewicz's described ideas marked the beginning of categorial grammar.

When it comes to semantics and pragmatics, Ajdukiewicz's contribution in these areas in some respects is better discussed jointly. The idea is that the central concept of semantics is the concept of meaning of expressions. Ajdukiewicz in different ways explicate the term "meaning", but the most original of them used the concept of acceptance of sentences – and therefore one of the fundamental concepts of pragmatics. In addition – the term "accept a sentence" is in fact an abbreviation of the term "recognize a sentence to be true," so the term containing as its segment, the term "true", which, like the term "meaning", is one of the most important semantic terms.

"Meaning of an expression" was traditionally defined with the classic definition, that is a definition which in this case would take the form: "The meaning of the expression is this-and-that" (*e.g.*, "it is a denotation of this expression" or "it is a connotation of this expression"). Ajdukiewicz decided on the so-called context definition, having the form:

> It is possible to recognize whether somebody associates the meaning assigned to a certain sentence of a given language, or not, in such a way that we put him in the situation chosen just for this sentence and state, whether he is ready to accept this sentence in this situation, or not [Ajdukiewicz 1934b: 176].

Formulas assigning a situation to the sentence, which «forces» us to accept this sentence as true, Ajdukiewicz called "directives of sense", and the concept – "the directive concept". He distinguished three types of directives: axiomatic, deductive and empirical – depending on what kind are the

situations which are mentioned in them. Someone who would not consider sentence "A square is a square" true, would have given testimony of violating an axiomatic directive of English language; whoever would not recognize the sentence "A square is a rectangle" – would violate the relevant deductive directive; who, seeing figure: □ would not accept the sentence "This is a square" – would violate the relevant empirical directive.

Research in the field of directive theory of sense went in two directions: reducing the axiomatic directives to deductive and deductive to empirical and behavioural interpreting acceptance – as willingness to take action, bringing profit in the event of veracity of a recognized sentence (and loss – in the case of its falsity).

2.4. Methodology

Methodology – the third after symbolic logic and logical semiotics basic section of logic *lato sensu* – is practiced in two ways: as apragmatic methodology (as it was sometimes called by Ajdukiewicz), or as pragmatic methodology (in the terminology of Ajdukiewicz). The pragmatic methodology is a theory of science-forming actions; apragmatic methodology – a theory of the products of these actions.

Ajdukiewicz put the most effort in the study of pragmatic methodology. They brought many important theoretical results.

Ajdukiewicz therefore proposed a new definition and classification of reasoning. In a classic sense, derived from Łukasiewicz – to reason (we should add – legally, because it was his only interest) is the same as to select to a given sentence its reason or consequence. The first – is a reduction, the second – deduction. Both the data in reasoning, and sentences selected in it may be accepted by the reasoner as true or not. From this point of view, the reduction is either explanation or proving, and deduction – inference or testing.

Ajdukiewicz found that concepts of explanation, proving, inference and testing reconstructed by Łukasiewicz are too different from the sense in which the relevant terms are used in daily scientific practice. In this practice *e.g.* "inference" refers not only to deductive reasoning, but also to various types of non-deductive reasoning – such as inductive inference, or reasoning by analogy. In light of his preference for pragmatic methodology, it was a serious charge. From this point of view, more natural, too, was – according to Ajdukiewicz – classification of reasoning, among others, with regard to whether it is spontaneous or planned (intended to address a specific task), and whether it is reliable or unreliable (or at most probabilizing).

The latter inferences became the subject of special studies by Ajdukiewicz – especially unreliable justifying inferences. He tried to, among others, specify the criteria of legitimacy of such inferences.

To this end, he distinguished between a scheme of inference and a mode (method) of inference. Scheme of inference is a scheme from which specific inference formulas are obtained by substitution. Given the scheme of inference – inference can be reliable or (in varying degrees) unreliable. Inference, for example, from the fact that no philosopher is a prophet, that no prophet is a philosopher – is a reliable inference; while inference from the fact that a resident of Tarnopol was a logician, that every resident of Tarnopol is a logician – is a highly unreliable inference. Due to its mode, inference can be rational or irrational. To be rational, the degree of reliability of inference must be no less than its degree of certainty. Therefore, someone who would base full conviction that every resident of Tarnopol is a logician solely on the fact that a certain resident of Tarnopol was a logician, would infer irrationally.

2.5. Semantic paraphase

It is understood that being a logician – and having considerable achievements in many branches of logic – Ajdukiewicz tried to apply the results achieved in logic to other branches of philosophy. It took a form of applying in metaphysics – on a large scale – a research method that has gone down in history as "semantic paraphrase".

The idea of semantic paraphrase was roughly as follows.

Statements about reality can be in a well-defined way assigned statements about these statements. Instead of reality, we can talk about sentences talking about reality; instead of theory of reality, we can practice the theory of sentences about this reality, or – in other words – the theory of language describing this reality. A language describing a reality – that is the object language – to fulfil its job well, should be a system of sentences with established sense, connected to each other by the relation of consequence. Such a system is then a kind of deductive system, and the theory of deductive systems – is apragmatic logic or metalogic. The findings of metalogic must therefore apply in the theory of object languages – including the theory of science languages. We may identify metaphysics and its two main divisions: epistemology and ontology with just such a theory.

Here is an example of Ajdukiewicz's semantic paraphrase of one of the metaphysical positions on the relationship between language and reality

– namely, a version of transcendental idealism – and use of the results of metalogic to undermine this position.

In the realistic position, said relationship is as follows: using (object) language the reality existing independently of it is mapped. According to transcendental idealism, it is somewhat the opposite: what we call "reality" is in fact intentional construct – a product – determined by the language, just the same way as *e.g.* the mythical world is a construct of mythology and the world of heroes of the *Trilogy* by Henryk Sienkiewicz is determined by what is said about it in *Trilogy*. How to decide – who is right: the realist or idealist? According to Ajdukiewicz, it can be done using semantic paraphrase method. Transcendental idealism will then take the form of a thesis stating that all and only those object sentences (on reality) are true which must be regarded as true on the basis of existing sense directives in the language in which these sentences were formulated. And this thesis – in the light of the findings of metalogic – is false. It turns out that it is enough that the language of a theory has as its part the language of arithmetic to have the class of sentences of the language accepted as true based on sense directives not cover all sentences true in this theory.

Therefore, epistemological transcendental idealism is also erroneous.

Using large-scale logical tools in philosophical considerations – Ajdukiewicz was at the same time, as, perhaps, no one else, fully aware that in their application one needs to be extremely cautious. The idea is that the language of logic – in many ways superior to the natural language spoken in general by philosophers – pays for this perfection a sizable price: does not meet certain essential functions of natural language.

Take – says Ajdukiewicz – implication connective. We read it in the language of propositional calculus "If *p*, then *q*" (where in place of *'p'* and *'q'*, we can insert any sentence), but this is not exactly the same connective, which occurs in the conditional of natural language – *e.g.* in the sentence "If we run out of money, we will borrow it from someone". As we know, for the truthfulness of the sentence with a logical implication connective it is sufficient that in place of *'p'* there is a false sentence or in place of *'q'* – a true sentence. However, we would not say the mentioned conditional as a sentence true in intention, just because we did not run out of money, nor just because we borrowed it from someone. Ajdukiewicz explained this by distinguishing two functions of sentences: stating and expressing. Now, both the implicational sentence of propositional calculus language and natural language conditional state the same thing. Someone, however, who delivers the sentence "If we run out of money, we will borrow it from someone",

also expresses that: (a) he is convinced that what the consequent states will not occur without the occurrence of what antecedent states; (b) he does not know that antecedent is false, and does not know that the consequent is true; (c) he is ready to infer the consequent from the antecedent.

Now, none of this is expressed by the statement constructed using the implication connective of propositional calculus.

2.6. Epistemology

The boundary between logic – and within it, the methodology – and epistemology is fluid. In this fluidity zone, lays the problem of status of scientific knowledge, in particular the question of acceptable scientific manner of substantiation of its assertions. To put it simply – it is a question of whether the content of statements accepted in science is decided by experience (empiricism) and reasoning (deduction), or whether it is a matter of agreement (convention). This is the plane on which for a long time clashed the views whose extreme was, on the one hand, radical empiricism, on the other hand – radical conventionalism. According to the former, all in science is decided by experience; according to the latter – all is decided by conventions.

Ajdukiewicz joined the discussion on this topic – and took a position which he described somewhat misleadingly as "radical conventionalism". It was the conventionalism in such a sense, that it assumed that the content of scientific statements is settled both by experience and reasoning, and convention, but that conventional are not experience data, but a way of mapping them in the language – and these are conventional two-fold: these data do not fully impose the selection of a specific shape of conceptual network in which the data are mapped and the selected conceptual network does not impose a particular form of language which perpetuates the network. In other words: sense directives are conventional. It was radical conventionalism, since – according to Ajdukiewicz – the indicated conventionality characterizes all scientific claims. In other words, all sense directives are conventional.

2.7. Ontology

Among the main issues of ontology – Ajdukiewicz paid particular attention to two: what existence consists on and how to describe a change so as not to lead to undesirable consequences.

Even in ancient times thought was given to the wisdom of the sentence "There are objects which do not exist". Without additional comments – recognition of the sentence to be true would lead to the thesis that certain objects both exist and do not exist. It is clear that if the sentence is to be free

of such consequence – the word "exist" must be taken in it once in one, and once in another sense. This observation initiated efforts to closely analyse the concept – or concepts – of existence.

Ajdukiewicz did it for real existence, that is actual and intentional existence, that is only conceived. He showed that the language in which we would like to talk about intentional objects, cannot not contain terms relating to the real objects. Suppose that, the *Iliad* speaks, among others, about Zeus – and on this basis we have the right to say that Zeus exists intentionally. We must therefore be able to formulate a sentence: "The sentence "And the will of Zeus was moving towards its end" occurs in the *Iliad*", and this sentence speaks, among others, of a real object, namely about the real epic of Homer. This makes it so that the so-called objective idealists who believe that nothing really exists – that is, that if something exists, it is at most intentionally – cannot properly verbalize their view. In order to say for example that not only Zeus, but – let's say – Homer himself exists only as an object of thinking of a certain person, they must admit to the last person a real existence, and therefore deny their own view.

In this way, Ajdukiewicz found the argument for rejecting the latter – ontological – form of idealism.

Since antiquity, the problems occurred as well with the description of a change, which would not violate the principle of non-contradiction. The reasoning, among others, was more or less as follows. Suppose that an object in a certain period changes colour – as it is, *e.g.* with a yellowing leaf, which changes from green to yellow. It can be said generally that the leaf at the beginning of the period in which the change occurs is green, and at the end of this period – is yellow or, more generally non-green. And what is this leaf in terms of colour in the middle of the period? It is neither green nor non-green. And not to be non-green – is the same as – to be green. Therefore – according to this description – our leaf in the middle of his period of change at the same time is not green and is green. Thus, it violates the principle of non-contradiction: it is self-contradictory. Based on similar arguments it was either considered that in the world there is no change, which is in conflict with experience, or that in the world there are contradictory state of affairs, which is in conflict with classical logic. In the latter case, there were even attempts to construct logic competitive to classical logic – called "dialectical logic" – which would allow actual existence of contradictions.

Ajdukiewicz analysed this and similar reasonings – and showed that they are wrong formally or based on unauthorized presuppositions. One of these presuppositions is the assumption that we can identify being-yellow of the

yellowing leaf with its not-being-green. In fact, when we say that the leaf is not green – it must refer to every colour of the yellowing leaf from the moment at which it ceased to be green. In the middle of the change period, the leaf is therefore also – contrary to the considered argument – non-green. The principle of non-contradiction is thereby not affected.

It may be worth noting that the article by Ajdukiewicz "Zmiana i sprzeczność" [Ajdukiewicz 1948b], containing the above reasoning, contributed at least indirectly to the fact that the communist ideologues stopped attacking logic as a harmful, bourgeois vestige threatening their totalitarian empire.

2.8. Axiology

Probably not coincidentally, the last text published by Ajdukiewicz before World War II was the article "O sprawiedliwości" [Ajdukiewicz 1939], and the first text published by him after the war was the article "Co to jest wolność nauki" [Ajdukiewicz 1946]. They represent the axiological current of his interests, and their analysis of the nature of justice and freedom – is nearly unmatched in terms of suggestibility.

Ajdukiewicz proposed to call "just" an act, as a result of which someone receives what is rightfully due to him from someone else. This in turn, what is rightfully due to someone from someone else, is governed by the principle of equity – that is, the principle of equal pay and retribution. To simplify, one can say that if a person received from someone an object of a certain value, then this someone is due from that person an object of equal value. One interesting consequence of this approach is that the category of justice does not apply to persons who are not within the reach of the principle of equity. One cannot for example say that someone something is rightfully due from someone else whom that someone has not given any positive or negative value – nor is anything owed from anyone if, for example they suffered evil, but not from some person (only – let's say – by the «forces of nature»).

On the other hand – when it comes to freedom, Ajdukiewicz proposed to strictly distinguish between two types: freedom of action and freedom of thought.

Man is – according to Ajdukiewicz – free in action (or in other words: in the choice of action), when he can do what he wants, and is not compelled to do what he does not want, provided that we are talking exclusively about the limitations arising from intentional actions of others. A person is not free in this sense who was gagged, for example, by someone else, or banned from speaking under the threat of properly harsh sanctions – but not the one who cannot speak because he suffers from paralysis. Such an approach

to freedom of action allows avoiding a conflict between the postulate of freedom and thesis of determinism. Furthermore, man is free in thinking when he has the right to believe in everything and only that, which is supported by solid arguments, and he has no obligation to believe in anything not supported by substantive arguments, or, what is more, in something against which such arguments speak.

Demarcation between these two scopes of freedom – freedom of action and freedom in thinking – is important in that it frees us from many misunderstandings in axiology.

3. Personality

After the death of Twardowski, Ajdukiewicz's master (and father in law), speeches delivered at the mourning ceremony in his honour were published; the book containing the speeches was titled: *Nauczyciel – uczony – obywatel* [Longchamps de Berier *et al.* 1938]. These three things: teacher, scholar and citizen – are also important points of reference when assessing Ajdukiewicz himself.

3.1. Scholar

Ajdukiewicz as a scholar – through the prism of his achievements – has been outlined above. Ajdukiewicz was called "analyst-profundist", "a mind descending into the depths" – due to the perspicacity of his critical analyses; but he was also a visionary syntheticist, the mind of broad theoretical horizons, due to which he could set up new, previously unnoticed fields of research to others. His profundism and vision-creating led him to innovation and pioneering in many fields. Ajdukiewicz's motto was to specify philosophical problems passed along by history – including logical problems, when it turned out that the language of logic also suffers from chronic ambiguity, instability, and vagueness.

3.2. Teacher

What was Ajdukiewicz like as a teacher?

All written and oral testimony is consistent: he was an excellent lecturer. His lectures were always conscientiously prepared – and the content presented in a way that harmoniously combined the accuracy and imagery.

He was also the teacher-educator: he cared not only about the quality of his lectures, but also a good level of audience – and about creating the conditions that would maintain such a good level. It was Ajdukiewicz's merit that in post-war Poland it was possible to maintain – or even introduce

– classes of logic in most majors of university study. That it was thanks to Ajdukiewicz – is evidenced by, among others, the fact that after his death there was gradual regression in this respect which, by the way, recently took a dramatic form, not without tragic consequences in the public sphere.

Some idea of his pedagogical talents is conveyed by Ajdukiewicz's textbooks. All – from different periods of life – were excellent: *Główne kierunki filozofii* [Ajdukiewicz 1923], *Logiczne podstawy nauczania* [Ajdukiewicz 1934], *Propedeutyka filozofii* [Ajdukiewicz 1938], *Zagadnienia i kierunki filozofii* [Ajdukiewicz 1949], *Zarys logiki* [Ajdukiewicz 1953], finally, *Logika pragmatyczna* [Ajdukiewicz 1965]. They paint an image of not only a collector of other people's results – but above all a systematicist and essentialist. Many passages in these books (*e.g.* section "Postępowanie człowieka" ["Behaviour of Man"] from *Propedeutyka filozofii* or most of the content of *Logika pragmatyczna*) – are original monographs in the field of the discussed issues. Textbooks by Ajdukiewicz even today represent an unattainable model of teaching excellence.

Sometimes, greatness of a teacher is measured by the greatness of his students. This measure is illusory, but also in this regard Ajdukiewicz could be proud. The group of his doctoral students included, among others, Zygmunt Schmierer (doctorate in 1936) – prematurely extinguished star of Polish logic (he was murdered by the Germans during World War II) – and Roman Suszko (doctorate in 1948), whose work has designated a considerable area of original research in the field of logic – in the form of non-fregean logic. As for the indirect effects – actually all major Polish logicians of the second half of the twentieth century have the right to claim to be students or co-operators of Ajdukiewicz.

3.3. Citizen

And what was Ajdukiewicz like as a citizen?

Let the bare facts speak.

Graduate class of high school: at a meeting of the Historical Society Ajdukiewicz delivers a speech "Powstanie Listopadowe" ["November Uprising"]. Years 1912-1913: Ajdukiewicz is a member of the Permanent Rifle Squads (from which the Riflemen Legion will emerge later). World War I: Ajdukiewicz-gunner receives two silver medals for valour – namely for extracting fellow-soldiers from the gassed fort on the Austrian-Italian front. 1918: Ajdukiewicz – already in the Polish Army – forms an armoured train "Odsiecz" ["Relief"] and commands it in Polish-Ukrainian fights near Lvov. 1920: Ajdukiewicz in response to the appeal of the State Defence Council – as a volunteer – takes part in the Battle of Warsaw and

other battles of Polish-Bolshevik war, ending the campaign as a captain of artillery. 1935: Ajdukiewicz is the co-founder of *Studia Philosophica* journal, whose four released volumes became a showcase of Polish philosophy in the West. 1939-1945: Ajdukiewicz in Lvov – under both occupations – conducts secret lectures at the academic level. 1953: Ajdukiewicz founds the journal *Studia Logica* and edits it until his death; this journal is still one for the most important logical periodicals around the world. The years as a rector of the University of Poznań: due to clever tactics, Ajdukiewicz manages to minimize the damage caused to the Poznań centre by raging Soviet totalitarianism.

3.4. Man

As can be seen – Ajdukiewicz was not only a man of thought, but also a man of action.

A short – and beautiful – description of Ajdukiewicz's personality was provided by his high school classmate, also a best student at the time, and later one of the coryphées of Polish philosophy Tadeusz Czeżowski:

> His lofty and beautiful figure harmonized well with his mind – the mind of a man, who set himself high goals and implemented them consistently, because he combined intellect and will, integrity and courage. These qualities made him an imperious man, and gave him authority recognized both by people close to him and by the opponents. But he was not a hard man, as he had a rich emotional life, expressed in a lively feeling of the beauty of nature and art, especially music (actively practiced), as well as a deep moral sense and sincere humanitarianism. The atmosphere of internal serenity signifying his numerous interests granted him personal charm and won over friends. And although – like every man with sensitive soul – he succumbed to varying moods, they made him more approachable in personal contact, but never discouraged from the way he saw fit [Czeżowski 1964: 118].

Add to this that Ajdukiewicz liked to dress his views in a robe of maxims. He would say, for example: Some people BEAR philosophical problems – I only subject them to SCIENTIFICATION. Or: It is one thing to bury PHILOSOPHY, and quite another – to poke around IN PHILOSOPHY. He expressed bluntly his philosophies. For example, anti-clericalism: That God exists, seems almost certain to me; that Christ is God and man at the same time, that I do not understand at all; I am sure however, that the Church is an institution of the devil! Or a critical attitude towards phenomenology: When Ingarden arrived in Lvov, even water in the taps turned turbid. He uttered his motto in life – of practical realism – in the form of a humorous directive: Do not nod your finger in your shoe when it threatens breaking your leg! He divided people into the noble and the wicked: of the former he spoke that

they are children of noblemen, and of the latter – that they are children of watchmen. And he added: Be careful, because some noble sons turn out to be the watchmen's sons!

During one of his Zakopane trips, a highlander woman at the sight of Ajdukiewicz said: "Pon to kieby jaki cysorz" ["You are like an emperor!" – in highlander dialect of Polish]. He liked this qualification – and henceforth he called himself "emperor" and he distinguished other people around him with the title of baron at the most. At the time of his Poznań rectorate he was given – with his connivance – the name of Kazimierz the Magnificent.

Indeed: he was a magnificent teacher, scholar and citizen.

And a magnificent man – simply.

11. Józef Maria Bocheński

Philosophy, as I understand it, holds no call to prophecy;
it is a science. It cannot tell people what to do; but when it says something,
he is trying to dissect it.

[Bocheński 1988]

1. Life

He lived for 92 and a half years. He was born on August 30, 1902, in Czuszów near Proszowice on Szreniawa; he died on February 8, 1995, in Fribourg, Switzerland, where he also was buried in Albertinum. He was the son of Adolf and Małgorzata née Dunin-Borkowska. He spent his childhood in Ponikwa near Brody in Volhynia. He survived the defence of Lvov in 1918. In 1920 – after graduating from Lvov Adam Mickiewicz Gymnasium, he took part in the Polish-Bolshevik war.

In 1920, he began to study law at the University of Jan Kazimierz; in 1922, he moved to the University of Poznań, where until 1926, he studied economics. Not having graduated, he enrolled in the seminary in Poznań and in the years 1927-1928 he had his novitiate in the Dominican convent in Cracow, where he took the religious name Innocenty Maria. Then, he studied philosophy at the University of Fribourg, Switzerland, completed with a doctorate obtained in 1931 – based on the dissertation *Die Lehre vom Ding an sich bei Moritz von Straszewski* [Bocheński 1932]. After studying theology at the *Angelicum* in Rome (1931-1934) – and receiving (in 1932) ordination to the priesthood – he became a professor of logic at the university. In 1938, he received habilitation in Christian philosophy at the Theological Faculty, Jagiellonian University – with his thesis *Z historii logiki zdań modalnych*

[Bocheński 1938]. He participated as a chaplain in World War II (including the September Campaign and the Battle of Monte Cassino). In the years 1945-1972, he was a professor of the University of Freiburg; there, he was also the dean of the Faculty of Philosophy (in 1950-1952) and rector (in 1964-1955). In 1958, he founded the Institute of Eastern Europe.

He was a guest lecturer at twelve universities in Europe, the Americas and Africa. He received five honorary doctorates, including an honorary doctorate from the Jagiellonian University and the Academy of Catholic Theology in Warsaw (in 1988).

2. Writings

He published more than 300 works on philosophy. His main works fall within the field of formal logic (*Précis de logique mathematique* [1948]), applied logic (*Logic of Religion* [1965]; *Was ist Autorität?* [1974]; *Zur Philosophie der industriellen Unternehmung* [1985]), methodology (*Die zeitgenossischen Denkmethoden* [1954]), history of philosophy (*Zarys historii filozofii* [1993c]; *Europäische Philosophie der Gegenwart* [1947a]), history of logic ("Notiones historiae logicae formalis" [1936]; *La logique de Théophraste* [1947b]; *Ancient Formal Logic* [1951]; *Formale Logik* [1956]).

He was also the author of many works depicting philosophical issues in popular terms (*Szkice etyczne* [Bocheński 1953], *Wege zum philosophischen Denken* [Bocheński 1959]).

A special place in his work was devoted to the works regarding the communist ideology and *Sto zabobonów* [Bocheński 1987]: a kind of philosophical dictionary, demystifying modern prejudices of the so-called enlightened Europeans.

Memoir masterpieces are his conversation with Jan Parys *Między logiką a wiarą* [Bocheński 1988] and *Wspomnienia* [Bocheński 1993b].

3. Educators

He had many teachers from different countries. There is no doubt, however, that his Polish masters had considerable influence on him: first Zygmunt Zawirski, Czesław Znamierowski and Florian Znaniecki; then Fr. Adam (Jacek) Woroniecki, Fr. Konstanty Michalski and Jan Łukasiewicz. Two of them – Łukasiewicz and Zawirski – were outstanding figures of the Lvov-Warsaw School. The same school was also attended by Jan Franciszek Drewnowski, Fr. Jan Salamucha (later a close friend of Bocheński) and Bolesław Sobociński, to whom he owed his definitive philosophical "conversion". As a result, he began to admit to the Lvov-Warsaw School. Today we can

say without hesitation that he turned out to be one of its most outstanding representatives.

Among the Polish philosophers – besides his direct masters – he valued, *e.g.*, Władysław Tatarkiewicz, primarily as the author of "best […] university textbook on history of philosophy" [Bocheński 1993b: 139], and Roman Ingarden, for his criticism of logical positivism (whereby, if you apply the neo-positivist criteria of reasonableness, the flagship neo-positivist thesis is meaningless).

J.M. Bocheński summarized part of his rich oeuvre in *Wspomnienia* [Bocheński 1993b: 350].

4. Views

4.1. Ontology

He was a PLURALIST. He believed that there are not only real objects, but also ideal ones. The feasibility of the former is that they are somewhere and at some time, and that are neither constant nor general nor necessary. The latter are ideal, *i.e.* – in contrast to the former – necessary, general and constant, but not localized in time or in space.

A set of real objects is not covered by material particulars. Besides material bodies there are souls, and besides concrete things – abstracta: in particular for example relations. He criticized reism – from its sociological consequences. He wrote:

> In Kotarbiński, there is ontology, in which there is nothing but things, there are no real relations. Then you either say that society is a thing, and man only a part of it, subordinated entirely – then we fall into totalitarianism; or we say that the only thing is man, and society is fiction, but then society will not have any rights, which leads to anarchy. If you want to have some reasonable relationship to society you need to accept something in between, namely that society includes something real besides people – relations that are not things [Bocheński 1988: 100].

The Bocheński's gravestone in *Albertinum*, Swiss Fribourg

He combined variabilism with COHERENTISM. He maintained that in the real world everything is changing, but the world is not chaos, or – even more – there are no contradictions in it. He justified it as follows:

> If I do not accept that the world is built logically, then science is not possible [Bocheński 1988: 144].

He was a firm supporter of OBJECTIVITY. He claimed:

> Reality exists independently of us and negation of it is morbid [Bocheński 1988: 43].

The mere knowledge is not an interference with an object:

> The fact that I saw a cow, does not change anything. The cow never ceases to be a cow [Bocheński 1988: 40].

4.2. Methodology

He was an ANTI-SCEPTIC. He had scepticism as unfounded and malicious. He maintained:

> Healthy civilization is not sceptical, but largely dogmatic [Bocheński 1988: 96].

Contrary to the sceptics, we "sometimes reach the truth" [Bocheński 1988: 32]. He promoted weakening the philosopher's maxim, "I know that I know nothing" to "I know better than anyone how little I really know" [Bocheński 1993c: 128].

He was an ANTI-IRRATIONALIST. This meant the adoption of two directives. According to the first directive of anti-irrationalism – one needs to know what he talks about, namely "to be able to explain what one means" [Bocheński 1988: 72]. He illustrated it as follows:

> For instance, anyone can call a cow a "logarithm" and then, in such a case quite rightly, argue that each logarithm has horns and usually gives milk. Such astonishing claims are nevertheless understandable if a person speaking in this way explains what the "logarithm" means [Bocheński 1988: 156].

According to the second directive of anti-irrationalism – when claiming something, one must be able to justify it [Bocheński 1988: 72].

As for the methodological status of scientific procedures – he ultimately opted for ANTI-FALSIFICATIONISM. After long hesitation, he came to the conclusion that the occupation of scientists is not *de facto* overthrow of explanatory hypotheses.

4.3. Philosophy

With regard to the methodological status of philosophy – he was a NATURALIST. He repeated with emphasis:

> Philosophy is a science like any other, only more abstract; […] practicing philosophy without contact with other sciences is a misunderstanding [Bocheński 1988: 153].

He did not deny, however, that beyond the scientific (theoretical) philosophy there is also a "wisdom" (moralistic) and "defence" (apologetic) philosophy; the thing is that they should not disguise as sciences. He wrote:

> A philosopher [as such] […] works neither for peace nor for mutual understanding, does not aspire to any victory, does not want to instruct anyone; he just wants to gain more knowledge [Bocheński 1993c: 126].

A scientific philosophy has two functions: "ancillary", assisting other sciences, and "demonic", breaking the intellectual superstition. He believed that "the fundamental difference between superstition and science […] is in the field of diligence" [Bocheński 1988: 73]: superstition is simply "intellectual sloppiness" [Bocheński 1988: 101]. He warned:

> When everyone or nearly everyone agrees on something, this thing is *a priori* suspect [Bocheński 1993c: 25].

He was a MINIMALIST as to the material extent of philosophy. Neither scientific theory of "being", nor scientific theory of "existence" are possible. He justified it this way:

> The theory of being is not possible, because there is no class of objects in general [Bocheński 1988: 146].

The question of the existence of the world is a pseudo-problem "because it seems to be asking about the truth of all sentences and such questions, of course, cannot be asked. This leads to a contradiction" [Bocheński 1988: 153].

He combined minimalism with PARTICULARISM. Overwhelming scientific philosophical systems are not possible. They are not possible – in the light of the thesis of incompleteness of developed deductive systems. And furthermore:

> You have to be insane to want to make an overall synthesis of today's knowledge. In the world there are today more than 100 thousand scientific journals. Scientific synthesis today is not a scientifically valid possibility [Bocheński 1993c: 169].

He identified scientific philosophy with ANALYTIC PHILOSOPHY. Analytic philosophers – "do not moralize", "do not play stories" [Bocheński 1988: 98, 122]; they only analyse.

To engage in analytic philosophy – is to practice LOGICAL ANALYSIS OF THE OBJECT LANGUAGE. Every word in this *definiens* is important. The philosophy is to be an ANALYSIS, rather than building speculative systems; but it does not have to be a structural analysis. It is to be a LOGICAL ANALYSIS and not, for example philological; but it does not have to be a formal analysis. Logical analysis is to concern the language, and not "concepts hanging in the air" [Bocheński 1989: 37]; concepts are tools of thinking – "one cannot think non-conceptually" [Bocheński 1988: 103] – but the concepts are always meanings of linguistic expressions. Logically analyzed language is to be OBJECTIVE; it is to concern reality and not just internal experience of philosopher; but also it does not have to be only a scientific language.

No wonder that with such a conception of philosophy, he put special emphasis on logic. He put it briefly: "Beyond the logic is just nonsense" [Bocheński 1988: 74]. He conceived logic ONTOLOGISTICALLY and UNIVERSALISTICALLY. Logic is axiomatic ontology: it is not just a theory or "ethics" of thinking. And there is only one logic – although it has many subsystems related to specific areas of reality.

4.4. Religion

He admitted that analysts … are afraid of metaphysics.

> [They think] that it is possible, but much more difficult than people think. […] If you want to fill the gaps in our knowledge, you must use a conscious decision, an act of will, faith, but not metaphysics [Bocheński 1988: 146, 152].

His conception of faith was VOLITIONALISTIC: if I believe, then my life will be orderly.

> Without God, it is difficult to avoid the conclusion that everything is actually absurd; [that the world is] a story told by an idiot. […] [And this] view is […] unpleasant to me [Bocheński 1988: 154, 155].

So – I believe.

He denied the existence of Christian philosophy, but did not deny the existence of Christian philosophers. He himself was one of them. He declared: "I profess Christianity" [Bocheński 1993c: 52]. He preached the need to separate philosophy and religion and theology. He stressed in particular that the God of the philosophers – "very poor God" (as he expressed it) – is not identical with the God of religion. But he added: "There can be no […] contradiction between […] reason and faith" [Bocheński 1988: 127]; nor

can there be a discrepancy between philosophy and theology; if it occurred, it must be removed by modifying either one or the other theory.

He understood philosophy naturalistically, but in matters of faith, he was an ANTI-SCIENTIST. He believed that there is room for mysteries of two kinds. Some – are sentences fully understood, but having justification only in Revelation. Others – are sentences not fully understood, as they contain similar terms. Neither former nor latter – against scientists – are nonsensical.

In matters of faith, there is also room for national shades. He saw especially the specificity of Polish religiousness – and tried to capture this specificity based on Henryk Sienkiewicz's *Trilogy*. He assumed that Sienkiewicz's image of Polish religiousness is essentially faithful in relation to the seventeenth-century original, that it contains elements of author's religiousness, and that Sienkiewicz, thanks to his genius, had a huge impact on religiosity – and in general the whole culture – of many generations of Poles. The specificity of this religiosity he saw, among others, in the fact that while worshiping God the most, the heroes of the *Trilogy* had the most emotional relationship with the Mother of God, and considering it their duty to serve their homeland and comply with the order of charity in respect of the comrades they did not consider that this order included the «heathens» – which did not prevent the latter from enjoying complete freedom in the Republic.

4.5. Anthropology

He professed psychophysical HOLISM. He claimed:

> To smash a man into two pieces: the soul and the body, is complete nonsense. […] The soul is not a piece, but the essence of the body; it is not a separate thing, a substance [Bocheński 1988: 106].

And he added:

> The body of the deceased has nothing to do with the deceased, because the essence has gone to heaven and there is now only a corpse, belonging to the mineral domain [Bocheński 1988: 121].

He complemented holism with ANTI-HUMANISM. He opposed the notion that people are fundamentally different – «senior» – to other beings. In all respects, in which people supposedly are fundamentally different from animals, this difference is only a difference of degree. Not only people reason (including – make idealizations), communicate, are aware of themselves, experience «fear»; not only people can create a culture. And thus: "A little

bit […] of spirit" is found in animals too [Bocheński 1993c: 37]. He considered speaking of moral superiority of men as particularly false. He was of the opinion that man – is the cruellest beast on earth.

4.6. Axiology

In ethics, he advocated INDIVIDUALISM. The most important human affairs are purely private. This individualism had three blades.

The first blade of individualism was ANTI-ACTIVIST. Only individual's life has sense – not collective's; and the life of a man makes sense when the man at the moment believes that life is worth living, *i.e.* when there is a goal at which he strives or when he devotes himself to (contemplative) «use» of this moment: delighting in what he has at the moment. Another thing is:

> A conscious man, as long as conscious and free, has certain tasks, obligations; something to do [Bocheński 1993c: 49].

The second blade of individualism was ANTI-MONOFINALISTIC: the meaning of life does not require that the objectives pursued by an entity are subordinated to one chief goal.

The third of induvidualism was ANTI-PESSIMISTIC. Some people sometimes experience moments in which their life has no meaning – but the view that no man's life has ever any sense is wrong. The semblance of accuracy of this view stems from the fact that its followers equate sense of life with happiness – and absolute happiness at that: the state of permanent satisfaction of all needs. This condition indeed is never reachable by anyone in life; but it is not true that no one can ever achieve momentary happiness.

5. Summary

Bocheński is best characterized – as a philosopher – by three words: anti-irrationalist, profundist and simplificator.

He was an ANTI-IRRATIONALIST, since he did not allow any methods in philosophy that would not have sanctions from logic. He was a PROFUNDIST, because using meticulous analysis he successfully explored the essence of phenomena being studied. He was finally a SIMPLIFICATOR, because these phenomena – if they were to provide the hard base for analysis – required simplification (idealization), and he knew how to make such a simplification with enviable sensitivity.

Besides, he shared it all with other prominent representatives of the Lvov-Warsaw School. But there were also things that made him a unique individual at

this school. This is particularly clear when we compare him, for example, with Tadeusz Kotarbiński: on the one hand, atheist, pacifist and trustworthy carer – on the other hand, Catholic, apologist of fair (wartime) «need» and keen debater.

6. Impact

During the most creative period – since 1939 – he stayed abroad. An expert – and implacable enemy – of communism, he took the first trip to Poland only in 1987, when it was clear that the Communist dictatorship is about to end.

It is no wonder that his direct students and co-operators were mainly foreigners. The most famous of them are Guido Küng (ontologist and philosopher of language) and Ignazio Angelelli (historian of logic). But there were also Poles, though of course only immigrants: among others, Anna-Teresa Tymieniecka (phenomenologist) and Zbigniew Jordan (logician and historian of Polish philosophy).

At the beginning of the nineties, his views began to gain followers also in the country, helped significantly by publishing his writings in Polish. They aroused interest among both experts and ordinary lovers of philosophy.

7. Assessment

In relation to one's views, four questions may be asked: whether they were coherent, whether they were accurate, whether they were argued, and whether they were original.

The first three questions in relation to Bocheński can be answered only fractionally. His work is so extensive that it cannot yet be grasped in its entirety. But this part of the total of his views, which is best known, seems accurately and sufficiently justified – and therefore coherent.

The fourth question can be answered only conditionally: in Bocheński's work there are many things which on the basis of the current historical knowledge – seem original. Most often they coincide with what Bocheński himself in his work found new when he wrote about himself:

> My main achievement is in history of logic and the application of mathematical logic to other areas [Bocheński 1988: 21].

In history of logic – and, more generally, in HISTORY OF PHILOSOPHY – new (or justified in a new way) were the following thoughts:

(a) that the history of philosophy – as the history of doctrines – is a very important part of the history *tout court*, because the doctrines (also philosophical ones) are an important factor influencing the course of human history;

(b) that philosophy – including logic – develops in a non-linear manner: their line of development rises and falls; and although in each period there is a multiplicity of trends, although there are still more and more new philosophical problems and constantly increasing complexity of solutions, the basic types of the latter still persist;

(c) that the period of scholastic philosophy is the golden age of European philosophy, and its «dark period» is not the Middle Ages, but the period of so-called modern philosophy;

(d) that the nineteenth century closes the latter, and that in the twentieth century, we are witnessing total departure from previous philosophical ideals (among others in terms of abandoning the faith in distinguished place of man in the world, in progress, in science and the creative possibilities of people).

Bocheński successfully applied LOGICAL tools, among others, to analyse WORLDVIEW.

He considered worldview a combination of cosmology (providing the metaphysical synthesis about the WORLD when taken as a whole) and anthropology (providing the vision of human ENTITY and especially a response to an existential question what to live for, and to a moral question of how to live). Enriching the worldview with a «prescription» for the salvation of an entity – makes it a religion; adding a «prescription» to repair the world – transforms worldview into IDEOLOGY.

He devoted particular attention to the analysis of religious (and theology) language. In this field – he proposed new approaches: of theodicy and of the theory of analogy and authority.

He believed that THEODICY without logical reconstruction is worthless and proposed formalization of some of the proofs for the existence of God and the immortality of the soul.

He examined the relationship of ANALOGY in terms of isomorphism (identity of formal characteristics of similar relations). He defined the analogy of attribution as a relation of seven arguments: expressions *a* and *b* are (unambiguously) attributively similar in language *l* with regard to content *f* contained in object *x*, signified by phrase *a*, and content *g* contained in object *y*, signified by expression *b* when expressions *a* and *b* are ambiguous in relation to relevant content in this language, and the contents *f* and *g* are in *sui generis* cause-and-effect relation to each other.

He perceived the authority as a relation of three arguments (*x* is the authority for *y* in the field *z*) and clearly distinguished epistemic authority (appraiser's – in a class of sentences) from deontic authority (supervisor's –

in a class of regulations); an example of the latter was Church for Catholics in matters of faith.

He also analysed the nodular ideological concepts: the system of free nations, nationality and love of country.

He characterized the system of free nations using five principles: the principle of rationalism (that science is the only human authority in knowledge of the facts), the principle of particularism (that the supreme goal of all politics is the welfare of the human individuals), the principle of egalitarianism (that people are equal in front of the law) and the principle of political pluralism (the least bad is democracy) and economic pluralism (the best is the economy with diverse forms of ownership).

He considered nationality – in particular Polishness – on three levels: «basic», regarding the identity of the country, language and customs; «first-level», regarding commitment to a common history, culture and ideology; finally, «second-level», due to the affiliation to a one state.

He identified love of country (patriotism) with the obligation contracted towards it – as towards the source "of almost everything that we are" [Bocheński 1942: 10], and in particular cultural goods we use. So understood, patriotism of course has nothing to do with hatred of foreign cultures. Patriotic obligation – is a duty to defend and spread native culture and not to destroy someone else's.

One of the last studies he conducted was analysis of a key economic term: the concept of an enterprise. One cannot, in his view, construct a correct theory of an enterprise if one does not determine its purpose and structure. Namely, an enterprise has one purpose: production of specific objects (and not, for example, profit for owners or happiness for employees). In contrast, the structure of an enterprise is designated by three factors: assets of an enterprise (capital, labour, invention), the binding agent of these components (entrepreneur) and external environment (customers, municipality, state). If all this is taken into account, it turns out that *a priori* there are more than fifty types of enterprises, not a few – as assumed in traditional economics.

8. Personality

He spoke of himself that he is a Pole turned Swiss. In fact, he was a kind of Polish squire.

This «squireness» manifested in deeds – and in speech.

In his language, there is a lot of ribald bluntness and mischievous wit. In Polish language he felt like a content lord of the manor. Here are some of the peculiarities of his language: "logical coupling" – about syllogistic mode;

"human praise" – about humanism; "havelism" (from Hebrew) – about pessimism; "producers of worldviews" – about those practicing synthetic philosophy; "chatterers" – about those who speak vaguely and slurred; "pontificators" – about eclectic philosophers; "rogues" – about sceptics, the intellectuals of the period of decline; "beings of the lower order" – about poor philosophers; "gang of four" – about the proponents of blurring the distinction between science and magic: Thomas Kuhn, Paul Feyerabend, Stephen Toulmin and Norwood Hanson; "therapeutic Wittgensteinism" and "anti-Galileo counter-revolution" – about some deviations in analytic philosophy; "philosophical round-ups" – about conferences.

In his works, there are plenty of excellent bon-mots, apothegmata, aphorisms, ripostes and punchlines. He confided, for instance: "I believe vacuum to be the deepest of all things; hence my love for platitudes and trivialization" [Bocheński 1993c: 172]. And he added: "I have very great respect, as a logician, for banalities, because ultimately the whole logic is a collection of banalities" [Bocheński 1993c: 10]. Elsewhere, he confessed: "The only thing I wanted to achieve in life, is to introduce a little order in the brains, so that philosophers stop saying silly things" [Bocheński 1988: 70] It was very fitting for him, what he wrote about Alfred North Whitehead: that "he has an incredible ability to formulate concise sentences" [Bocheński 1988: 78].

And all this – in speech – sprinkled with orientalisms ("А дидко знае!" ["Goodness knows"], "Это другое дело!" ["It's an altogether different matter!"]) and anecdotes, not devoid of self-irony, with hidden layers. Here is one of them: "Once, I ride on the train with some Italian philosopher, prof. Castelli. He asks me: What do you do, father? – I try to practice a little logic. He looks at me and asks: Are you not afraid, father, to be a servant of Satan? I say to him: You are like Luther. And he tells me that it's not Luther; it's St. Peter Damian. It's true. St. Peter Damian said that logic is an invention of the devil. Like Fr. Tischner today" [Bocheński 1988: 135]. This story could have been told by one of heroes of Sienkiewicz's *Trilogy*, Mr Onufry Zagłoba himself!

It is true that the anti-nobility stereotype required a squire to be uneducated. Bocheński thus did everything to deny this stereotype. He used the weapon of defiance to this end. They say that the Middle Ages are dark ages? He shows them that their Enlightenment is dark. They say that religion is superstition? He points out to them that they are immersed in superstition themselves. Or, from another domain. The young «rogues» organize motorcycle rallies? He proves to them that the real man – even an old man – can afford something more: aircraft rallies. *Etc*., *etc*. Similarly, here. They

say that a squire is a blockhead? He gives himself as an example that one can be a squire-philosopher.

And if the word "squire" offends someone despite everything, he can be described thusly: philosophizing Sarmatian.

***

Polish Dominicans have so far had three top-class thinkers: Ferdynand Ohm-Januszowski, Adam (Jacek) Woroniecki and Bocheński. The work of the latter is a real treasure – and wasting it would be an intellectual crime. It must be published, read – and above all continued. To continue in this case is – as Bocheński himself would put it – "does not mean to share [his] ideas […], but his fundamental philosophical attitude. […] A philosopher should exercise his brain on his own" [Bocheński 1988: 125-127]. And in order to really exercise one's brain – logic is necessary. And this is precisely what Bocheński encouraged: to thoroughly learn and apply logic.

He said among other things that:

> Poland [due to its traditions of logic] is today the only one in the world with the opportunity to create a new [*i.e.* analytical] Catholic theology [Bocheński 1988: 131].

These words are a kind of Bocheński's testament.

12. Marian Przełęcki

To say everything about things,
one needs to speak not only about things.

[Przełęcki 1984]

1. Life

Marian Adam Przełęcki was born on May 17, 1923, in Katowice, as the son of Leopold, a bank clerk, and Olga née Micewska. In 1939, he graduated from four-year Gymnasium School in Tomaszów Mazowiecki. During World War II, he was in Nowy Sącz, where after several years of preparation he passed his final examination before a secret examination committee. In 1942-1944, he worked as a clerk at the local railway workshops.

In 1945, he began studying at the Faculty of Humanities of the newly opened University of Łódź. He recalled half a century later:

> What the first post-war year of study was about, let it be evidenced by the fact that to this day I carefully keep notes of all lectures, which I then attended [Przełęcki 1992a: 127].

At the University of Łódź based on his paper *O uzasadnianiu jednostkowych zdań psychologicznych o cudzych doznaniach* [*On Substantiation for Individual Psychological Statements about Other People's Sensations*], written under the direction of Janina Kotarbińska, he received a master's degree in 1949. July 4 of the same year he married Aleksandra Napiórkowska, later a prominent expert in the field of experimental biology. The Łódź times also brought about the familiarity and friendship with Ija Lazari and Tadeusz Pawłowskis and with

Klemens Szaniawski. While still a student, in April 1947, he became a junior assistant at the Department of Logic; after receiving master's degree, he was appointed senior assistant of the department. Those years were also marked by hard organic work when building from scratch a scientific workshop of the department, work later recalled among younger colleagues with certain regret, as a tradition rarely continued today.

In May 1952, he moved – in the wake of Janina and Tadeusz Kotarbińskis – to Warsaw, where he went through all the ranks of teaching: in January 1955, he became assistant professor, in October 1962, a reader, in July 1971, associate professor, and in February 1986, a full professor at the Institute of Philosophy of the University of Warsaw. In the years 1955-1961 (including only part-time in 1957), he also worked as an assistant professor at Department of Logic of the Institute of Philosophy and Sociology of Polish Academy of Sciences. As a Polish Academy of Sciences fellow, in the academic year 1958-1959, he stayed in England, where he continued his studies under the direction of Alfred Ayer at the University of London (just before his return to Oxford) and Joseph Woodger and Richard Braithwaite from Cambridge University.

His academic career developed in parallel. In 1957, he became a doctor (as back then it was called, according to Eastern customs: a candidate) based on the dissertation *Pozaformalne kryteria poprawności definicji w naukach przyrodniczych* [*Extraformal Accuracy Criteria for Definitions in the Natural Sciences*]. The promoter was again Kotarbińska and reviewers: Kotarbiński and Kazimierz Ajdukiewicz. He completed the habilitation procedure in 1961: his dissertation was titled *Pojęcia teoretyczne a doświadczenie* [Przełęcki 1961], and his reviewers were Ajdukiewicz, Kotarbińska and Maria Kokoszyńska-Lutmanowa.

His authority as a logician, achieved in the past forty years in Warsaw – achieved, long-established and enriched with rare in academia non-confrontational nature – was the reason for which he was burdened (while not caring about splendour and even avoiding leading social roles) a lot of different non-scientific responsibilities. In 1963, he became a member of the Philosophical Committee of Polish Academy of Sciences. As a member of the International Union of History and Philosophy of Science, in 1975-1979, he was part of its authorities. Since 1984, he was a member of the International Institute of Philosophy. He was a member of the Polish Philosophical Society since its reactivation in the fifties. In this society, he served as secretary (1956-1964) and member of the Main Board (1965-1970), chairman (1974-1976) and member of the Chief Audit Committee (1971-1973, 1977-1985) and deputy chairman for the Warsaw Branch (1971-1976). Since

1969, he was a member of the Polish Semiotic Society, and for several terms he was a member of its Peer Court.

He presented papers at many national and international conferences, and in 1974, with Szaniawski and Ryszard Wójcicki, he was a co-organizer of the International Conference on Methodology in Warsaw. He travelled with the lectures, among others, to universities in England, Italy, Austria and Yugoslavia. In the latter, since 1975 until the outbreak of the Civil War, he cooperated with the Inter-University Centre of Postgraduate Studies in Dubrovnik, in 1976-1981, being the director of the course *Science and Philosophy*, and in 1978-1981, participating in the work of the *Foundation of Science and Ethics* research program.

The Columbarium of the North Cemetery, Warsaw – a place of Przełęcki's burial

He was a member of editorial boards of journals: *Studia Logica* (since 1964), *Epistemology* (since 1978), *Poznań Studies in the Philosophy of the Sciences and the Humanities* (since 1975) and *Erkenntnis* (since 1975), *Grazer Philosophische Studien* (since 1982), *Dialectis and Humanism* (since 1982, also after transformation of the journal into *Dialogue and Humanism*) and *Filozofia Nauki* (since 1993); he was also a member of the editorial committee of *Studia Filozoficzne* (since 1965 – until closing the journal; in 1964-1966, he was also a member of the editorial office).

He died on August 9, 2013, in Otwock near Warsaw, and was buried in the Columbarium of the North Cemetery, Warsaw.

2. Personality

Socialist-altruist with unchangeable – against external political fluctuations – beliefs, but without party membership card; the only non-scientific organization to which he belonged (since 1949) was the Polish Teachers' Union.

Christian, but non-believer; he sought mystical experience in remote locations in the country and in the interiors of empty churches – churches without God; he believed, moreover, that even if there is no God, all is not morally permissible. Moreover, he actually considered faith in God an obstacle to the realization of evangelical moral ideal, and acceptance of religious dogma – something naïve and immoral, offending one of the most important (at least on the grounds of dignity ethics) moral norms: the warrant of the accuracy of thought.

His attitude towards the world was best expressed in the commentary to Mickiewicz's poem "Nad wodą wielką i czystą" ["Over the water great and pure"].

> [It is the] attitude of non-involvement in the transient things of this world, and yet the attitude of patient endurance. Its superiority is not superiority of pride, but the superiority of humble submission. Non-involvement in transient phenomena does not lead to rebellion against them. It is an acceptance of the order of fleetingness, acceptance of the evolving simultaneously in overcoming this order. Everything has a purpose and a role to play. Seeing the purpose of the passing world and acceptance of this purpose is also liberation from the bonds of time and finding one's own separate path [Przełęcki 1982b: 25].

It is a "loving attitude to the world and its difficult, devoid of illusion, affirmation" proposed by Iwaszkiewicz [Przełęcki 1988: 49].

The words, which he himself used to describe Szaniawski fit him perfectly as a philosopher.

> A traditional philosopher – is someone who nurtures deep, but dark, obscure, paradoxical, intuitions; yet he does so with the subjective certainty going beyond the degree of their objective justification. How to reconcile this intellectual attitude with […] the need for clarity […] precision and [appropriate] degree of criticism [Przełęcki 1992b: 262]?

Characteristic is the way in which he received the news about the preparation of a publication on his philosophical views. "But I do not have any views!" – was his reaction. One could feel in these words a regret that «clear depths» "are vainly sought in philosophical inquiry".

3. Environment

3.1. Predecessors

Przełęcki considered himself a representative of the Lvov-Warsaw School. If the demand for care for the precision in wording and discipline in support of philosophical theses and the assumption of applicability of logic to compliance with this requirement are to be considered as a major feature of this school, this self-identification is fully correct.

Incidentally, the price paid by Przełęcki for the precision and discipline of his analyses is their ascetic fragmentation. Reducing the degree of vagueness entails a reduction in the degree of generality: the scope of generalizations. Formal «digestion» is suitable only for rudimentary preparations removed from the philosophical material; the rest must be «set aside»: thrown in the

cauldron of only half responsible sketchy speculation or vague metaphors. The more certain outcome is achieved, the more there are things undecidable in such a certain way. And the negative consequence of that postulate rests upon all who admit to the heritage of the Lvov-Warsaw School.

Przełęcki is a representative of this school also due to the fact that in his studies he refers both to the problems analysed there and to its findings proposed by its coryphées, though he does not always accept the latter. For example, the starting point for the use of model theory apparatus in the analysis of philosophical questions are works of Roman Suszko, and a point of reference in the study of conventionalism – works of Ajdukiewicz, in the study of definition – works of Kotarbińska, the study of ontological commitment of empirical theories – works of Henryk Mehlberg, the study of analyticity – works of Kokoszyńska-Lutmanowa.

The specificity of theoretical interests of Przełęcki makes it natural that his works also include references to the achievements of philosophers outside the Lvov-Warsaw School, but close to it ideologically – closest, probably, to: Moritz Schlick, Rudolf Carnap, Hans Reichenbach, Karl Popper and Richard Montague.

3.2. Educators

As his direct teachers Przełęcki listed Kotarbiński, Ajdukiewicz, Maria Ossowska and Kotarbińska. The student-teacher relationship here is in no way a relationship of master and follower.

Przełęcki subjects the leading metaphysical doctrine of Kotarbiński – reism – to analysis which leads to conclusions destructive in their essence. The thesis of ontological and semantic reism is false, unless it is somehow either radically limited, or deemed something other than it identifies itself – for example, an arbitrary definition of "reasonableness" or the characteristics indicating the criterion of a minimum ontological commitment. An idea of the quality of the analysis that leads to this conclusion is provided, *e.g.*, by *explicatum* of the view that the semantic version of reism is justified in its ontological version. In the most liberal interpretation, this view for Przełęcki adopts the form of thesis: that any true non-reistic sentence (*scil.* implying existence of objects other than things) is translatable, at a certain level of precisation of language to which this sentence belongs, into a reistic sentence – is a logical consequence of the fact that there are only things.

Equally devastating results are brought about by Przełęcki's analysis of criticism of transcendental idealism carried out by his second teacher, mentioned above – Ajdukiewicz. It turns out that in its original form this

criticism is untenable. The metalogical principle of excluded middle – which this criticism referred to – does not apply to the area where the dispute of realism with idealism is pending: not fully determined semantic languages of our knowledge about the world.

Przełęcki also did not share, among others, Ossowska's view, calling into question the attempts to directly justify assessments by quasi-empirical intuition. On the other hand, integral altruism of Przełęcki would not find favour with someone, who, as she, realized that in an environment which "does not want to flourish on someone else's harm", an «inveterate altruist» "requires constant vigilant care" and becomes annoying to live with [Ossowska 1949: 202].

Przełęcki is perhaps most connected to Kotarbińska – promoter of his master's and doctoral dissertations. The ideal of scientific integrity – good work in philosophy – is common to the whole Lvov-Warsaw School. The essence of this ideal – as already mentioned – is the precision and discipline, but with them it is optimal precision and discipline – not: maximal. Their analyses are concise, but one cannot accuse them of brevity. Despite that, there is also something in which they differ profoundly. They both realize this ideal mainly in the methodology; but if Kotarbińska makes it in the «traditional», aformal methodology, Przełęcki – just in FORMAL one.

3.3. Peers

A special role in the work – and the life – of Przełęcki was played by four people of his generation: Andrzej Grzegorczyk, Wójcicki, Jerzy Pelc and Szaniawski.

Grzegorczyk – as Przełęcki confessed – instilled in him an attitude of scientific sincerity: the need – and the courage – to express one's own theoretical intuitions, however naïve they seemed at first glance. And, indeed, Przełęcki's statements sound unpretentious, but they are never trivial. And often they are as surprising as the one which breaks the stereotype of love from Plato's *Symposium,* revealing its loathsome feature of aestheticism. Or the one stating that "indifference finds it easiest to be tolerant" [Przełęcki 1985: 30].

With Wójcicki, Przełęcki jointly published three own articles and one volume of the work of others. All three papers suggest bilateral impact – despite the serious differences as to the findings, which are reflected among others in mutual reviews from other works.

He was also publishing in trilateral cooperation: with Pelc and Szaniawski – and Szaniawski and Wójcicki. Kotarbiński once called Stanisław

Leśniewski "the only man of genius, whom fate allowed him to meet almost daily" [Kotarbiński 1958a: 307]. Przełęcki wrote about Szaniawski – after his untimely death – that he was "the most intelligent man with whom fate brought him into personal communion" [Przełęcki 1992b: 261].

4. Views

4.1. Ontology

Being in compliance with tradition of the Lvov-Warsaw School, Przełęcki treated ontology as the general theory of reality: everything and only what is – what exists.

The reality is objective: it cannot be reduced to human behaviour; it is not only its «correlate». "Only about knowable objects one can legitimately claim that they exist" [Przełęcki 1984: 358], but it would be baseless to assert that there are only knowable objects. Even more unreasonable it would be to limit reality to what is present. The passage of time is not that part of what is irretrievably loses existence and is forever destroyed. What once was happened, was once a reality – cannot be undone, will never lose reality again.

There are not only knowable objects, in particular, not only the observable objects (see *e.g.* micro objects), not only «present» (see *e.g.* past events), but also not only fully describable; what's more, no existing object is fully describable.

Real world – including the part described by empirical theories – has set-theoretical structure: set theory (more precisely: naïve set theory) can simply be regarded as a formal theory of reality. Moreover, "it is the only formal theory of reality with sufficient precision and generality" [Przełęcki 1982a: 99]. Set-theoretical ontology is ontology of abstracta and concreta. If we specify set-theoretical abstracta – *i.e.* sets – as devoid of both temporal and spatial and physical characteristics, then concreta are these objects, which are entitled to at least one of these characteristics. Things – concrete individuals – would be assigned all, and *e.g.* contents of images – only temporal characteristics. Contrary to reism, not only things are concreta, and contrary to concretism – not only individuals exist.

The universe of set-theoretical structure consists of things: observable (macroscopic) physical objects, having the capacity to be stimuli, and thus having impact on human cognitive organs – causing sensory and extrasensory experience. But beside things, in the world there are still sets that create infinite hierarchy of abstract objects.

Set-theoretical ontology is reductionist ontology: properties on its basis are reduced to sets. The properties may be of two types: empirical and

extraempirical. The former – or qualities – are the domain of science (and methodologies); the latter – or values – refer to philosophy in the strict sense, which therefore can be reduced to axiology.

Among the empirical properties, some are highlighted as IMPORTANT from the point of view of a particular theory. Among such relatively important properties some are ESSENTIAL properties, *i.e.* such, on which others depend, where these dependencies are recognized in the laws of a relevant theory – so that knowledge of these laws allows to infer on the basis of the fact that an object has a certain essential property, that its remaining properties are also relatively important.

Regardless of that, some properties are «current», others are a type of disposition: we know of their existence because, in certain observable conditions, they reveal, «update» themselves.

Sets are determined by properties, but ambiguously: various properties – including observable (see *e.g.* greenness) and non-observable (*e.g.* emission of electromagnetic waves with a length of 490-560 mm) – can determine the same set (in this case a set of green objects).

The world of things is subject to constant spatial and temporal changes, and therefore in terms of the model theory must be treated as a series of successive «established» structures.

4.2. Epistemology

There are two sources of knowledge or direct ways of justifying knowledge: sensory experience and axiological (extrasensory) intuition – attributed respectively to two aspects of the world of things: qualities and values.

"Data of experience" can be understood in two ways. In broader sense, they are «ostensive» properties. In the narrower sense, they are the data of the first type expressible in language, in particular expressible in a given language. Experience data inexpressible (at all) linguistically are *e.g.* the cognitive content associated with religious intuitions, if these intuitions exist, and if they are indeed indetermined. Contents of sensual and axiological experience are on the other hand expressible, but not all in any language – for example not all in a sufficiently semantically determined language.

Indirect justification has a similar form both in the domain of quality and value. In particular, empirical and axiological theses – and more broadly philosophical theses – are often derived from other theses by reduction and entimematic deduction. In the case of reductionist ontological theses, the complementary premise usually happens to be an ontological version of

"Occam's razor", according to which there are only those objects whose existence is established by each manner of wording of our knowledge.

4.3. Methodology

4.3.1. Idealization

The formal methodology of mathematical theories has a rigour in presenting questions, reliability of submitted solutions and impartiality in revealing undecidable issues. A similar degree of rigour, reliability and impartiality can be achieved by using formal apparatus within the methodology of empirical theories, particularly in standard – *i.e.* model-theoretic – reconstruction – of the semantics of language of these theories. Such standard model-theoretic approach allows, among others, to pose the issue of eliminability of theoretical terms with such a degree of accuracy which with other approaches is unreachable (*e.g.* on the basis of set theory, the only approximate equivalent of this problem is an issue of eliminability of functions).

The use of the formal model theory apparatus requires subjecting empirical theories to rigorous idealization procedure similar to the one, which mathematical theories are subjected to.

Logical analysis of any theory is possible in so far as it is reconstructed as a theory:

(a) «STATIC», *i.e.* identified with a set of sentences with unchangeable logical status (actual theory is in this sense a string of such sets);

(b) ELEMENTARY *i.e.* such that the underlying logic is only first-order logic (with identity);

(c) FORMALIZED *i.e.*, expressed in language characterized as purely syntactic (*scil.* by reference only to form of expressions);

(d) AXIOMATIZED, *i.e.* being a system of statements identical with the set of consequences of a particular decidable subset of these statements.

Actual scientific theories are neither «static», nor elementary nor formalized, nor axiomatized. It is important, however, that not only mathematical, but also empirical theories CAN be subject to such idealization, and thus CAN also be subject to formal logical analysis. Such analysis in the case of empirical theory also requires an assumption that the universe of such a «simplified» empirical theory is a set of physical objects: observable or non-observable.

In approach of model-theoretic semantics, language of the theory is suitable to describe certain fragments of reality – or rather certain aspects of these fragments with the structure of set theory – or certain models of language, where some of those «possible» (due to the language) models are

highlighted as intended, proper: those which are indeed described by the sentences of that language.

If the intended model is exactly one (*i.e.* there is unambiguously determined interpretation: that what the language actually says), the language defining this model is semantically fully determined.

Languages of empirical theories are not fully, unambiguously defined semantically. It is so for the following reasons.

4.3.2. Defining

In empirical theory language, besides logical terms there are extralogical predicates. Any set of sentences in the theory may be recognized as a set of postulates for extralogical predicates present in these sentences.

At least some of these predicates are defined directly, ostensively. These are observational terms whose denotations are sets of determined observable objects. Observational terms – as defined (interpreted, equipped with a denotation) ostensively – are (essentially) vague: using ostension one model can never be determined exactly. The ostension procedure consists in a direct indication not of denotation of the observational term, which is not a certain observable object in the strict sense (and therefore is not subject to the indication by ostension), but in the indication of individual designates (or positive patterns) and objects that are not designates (or negative patterns). And all designates – and even less non-designates – of a given observational term generally with ostensive defining cannot be indicated. User of an ostensively defined term – even best «trained» in language – must therefore, through «an act of abstraction» decide on his own whether the similarity between an object and a positive pattern concerns the correct reasons and whether it has a degree sufficient to consider this object as designate of the considered term; this «act of abstraction» does not succumb to a precise logical analysis. The issue is further complicated by the already mentioned perpetuity of changes in the world. Hence, the large number of observable objects – and of course all unobservable objects – are within the scope of ambiguity of the term: sometimes (*scil.* in some models) they are included among the designates of the term, sometimes (*scil.* in other models) – not. This situation has to be obviously distinguished from a situation in which a source of similar differences is ambiguity of expression or incorrect identification of the object in question.

In addition to the observational terms, extralogical predicates of language of empirical theories include theoretical terms, reffering either to unobservable properties of observable objects or simply unobservable objects.

As such, they may only be defined verbally with a distinguished subclass of postulates (*resp.* axioms) – namely with the meaning postulates. These postulates usually take the form approaching one of the following forms (in order of increasing degree of generality):

(a) "each and only an object having a certain observable property falls under a given theoretical term" (equivalence definitions);

(b) "each and only an object having a certain observable property falls under a given theoretical term, if it meets a certain condition" (conditional definitions, including *e.g.* operational definitions of "length" and definitions of "chemical element");

(c) "each object having a certain observable property and only an object not having (another) defined observable property falls under a given theoretical term" (partial definitions, for example definitions of "genotype");

(d) "each object having a certain observable property falls under a given theoretical term, unless it falls under ANOTHER specific theoretical term" (definitions «of exclusion»);

(e) "each object having a certain observable property remains in a certain relation to a certain object falling under a given theoretical term – in particular, contains the object" («relative» definitions).

Interpreted verbally, theoretical terms (with the exception of empty terms) are – as observational terms related to them with postulates and ostensively interpreted – also vague. They are also – with the exception of those with equivalence definition – open, as referring to the properties manifesting themselves only in certain circumstances. All this is what makes the language of empirical theories («idealized» in the highlighted manner) a language significantly indeterminate.

This has serious philosophical implications.

4.3.3. Valuation

According to the semantic conception of truth, given sentence is true, when things are as it proclaims. According to model-theoretic version of this conception, a sentence is true, when it is true in an intended model, *i.e.* when in this model, things are as it proclaims. In the case of indetermined languages, having more than one intended model, a certain sentence – namely containing vague or open terms – may be true in some and false in other models. If we accept that the sentence is *super-true,* true «really» (*scil.* absolutely), when it is true in all intended models (*resp.* for each permissible interpretation), then the sentence previously considered – otherwise having always a certain value within a given model – must be considered

indeterminate, deprived of "absolute" logical value. Also its negation must be recognized as similarly indeterminate.

It turns out that the analysis of empirical theories in terms of model-theoretic semantics and set-theory ontology leads to undermining two traditional dogmas: semantic principle of specificity of all descriptive sentences and metalogical law of excluded middle.

Some sentences are indeterminate (unspecified as to the absolute logical value) and therefore metalogical principle of excluded middle (according to which of the two contradictory propositions, one is always true) must be repealed. This situation requires neither repealing the ontological principle of excluded middle (which proclaims that of the two «contrary» states of affairs one always occurs), nor taking idealistic position in the ontological dispute idealism-realism. The point is that this indeterminacy of some sentences is not based on indeterminacy of a relevant fragment of the world, but on indeterminacy of which of the – otherwise determined – fragments of this world the issue is about (*i.e.* lack of determination what is a «semantic correlate» of these sentences).

This analysis also forces us to challenge two other traditional dogmas: a methodological belief in the separation of analytic statements among empirical theory sentences, *i.e.* definitions and their consequences, as well as synthetic sentences, or material statements, justifiable through direct experience – as well as semantic illusion that what we speak of is determined by the occurrence of such or other words in our utterances.

4.3.4. Analyticity

When it comes to the dogma concerning the dichotomy between analyticity and syntheticity, it turns out that, for example, among the consequences of partial definitions there is one, according to which no object can at the same time have both «defining» properties (in particular «observable»), properties, indicating the «defined» property (especially denotation of defined theoretical term). This consequence has the nature of an empirical generalization and as such is subject to assessment by the experience. It turns out – in other words – that a set of analytical sentences in language of a certain empirical theory cannot be identified simply with a set of consequences of definitions of this theory, as the set of these consequences can include the non-analytic consequences, thus being far from negligible part of the extension of the theory.

The notion of "analytic statement" must therefore be narrowed down to avoid paradox based on the fact that on the one hand definitional introduction

to a language of a term makes analytical some originally synthetic sentence in which the term does not occur at all; on the other hand, that truthfulness of some analytic statements depends on the experience.

This can be done in three ways, where the choice of method depends entirely on the will of the user of the concerned language.

Firstly, it can be assumed that the sentence is an analytical sentence in that language, when it is true in any model of the language in which NON-CREATIVE postulates are true, thus excluding *e.g.* reductive definitions. With this perspective, the experience may settle at most the reasonableness of that sentence – but if it makes sense, it certainly is also true.

Secondly, it can be assumed that the sentence is an analytical sentence in that language, when it is true in any model of the language in which postulates are true, provided that the fragment of the model – corresponding to the language of the first order, of which the language in question is an extension – is permissible due to these postulates.

Thirdly, one can avoid the phenomenon of paradoxicality if the definition formulas clearly separate analytic (conventional) component from synthetic (factual) component. If the general definition scheme is "Something is a «defined» object, when it meets the specified definitional condition", then the analytic component is the sentence claiming that (a) if there is something that meets this condition, then this thing is just this object, and the synthetic component – the sentence claiming that (b) there is something that satisfies the definitional condition. Thus, for example, partial definition "If something has a certain «defining» property, it also has a «defined» property (*scil.* assigned to a defined predicate), and if it has a different (but specified) «defining» property, it does not have a «defined» property" is equivalent to the conjunction of analytic component "If something has the first and not the second «defining» property, it has a «defined» property, and if it has the second and not the first «defining» property, it does not have a «defined» property" and synthetic component "If it has one, it has no second «defining» property".

Analytical sentence of a given language is then a sentence of the language, which is a logical consequence of any set of analytical components (sentences) of that language. In this way, the extracted analytic sentences are not involved in said paradox, but some of them are still in some way dependent on the experience: namely, it determines their meaningfulness.

If one wishes for experience to decide neither about the truth, nor about meaningfulness of analytic sentences, one needs to limit the latter to those that are either (a) an axiomatic postulate, *i.e.* such that its synthetic component

is a law of logic (*scil.* logical tautology without descriptive terms) or (b) definitional postulate whose synthetic component is an analytic sentence, or (c) a logical consequence of any set of analytic statements, including as only descriptive terms – names appearing in those sentences. Such analytic sentences in the strict sense would include equivalence definitions and any definitions reduced to their analytical components, and thus ultimately definitions containing as only names – non-empirical terms.

Dealing with the last of these dogmas requires clarification, when the occurrence of a term in a sentence is related to the fact that this sentence does not in fact say anything about the denotation of the term. One must therefore specify the criteria of irrelevant occurrence of terms in a sentence. These criteria may be defined more or less liberally. A given term occurs in a sentence of a certain language in an inessential way, when the logical value of this sentence is determined uniquely by the interpretation of its other terms: each or some of their interpretations, either arbitrary, or permissible, or – in the weakest sense – relevant; in other words – if the sentence is equivalent either logically or analytically, or «actually» to a certain sentence not containing this term. Most relevant at that is probably the «middle» explication.

4.4. Axiology

Axiology differs from the science with its area of interest and the way of speaking about its subject and justification of these statements.

An area of interest of axiology are values: aesthetic, ethical and metaphysical – the individual sense (granted to life of a man realizing the values), and the global sense («global» value of the world). Axiological statements therefore – are evaluating sentences: that *e.g.* a given creation of man is aesthetically ugly, that a certain act is morally reprehensible, that someone's life is «pointless», that the world is «sinister».

Evaluating sentences are denied the cognitive (logical) value either because existence of any intended model for those sentences is rejected, and therefore relevant evaluating predicates are considered to be totally indetermined (*resp.* vague), or because existence of properties assigned to these predicates is rejected.

As to the first reason, at least some of the evaluating predicates do not seem completely vague: if *e.g.* predicates "aesthetically beautiful" and "morally good" are not like that, then at least predicates "aesthetically more beautiful" and "morally better" do not look completely vague. As to the second reason: axiological systems analysis in terms of the standard – set-theoretic

– that is, extensional model theory generally repeals a problem of existence of properties, including axiological properties (values), as it attributes to predicates in the models – not properties, but sets. Moreover, axiological intuition proves the existence of values and indestructibility of values which have already occurred.

The indicated reasons are not enough to adopt the view that all evaluating sentences are devoid of logical value. On the contrary, much speaks for the fact that the evaluating predicates should be treated as extralogical predicates of empirical theories. Some of them resemble observational predicates defined ostensively (here by reference to standards of beauty or good identified using aesthetic or moral intuition); other – theoretical, defined verbally (by binding with the former).

The fact that at least some of the evaluating sentences are qualified in terms of logical value, obviously does not prejudge their scientificity, nor the scientificity of ethics. The fact that some sentences have the status of scientific statements is only determined by their justification, namely – by recourse as a last resort to experience. This final condition is not met by evaluating sentences: they may be justified at most appealing to intuition: aesthetic, ethical or metaphysical. The illusion to the contrary, comes from the fact that the actual philosophical statements are usually metaphorical and indirect. Indirectness of speech in this case lies in the fact that they have a *quasi*-descriptive form: they do not state outright, but rather suggest certain valuation – in the case of a metaphysical expression: a more or less defined «vision of being». They resemble in this regard literary expressions, and – to some extent – works of plastic art and music. The difference could be stated – metaphysically and indirectly – by saying that these provide a "concrete image of a certain fictional world", while the others – "an abstract model of the real world". Their function oscillates between informative and evocative.

The difference between direct way to justify evaluating and descriptive sentences concerns not only the type but also the degree of intersubjectivity of methods. Axiological intuitions are more subjective than empirical intuitions. Intuitions linked *e.g.* to moral good range between intuitions of a perfectionist («aspirer») and intuitions of an altruist. For the former, an act is morally good when it aims at achieving OWN moral good, *e.g.* moral perfection (or happiness), or at avoiding own moral evil, *e.g.* moral collapse. For the latter, an act is morally good when it aims at SOMEONE ELSE'S moral good or removal of someone else's evil, someone else's harm; when it is to increase someone else's good or protect them from evil, and not in the name

of selfish motivation – achieving own good or avoiding own evil. Faced with a situation when someone hurts someone, a perfectionist – «rigorous» moralist – primarily condemns the wrongdoer; altruist – «liberal» moralist («antimoralist») – sympathizes with both: the abused, and the wrongdoer. He solidarises with both, because both of them are touched by misery: the abused by harm and the wrongdoer – by moral decay. Limited intersubjectivity of axiological intuitions is the reason that criticism of perfectionist's decisions must be ultimately a criticism from some *de facto* subjectivist point of view, *e.g.* the position of an altruist.

It would be, however, dogmatic to believe that in the event of similar differences the limit of intersubjectivity was completely exceeded. And further, on the basis of that only that empirical statements are intersubjectively justified, and only the latter – are rational, to consider as irrational any valuation. Someone who proclaims certain views with the degree of firmness corresponding to the degree of their legitimacy does not behave irrationally. So, he will behave rationally who will assume that the attitude of an altruist – free of condemning anyone – effectively protects against the danger of realization of negative values under the guise of «moral sensitivity» as long as it is not a certain and unreserved assumption.

The boundary of logical rationality runs not between experience and axiology, but between experience and axiology – and religion and mythology.

Therefore, according to Przełęcki, genuine faith is not available for a critical philosopher.

4.5. History of philosophy

Przełęcki is not a historian of philosophy: he is not, in any case, if the occupation of historian is seen as tracking wandering ideas and making adequate HISTORICAL EXEGESIS of the texts concerning these ideas.

When Przełęcki goes back to his favourite since the philosophical initiation and – in his opinion – the greatest thinker of the world, Plato, he rather makes a kind of AHISTORICAL RECONSTRUCTION of his views.

Przełęcki is not really interested in WHAT problems old philosophers really dealt with; he is interested in certain PROBLEMS, which they ALSO dealt with – and only so much as they are still valid problems in his assessment. Faced with such *quasi*-historic works, allegation of inadequacy is actually unseemly.

It is not, therefore, about whether Plato had a clear awareness of the difficulties associated with the theory of ideas (and there are many indications that he had such awareness), but the fact that both mereological and analogous ("similarity-based") explication of the relationship between objects and

ideas, in which these objects «participate», must be considered unsatisfactory and «paradoxical» in accordance with current methodological standards.

Neither is it about whether Plato's argument in favour of altruism is «dialectically» important, or whether it speaks to the opponents of Socrates, assuming commonality of relevant assumptions, but whether these assumptions are consistent with today's moral intuitions.

It is not finally about whether eschatological myths occurring frequently in this argument were treated seriously by Plato himself, but whether currently they are able to fulfil their pragmatic function: to facilitate the recognition of certain ethical ideas and encourage following them.

It is not about whether Plato indeed presented certain arguments, but about whether a certain argument, HISTORICALLY permissible, which CAN BE found in Plato, is FACTUALLY correct.

5. Summary

In philosophical controversies, some emphasize the validity of their own solutions, others – the fallacy of DISMISSED SOLUTION. Przełęcki is rather the latter. Therefore, his position is more easily determined using anti-theses rather than positive theses.

The core of Przełęcki's position is METHODOLOGICAL ANTI-SCIENTISM, ANTI-DOGMATISM, ANTI-IRRATIONALISM AND ANTIMAXIMALISM. Science does not exhaust knowledge. Not all its components should be acknowledged equally. «Truths» of faith do not belong even to the «weakest» knowledge. Obtaining (in particular by formal logical analysis) complete knowledge about any real issues is not achievable.

Przełęcki's ONTOLOGY is determined by ANTI-IDEALISM, ANTI-REISM, ANTI-FICTIONALISM AND ANTI-INDETERMINISM. The world is not the same as its image. Things do not exhaust the total of what exists. However, not everything that can be thought exists. There are (even in the future) no events that would not be predetermined.

In EPISTEMOLOGY, Przełęcki favours ANTI-CONVENTIONALISM, ANTI-SENSUALISM, ANTI-OPERATIONALISM AND ANTI-RELATIVISM. Not all scientific claims are only linguistic conventions. Direct justification to factual assertions is provided not only by sensual data. The fact that certain scientific claims are essentially unsolvable, does not deprive them of meaning. True statements never lose the truthfulness.

Przełęcki's METAETHICAL views include ANTI-EMOTIVISM, ANTI-SUBJECTIVISM, ANTI-NATURALISM AND ANTI-HETERONOMISM. Evaluating statements not only express. What they describe – values – cannot be reduced to individual

perceptions about values. Values are also not only the quality system. Justification of evaluations cannot be found outside the world of values.

Przełęcki's ethics is based on ANTI-EGOISM, ANTI-PERFECTIONISM, ANTI- EUDAIMONISM AND ANTI-HEDONISM. It is not a good thing to take care of own welfare. Nor of perfection. Nor of happiness. Nor of pleasure.

One, however, would like to attach to all these anti-qualifications the reservation which often appears in Przełęcki's works. Do they really grasp the PHENOMENON of his philosophical individuality? IT'S HARD TO SAY DECISIVELY …

6. Assessment

Some ONTOLOGICAL views of Przełęcki were criticized in an article *Spiritus metaphysicae in corpore logicorum* [Jadacki 1980]. His «realism» was there contrasted with the thesis that there are languages whose universe is not identical with the real world; that logic should not remove such languages from the field of its research; that semantics – in particular semantic conception of truth – should be (and *de facto* is) – ontologically neutral; that ignoring other than existence ways of being prevents the correct formulation of some ontological issues. The criticism did not convince Przełęcki, who, among others, rejected the notion of "being" broader than the notion of "existence" – as (for him in any case) intuitively elusive.

The main complaint directed against Przełęcki's METHODOLOGICAL solutions – formulated, among others, by Peter Williams [1970] – boiled down to the fact that the program idealization reaches the degree of inadequacy deforming the scientific reality. Przełęcki's response was to demonstrate the concretisability of proposed idealization – by reference to examples of procedures in which the individual idealization conditions are gradually lifted, and examining the theoretical consequences related thereto.

And so, a departure from the «static» approach and examining the DEVELOPMENT of the theory (in particular, its language), and a comparison of each component of its non-singular sequence of its «cross-sections», captures the variable role of experience in justifying the sentences in different «cross-sections». The emergence of a new definition of a given theoretical predicate can then be regarded as a change in the theory of objects belonging to its denotation – while maintaining its current sense. This new definition is essentially a real definition, or a certain synthetic sentence (*scil.* material assertion, claiming to be an inductive generalization), and experience, of course, decides on its truthfulness. One can also – and this is according to Przełęcki a more accurate approach – see here a change in the sense of the defined predicate, and in a relevant definition – a definition in the strict sense, or a certain analytic

sentence; experience then decides at most its usefulness, namely whether or not it meets the criteria laid down in the existing definition, if that indeed identified some class of objects momentous for the theory.

Repealing the assumption about the elementary status of empirical theories and enriching their language with mathematical terms (and universe with mathematical objects) enables analysis of the issue of measurement approximation – in terms of vagueness of empirical terms – and empirical sense of quantitative sentences.

Lifting the limit of the intended models of observation language to the extensions having as the universe a set of physical objects allows to specify the universe in a manner more similar to the facts: on the one hand ostensively for observable part and verbally for the remaining part, on the other – ambiguously for the whole (and this, contrary to appearances, is what happens, according to Przełęcki in science).

Undermining the METAETHICAL position of Przełęcki Anna and Andrzej Jedynaks [1981] accused him that extensional interpretation of ethical theories, in assigning logical value at least to some evaluating propositions, blurs the distinction between evaluating and descriptive predicates. The procedure of ostensive defining – appropriate for «observation» moral predicates, for example predicate "morally good" – would, according to them, rely on the registration of what all users of the predicate *de facto* consider to be its referents, in this case morally good acts. And that would lead to the identification of *e.g.* predicate "morally good" with the predicate "regarded by the general public of the English language as morally good". Rejecting such identification, Przełęcki pointed out that not every assessment of the type "This act is morally good" is a part of ostensive definition. Some of these assessments are factual assertions, not defining a sense of an examined predicate, but reporting identification of an action as belonging to the denotation of this – understood in some (even intuitive) way – predicate, and sometimes such identification may be simply wrong.

Przełęcki's moralism was criticised in a text whose title – "Utopia etyczna Mariana Przełęckiego" [Jadacki 1988] – captures the main caveat formulated there: that this moralism is unrealistic, that it does not take into account reality. The moral ideal of mercy not opposing evil was found in this text as ambiguous (and in the original, unpublished version, even harmful) socially. Przełęcki (in the introduction to the book publication of his ethical essays) admitted that his ideal "seemingly at least – cannot aspire" to the role of an "effective weapon in the fight against evil" [Przełęcki 1989: 132]. He added, however, that in general "moral gap between moral ideal and reality is inevitable" [Przełęcki 1989: 132].

7. Impact

Przełęcki wrote:

> We should separate clearly two things: what in philosopher's oeuvre is the most creative and original, and what seems closest to us today for one reason or another [Przełęcki 1991: 308].

In the case of a contemporary philosopher this distinction is particularly difficult to carry out. The fact that many Przełęcki's ideas have been taken by other philosophers can be considered as much a symptom of originality as «closeness». Proper measure can only be provided by some historical distance, the more that the references had the form of critical continuations. At least three such continuations – all within methodology – should be mentioned.

And thus, Williams [1974] examined – stemming from Przełęcki's analysis – a problem of observational displacement of a fragment of language of empirical theories from the language to everyday language and the issue of recognition of such observational language as a kind of useful epistemological fiction.

On the other hand, Wójcicki [1974] – referring to Przełęcki's approach – considered among others the ability to opt out from opposing theoretical terms to observational terms and operational, «constructivist» limitation of the universe of intended models, as well as granting to sentences, which in some intended models are (relatively) true, and in other (relatively) false, the approximate (absolute) truthfulness.

Finally, Joseph Sneed [1971], accepting – like Przełęcki – the set-theoretic structure of reality, tried to describe this structure directly, and not – as Przełęcki – through the «filter» of the language structure of elementary empirical theories and relevant semantic relations (in particular veracity).

It is understandable that Przełęcki exerted the greatest influence on his students.

8. Students

It is difficult to find someone for whom scientific work would be so closely linked thematically to teaching, as for Przełęcki. The vast majority of master's and doctoral theses written under his direction do not go beyond the subject, which he creatively dealt with – and usually in the period before directing the master's or doctoral student.

In the early sixties, Przełęcki worked on the problem of analyticity and the work of his first doctoral student – Adam Nowaczyk related to this issue (*Pojęcie zdania analitycznego a niektóre zagadnienia teorii poznania i semantyki* [*The Concept of Analytic Statement and Some Issues of Epistemology and Semantics*]

– 1967) – and graduate students Marian Dębogórski (*Poglądy Arthura Papa na kwestie analityczności i aprioryczności* [*Arthur Pap's Views on Issues of Analyticity and Apriorism*]) and Urszula Ofierska (*Pojęcie zdania analitycznego i problem analityczności matematyki wedle Carnapa i Quine'a* [*The Concept of Analytic Statement and Issue of Analyticity of Mathematics According to Carnap and Quine*]).

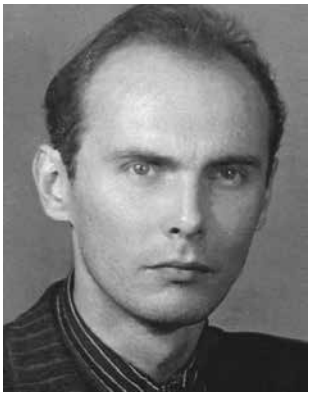
In the second half of the sixties, Przełęcki prepared a monograph issued in 1969 *The Logic of Empirical Theories* and his graduate students also studied the key issues of logical reconstruction of empirical theories: Elżbieta Kluba-Kałuszyńska – axiomatization methods (*Pewne sposoby aksjomatyzacji teorii naukowych* [*Certain Methods of Axiomatization of Scientific Theories*] – 1969), Ryszard Wawrzyńczak – types of models (*Różne pojęcia modelu w teorii nauk empirycznych* [*Various Concepts of Model in the Theory of Empirical Sciences*] – 1970), Mieczysław Omyła – interpretations of definitions (*Podstawy teoriomnogościowe definicji indukcyjnych* [*Set-Theoretic Fundamentals of Induction Definitions*] – 1970).

At the turn of the seventies and eighties, Przełęcki dealt with broader methodological problems related to the implementation of the program outlined in the aforementioned monograph; thus, not coincidentally this period resulted in doctoral theses – by Michał Tempczyk regarding reducibility (*Warunki redukowalności teorii empirycznych różnych szczebli strukturalnych* [*Terms of Reducibility of Empirical Theories at Different Structural Levels*] – 1972), by Elżbieta Mickiewicz regarding explication (*Wyjaśnianie historyczne w biologii* [*Historical Explication in Biology*] – 1973) and by Stefan Snihur and Józef Wajszczyk concerning formalization (respectively: *Próba formalnej rekonstrukcji języka empirycznego* [*Attempt at Formal Reconstruction of Empirical Language*] – 1975, and *Formalna rekonstrukcja pojęcia zmiany na gruncie języka jakościowego* [*Formal Reconstruction of the Concept of Change on the Basis of Qualitative Language*] – 1976).

In the decade between 1976 and 1987, the main point of Przełęcki's interests moves to philosophical implications and applications of results of his logical research, and this is the subject of, successively: the dissertation by Krystyna Misiuna (*Kryteria semantyczne ontologicznego zaangażowania języka* [*Semantic Criteria of Ontological Involvement of Language*] – 1987), thesis by Miłosz Fryckowski (*Semantyczna teoria prawdy Tarskiego jako kodyfikacja klasycznej koncepcji prawdy* [*Tarski's Semantic Theory of Truth as a Codification of the Classic Concept of Truth*] – 1988) and doctoral thesis by Jarosław Pasek (*Analiza pojęcia presupozycji* [*Analysis of the Concept of Presupposition*] – 1988).

Among Przełęcki's graduate students, several earliest – Nowaczyk, Kałuszyńska, Omyła and Tempczyk – are today's highly appreciated scientists in philosophical circles in Poland and beyond.

13. Zdzisław Augustynek



The nature of time
can be captured only by a person
who listens to classical music.

Zdzisław Augustynek[36]

1. Life and activity

He was born on November 25, 1925, in Jordanów, near Nowy Sącz, as the son of Jan, a railway clerk (train dispatcher at a local station) and Magdalena née Zgodomirska. After finishing elementary school in Biecz (1938), he became a student of the secondary school in Gorlice; during the occupation he was in Biecz, where he prepared for the small high school graduation exam in secret lessons; after the war he continued his studies in high school in Gorlice (in mathematics and physics classes), where he received a high school diploma (1946).

He studied at the Faculty of Humanities at the University and the Technical University in Wrocław (1946-1950) – back then, it was one university – completed with a master's degree in philosophy. After graduation, he married Bronisława née Fritz (3.07.1927, Lvov – 15.09.1984, Warsaw), the Polish Army soldier (honoured with the title of Righteous Among the Nations for helping Jews in the period of German occupation of Poland), master and then doctor of philosophy. He began doctoral studies at the University of Kiev (1951-1953), then he moved to Moscow University (1953-1955), where he received his doctorate (in the local terminology: "candidature") based on

[36] The quoted statement originates from one of the last conversations with the author of this book.

his thesis *Filozoficzne znaczenie szczególnej teorii względności* [*Philosophical Importance of the Special Theory of Relativity*] (1955). He received his habilitation based on dissertation *Determinizm fizyczny* [Augustynek 1962] (habilitation – the then readership – 1963). When preparing his thesis, he took short internships in Switzerland (1960) and Russia (1961). As a Fulbright scholar, he continued his studies in the United States (1966-1967). Ten years after receiving his habilitation, he obtained associate professorship (1971), and six years later – full professorship (1977).

His academic career began with assistantship in the University of Wrocław (1949-1955; on leave for the period of doctoral studies). Then, he was transferred to the Jagiellonian University, where he underwent consecutive stages of his academic career from the position of assistant professor to that of associate professor (1955-1977). He headed the Department of Philosophy of Nature (1957-1963), transformed into the Department of Philosophy of Natural Sciences (1964-1977). He also served as deputy director (1967-1969) and director (1969-1974) of the Institute of Philosophy at the Jagiellonian University.

Transferred – at his own request – to the Institute of Philosophy at the University of Warsaw, he created there a Department of Philosophy of Natural Sciences (1977), later transformed into the Department of Philosophy of Science, which he headed for nearly a quarter century (up to 2000). Besides, he worked at the Institute of Philosophy and Sociology of Polish Academy of Sciences (1957-1960), where he then headed the Philosophical Problems of Physics Laboratory (1977-1983), and briefly at the Academy of Mining and Metallurgy in Cracow (1960-1961). At the age of seventy (1996) he retired.

He took, among others, the following research trips: to Austria (1967, 1980 and 1981), Denmark (1981), Yugoslavia (1983 and 1985) and Canada (1983).

He spoke fluent English, German and Russian, but he very rarely delivered papers – even in Polish.

He was a member of the Bureau of the Committee of Philosophical Sciences of Polish Academy of Sciences (1969-1989) and a member of its Presidium (1972-1981) and Deputy Chairman (1981-1983); he was also an alternate member of Main Board of the Polish Philosophical Society (1980-1983).

He edited a series *Prace Filozoficzne* within the *Zeszyty Naukowe Uniwersytetu Jagiellońskiego* (1972-1976). He was a member of the Editorial Committee of *Studia Filozoficzne* (1967-1987) and *Dialectics and Humanism* (1974-1990). He chaired the Program Council of *Filozofia Nauki* since inception of the quarterly (1993) until his death.

The Augustynek's burial in the North Cemetery, Warsaw

He was a declared socialist (he belonged to the Communist Party in the years 1950-1989), but at the same time he had many friends among people with views distant from socialism, including his disciples Mirosław Dzielski and Józef Misiek – and with the author of these words.

He was awarded the Knight's Cross of the Order of *Polonia Restituta* (1974).He died on 29 October 2001 in Warsaw. He was buried on November 5 in the family grave in the North Cemetery (Wólka Węglowa, Warsaw).

2. Personality

There are people like carved images in stone: once formed – after becoming adults they almost never change. Their time is one big constant PRESENT; past is long gone, and the future – is not coming. There are other people: like autumn clouds on a windy, but rainless afternoon – ever-changing the form of their existence. Their time does not stand still, but runs: without respite – for the present.

Augustynek was rather the former. People close to him had the IMPRESSION that actually did not change at all. In fact, however, the changes were there – though not violent, just evolutionary.

Focused on a single, explicit domain of research – ontology – even in the "hobby" column in the guide *Who's Who in Poland* he wrote: "the study of the *mind-body* problem". He warned others at least not to lose focus in scientific work. He practiced – and valued practicing – philosophy, not its history: his greatest concern was if for a week or a month he did not solve any theoretical problem. No wonder that among Polish philosophers he most appreciated Kazimierz Ajdukiewicz (with whom he generally agreed) and Roman Ingarden (with whom he generally disagreed). (Among the foreign philosophers, he kept in closest touch with David Armstrong.)

He appreciated clarity and conciseness – he affixed read texts on the margins with three types of "comments": "OK" when he accepted the view, "NO" when he rejected it, and a "?" when he did not understand what it was about. A visual – he felt best at the blackboard because he thought writing or drawing. He spoke firm Polish, and in a narrower circle sometimes bawdily (especially when he spoke of the meanness of some of his colleagues), but he wrote (also of their views) in a language sleek, dispassionate, frugal in words and without unnecessary rhetorical figures.

Egocentric, but he tolerated other people's interests, although not – views which he considered wrong. He even tolerated foreign to him interests of his students, although sometimes he complained that none of them continued directly his own research. And he complained most that they did not read him – even closest associates. Introvert, but he had written on his face what was going on in his soul. Misanthrope, but he liked when others praised him, and he himself liked to boast success with ladies: a little – but not quite – half-jokingly. An eventist in theory, but concretist in action: he shunned institutions – with scientific societies at the head – in which he felt (often not without reason) superficiality and hypocrisy. Man of ambition and dignity: he did not like to bend his neck: he preferred to give up some good, when it was necessary to ask too lowly for it. Socialist, but he hated fraternization. Hotspur, but when he recognized his guilt, he apologized, and when he himself was apologized to – he quickly forgave. A little slovenly – but with a disarming touch of ascetic, a teetotaller and a hypochondriac.

Born in a provincial town, in the family of a railwayman – he hated the nature or travel, but passionately read books and watched films about nature and travel. He also liked – repulsive to many – graffiti on houses in Ursynów. The philosopher of physics, but childishly clumsy in everyday matters: terribly afraid of PIT and … computers. Actively uninvolved in politics (at least during the Warsaw period) – he passionately devoured *Gazeta Wyborcza* and *Polityka*, surprised when someone did not share his enthusiasm for political diagnoses they posed.

3. Environment: Predecessors, teachers, peers

His teachers as a student in Wrocław included eminent lecturers of Jan Kazimierz University in Lvov and Jagiellonian University: Henryk Mehlberg, Maria Kokoszyńska-Lutmanowa and Bolesław Gawecki (philosophers), Mieczysław Kreutz and Helena Słoniewska (psychologists) and Bronisław Kanster (mathematician).

The promoter of his doctoral thesis was a Dagestani philosopher and physicist – Khalil Fataliev.

His habilitation thesis was reviewed by Kazimierz Ajdukiewicz, Roman Ingarden and Janina Kotarbińska.

During his stay in the United States, he worked at Harvard University under the direction of Hilary Putnam, at University of Pittsburgh – under the guidance of Adolf Grünbaum, and at University of Chicago – under Henryk Mehlberg.

For nearly a decade, he conducted (together with the author of this text) ontological seminars. Their participants included the following later recognized philosophers: Cezary Cieśliński, Małgorzata Czarnocka, Tomasz Bigaj, Piotr Brykczyński, Anna Lissowska-Wójtowicz and Witold Strawiński. The result of this seminar was the book *Possible Ontologies* [Augustynek & Jadacki 1993]; at joint meetings, the idea of quarterly *Filozofia Nauki* was born (founded ultimately in 1993).

4. Views

4.1. Epistemology

Philosophy is full of PUZZLES.

One of the most puzzling issues is the question of how to justify the metaphysical theses in general. Augustynek sometimes appealed to intuition, but sometimes accepted certain views in the knowledge that they are "counter-intuitive". These include *e.g.* the notion of the uniformity of the world (*block-universe*), or the view that there are not only present events, but also past and future. There must therefore probably be an overriding criterion determining which intuitions are to be reckoned with, and which can be ignored.

Augustynek considered the greatest puzzle of epistemology how we assert the existence and learn properties of abstracta – objects characterized as UNOBSERVABLE and NOT INTERACTING physically. He said bluntly: "I do not know of any, at least to some extent satisfactory solution to this problem". And that is why he did not deal at all with issues of epistemology.

4.2. Ontology

One of the ontological puzzles is the nature of the relationship of OCCURRENCE of an event in a certain thing. Augustynek solved this puzzle by identifying relationship of occurrence with BELONGING (in the set-theory sense) of event to that thing. A matter of OCCURRENCE of an event at a specific time and place is also puzzling. Also this relationship Augustynek reduced to the relation of BELONGING.

This ambiguity is inherited by a more general issue: the issue of the relation of the world to space-time, which is the subject of a dispute between substantialists and relationists. A fragment of one of his works, dedicated to this dispute is the most dramatic of the «metaphysical reflections» of Augustynek. Here is an excerpt:

> Currently, the physical world is «immersed» in space-time. To resolve experimentally, *ergo* directly […] the dispute [between substantialism and relationism],

> one must simply … annihilate the world. If then the space-time were not subject to (simultaneous) annihilation, substantionalism would be proven. However, only God is able to realize such a *crucial experiment*. But what for? God still knows how things are with space-time. But we, people, remain with an indirect, non-experimental resolution to the dispute [Augustynek 1992: 76].

What, however, would the «human» indirect solution to this problem generally be based on? On the other hand, what would be the meaning of "simultaneity" if one expected SIMULTANEOUS annihilation of the world and space-time? The DRAMATIC core of this argument lies, among others, in the fact that even God would not be able to make a suitable crucial experiment.

Augustynek devoted many extensive studies to analysis of the «nature» of time. He judged as most valuable the following of his results in this scope: (a) formulation of various possible definitions of time (and space-time), and disclosure of their circumstances and consequences; (b) stating characteristics of different groups of properties of time and their philosophical meaning; (c) indicating symmetrical properties – homogeneity and anisotropy – of time; (d) grasping relationally understood past, present and future and their relations with becoming and existence.

4.2.1. Fundamental ontological doctrines

According to Augustynek, there are four basic ontic relations: (logical *resp.* genetic) identity, non-oriented causal relationship, spatial separation and temporal separation. These relations are sufficient to characterize the sequence of four basic ontic categories: substance, causality, space and time.

There are three fundamental ontological doctrines: (point) eventism, pointism and dualism. Eventism is based on events and states that every object is an event (non-extensive, but localized spatio-temporally) or a set funded in the events. Pointism is based on space-time points; dualism presupposes the existence of both events and points.

Augustynek rejected dualism, among others because its component is substantivism; he also rejected pointism because he did not agree with the thesis that the physical world is the «emanation» of space-time; he advocated for eventism, because, conversely, it considers space-time as «emanation» of the physical world, and is also adequate in relation to the relativity theory.

He was a creator of a particular version of eventist ontology – namely point eventism: the second in Polish twentieth-century philosophy, alternative to Tadeusz Kotarbiński's reism (and much more precisely developed) original metaphysical system. This ontology is a partly formalized ontological system, which uses the conceptual apparatus of set theory, with its primary

concept as the concept of "point event." Point eventism boils down to the following theses:

(1) Individuals (nonsets) are the physical point events.

(2) Every physical object (except events) is a set funded in events; in particular, elementary particles (and their conglomerates) and physical fields are the corresponding sets of events.

(3) Each space-time object is a set funded in events; in particular, spatio-temporal points respective sets of events, hence space-time is a respective set of such sets.

Point eventism of Augustynek has no counterparts with comparable coverage in the current philosophical literature of the world. It emerges victorious in the confrontation with other systems of equally universal aspirations (*e.g.* nonpoint eventism and radical and liberal reism). It constitutes, according to Augustynek, adequate ontology of relativistic physics, implying at the same time set realism.

4.2.2. Spatio-temporal objects

According to Augustynek, there are two fundamental (for ontology of physics) types of objects: spatio-temporal and physical. Among both, he further distinguishes objects, properties, and relationships. Spatio-temporal objects – are points, areas, and space-time. Physical objects – are (point) events, coincidences, temporal sections, processes and things. The main difference between spatio-temporal and physical objects is that the former are non-locatable and do not interact, and the latter are located and interact.

Augustynek carefully studied the nature of spatio-temporal objects, their relations and relationship to the physical world. In particular, he critically dissected the positions on the issue of nature of these objects: set substantivism, relationism, and causal and acausal mereological substantivism – and also existential consequences of these positions (assuming Quine's concept of existence). The set positions in the dispute over the ontological nature of space-time validate set realism, and mereological positions – set nominalism.

Augustynek – on one hand – believed that the arguments in favour of substantivism do not finally settle the question of nature of space-time objects in its favour. On the other hand, he advocated relationism as more attractive hypothesis. The attractiveness lays in the fact that relationism: (a) strongly «suggests» physical monism in point eventism version (and this monism is adequate in terms of relativistic physics); (b) allows a uniform approach to physical fields and particles relative to space-time.

Space-time consists (in set or mereological terms) of spatio-temporal points. These points are characterized by non-extensiveness, non-locatability, acausality and the fact that they are sets (namely sets of events). All other characteristics are in conflict with physical theories (in particular with the theory of relativity) and the philosophical «sympathies» of Augustynek: set realism and spatio-temporal physicalism (*i.e.* idea that space-time is a structure of physical world).

Augustynek's most original results in research of spatio-temporal objects are: (a) formulation of minimum and maximum definition of time and (b) construction of axiomatics of purely causal theory of the past and the future.

According to the minimum definition of time – *i.e.* definition grasping only its «narrower» nature – time is a set of events «distributed» by the relation of absolute time separation. According to the maximum definition – *i.e.* grasping also such features of time as relativity, orientation, and arithmetizability – time is a set of events ordered (partially) by the relation of relative previousness.

Augustynek gave the original argument in favour of time and space bond: it is the close connection between the global temporal and spatial realism – being the reason that anyone who adopts one must also adopt the other.

4.2.3. Physical objects

In the field of research on physical objects, the following Augustynek's results hold greatest importance for the development of philosophy: (a) formulation of «impact» definition of causality, (b) discovery of the so-called separation law and (c) complementing it with an additional argument in favour of time and space ties.

According to the «impact» definition of causality: x is the cause of y when x acts on y and x is absolutely earlier than y. It turns out that the historical forms of temporal definition of causality are a simple reduction of *definiens* of «impact» definition to its last element. In turn, «separation law» says that if two events belong to different things, these events are either separated temporally, or spatially. General philosophical importance of this law lies in the fact that it gives time and space a common basis in the diversity of things.

A consequence of purely causal theory of the past and the future – constructed by Augustynek, who otherwise supported acausal concept of time – is necessity to discard the existence of present events. This consequence on the basis of the approaches widespread so far is something paradoxical. In this way, it turns out that the assumption of the existence of the present is not

an obvious idea, but calls for justification. The importance of this result can be compared to the weight of challenging the obviousness of the principle of non-contradiction by Jan Łukasiewicz at the beginning of 20th century.

5. Summary

Augustynek himself stated as the main areas of his research: ontology, philosophical logic, methodology of science and philosophy of science, particularly philosophy of mathematics and physics.

He was first and foremost an outstanding ontologist, best in his time expert on philosophical issues of space-time, author of classic monographs in this field. He continued the research style of the Lvov-Warsaw School, successfully using the conceptual apparatus of logic (*resp.* set theory) to reconstruct traditional philosophical questions.

6. Students

His Cracow master graduates included Piotr Wrześniewski (*O identyczności przedmiotów w czasie* [*On Identity of Objects in Time*] – 1972) and Adam Grobler (*Filozofia Stanisława Lema – dylematy kultury* [*Philosophy of Stanisław Lem – Dilemmas of Culture*] – 1977). In Cracow, he also promoted eight doctors: Zdzisława Piątek (*Pojęcie postępu we współczesnej biologii* [*Notion of Progress in Modern Biology*] – 1969), Józef Misiek (*Geometra a empiryzm* [*Geometry and Empiricism*] – 1970), Janusz Płazowski (*Monizm czasoprzestrzenny* [*Space-Time Monism*] – 1970), Edmund Skarżyński (*Zasada kosmologiczna i jej rola w kosmologii* [*Cosmological Principle and Its Role in Cosmology*] – 1970), Halina Rżewska (*C.H. Waddingtona koncepcja ewolucji* [*C.H. Waddington's Concept of Evolution*] – 1974), Mirosław Dzielski (*Newtona i Leibniza koncepcja czasoprzestrzeni* [*Newton's and Leibniz's Concept of Space-time*] – 1975), Piotr Wrześniewski (*Ontologiczne podstawy fizyki* [*Ontological Foundations of Physics*] – 1978) and Wiesław Orlicki (*Teoria stanu stacjonarnego a materializm* [*Steady State Theory and Materialism*] – 1970).

During the Warsaw period, he had six master graduates: Elżbieta Olender-Dmowska (*Dualizm K. Poppera* [*Dualism of K. Popper*] – 1983), Krzysztof Pawłowski (*Koncepcja ontologii M. Bungego* [*M. Bunge's Concept of Ontology*] – 1984), Andrzej Teleżycki (*K. Popper's Concept of Three Worlds*), Anna Lissowska-Wójtowicz (*Stosowalność matematyki* [*Applicability of Mathematics*] – 1990), Tomasz Bigaj (*Problem istnienia według W.v.O. Quine'a* [*The Problem of Existence According to W.v.O. Quine*] – 1991) and Marek Kądzielski (*Koncepcja czasu w filozofii krytycznej I. Kanta* [*Conception of Time in the Critical Philosophy of I. Kant*] – 1996). During this period, he supervised the writing of three doctoral theses: by Małgorzata Czarnocka (*Kryteria istnienia w naukach empirycznych* [*Criteria of*

Existence in Empirical Sciences] – 1984), Tomasz Bigaj (*Matematyka a świat realny. Filozoficzne podstawy stosowalności matematyki w naukach empirycznych* [*Mathematics and the Real World. Philosophical Foundations of Applicability of Mathematics in Empirical Sciences*] – 1996) and Krzysztof Wójtowicz (*Realizm teoriomnogościowy* [*Set Theory Realism*] – 1998).

14. Leszek Kołakowski

Everything important in philosophy […]
was said a long time ago.
[…] So I prefer to make do with small comments
on what other people did.

[Kołakowski 1994: 17]

1. Life

He was born on October 23, 1927, in Radom, he died on July 17, 2009, in Oxford; He was buried in the Powązki Military Cemetery in Warsaw.

He came from a family of insurgent traditions; his great-grandfather, a participant of the January Uprising, was exiled to Siberia by the Russians; his father was executed by the Germans for underground activities during World War II. Shortly after, in 1945, he began studying philosophy at the University of Łódź, which he completed in 1950 with thesis *Naczelne dążności konwencjonalizmu w filozofii* [*Supreme Tendencies of Conventionalism in the Philosophy*] written under the guidance of Janina Kotarbińska, belonging to the main representatives of the Lvov-Warsaw School. The School gave him the intellectual touch and he remained in its circle of influence until his death (among others, he was friends with Marian Przełęcki). At the same time in his youth, he became involved with the communists – and as a member of the Communist Party (from 1945 until 1966, when he was expelled) – he actively participated in preparing the ground for depriving pre-war philosophy professors (including Władysław Tatarkiewicz) of university chairs. In the years 1949-1968, he worked at the University of Warsaw – gradually moving up from assistant to assistant professor

(1964). At the same time (since 1952), he was employed at the Institute of Scientific Personnel Training (later: Institute of Social Sciences) of the Central Committee of the ruling Polish United Workers' Party. He earned his doctorate in 1953 with a thesis *Nauka Spinozy o wyzwoleniu człowieka* [*Spinoza's Teachings on Human Liberation*], whose promoter was the then chief communist ideologue of that time in Poland – Adam Schaff. In the sixties he gradually began to move into positions of the so-called revisionism, *i.e.* the position that the communist regimes in Poland (and in Russia and throughout the Soviet empire) do not realize socialist ideals in practice. In 1968 – after the so-called March Events, *i.e.* the demonstrations of students used in fractional fighting (and possibly even were their expression) in the ruling camp – he was deprived of the right to conduct university lectures and censorship forbade the publication of his works (prohibition remained in force until 1988). As a consequence – he emigrated. Eventually he settled in England, where he received a teaching position at the University of Oxford (1970-1991).

In exile, he engaged in supporting the political opposition in Poland. He was, among others, a member of the Workers' Defence Committee (since 1977); later joined the *Solidarity* movement. After the fall of the communist regime he repeatedly visited his homeland.

2. Writings

Kołakowski's work was abundant and diverse.

His most important philosophical works include: *Kultura i fetysze. Zbiór rozpraw* [Kołakowski 1967], *Obecność mitu* [Kołakowski 1972b], *Religion. If There Is No God…* [Kołakowski 1982], *Horror metaphysicus* [Kołakowski 1988a], and "*Czy Pan Bóg jest szczęśliwy" i inne pytania* [Kołakowski 2009]. In fact, these books are series of autonomous essays. Many of them were published in the volumes *Pochwała niekonsekwencji* [Kołakowski 1989] and *Myśli niewyszukane* [Kołakowski 2000].

Among historical and philosophical publications, the following stand out above all: *Wykłady o filozofii średniowiecznej* [Kołakowski 1956], *Filozofia pozytywistyczna (od Hume'a do Koła Wiedeńskiego)* [Kołakowski 1966], and the three-volume history of communist ideology *Główne nurty marksizmu.* vol. I. *Powstanie.* vol. II. *Rozwój.* vol. III. *Rozkład* [Kołakowski 1976-1978].

He published many journalistic texts (anyway, the boundary between these texts and theoretical texts is not sharp in Kołakowski); among them, the most known are three series of *Mini-wykłady o maxi-sprawach* [Kołakowski 1997-2000] and *Moje słuszne poglądy na wszystko* [Kołakowski 1999].

The Kołakowski's gravestone on the Military Powązki Cemetery, Warsaw

A large part of his work includes philosophical essays and prose, which implicitly state his philosophical views. The best-known works from this scope include: *13 bajek z królestwa Lailonii dla dużych i małych* [Kołakowski 1963], *Rozmowy z diabłem* [Kołakowski 1965] and "*Czy diabeł może być zbawiony" i 27 innych kazań* [Kołakowski 1982a].

3. Views

Kołakowski's views underwent radical changes. These changes, however, had an evolutionary – and not revolutionary nature. The most radical changes have affected matters of worldview. From the initial enthusiast (and beneficiary) of communism and its ideology, he gradually became a virulent critic of communist ideology (and communists began to see him as one of their greatest enemies; violent fight against apostates is otherwise typical for institutional dogmatism). The original avowed anticlerical, he gradually began to appreciate ever more the cultural role of the Catholic Church. Absolute atheism eventually transformed into an attitude that could be described as "hypothetical theism" summarizing his belief that "if God does not exist", then morality is devoid of any foundation.

3.1. Philosophy

Like the representatives of the Lvov-Warsaw School – Kołakowski declared MINIMALISM with respect to philosophical speculation. However, his motivations were different. Twardowski and his disciples spoke out against «all-encompassing» philosophical syntheses, as they considered constructing such syntheses premature. Kołakowski believed that such systems already exist and all one can do is at best improve them in detail. Hence, probably much effort that Kołakowski put in his works on history of philosophy and exegesis of the views of the «great» thinkers.

Kołakowski linked ANTHROPOCENTRISM with this minimalism, *i.e.* the belief that the most important issues within philosophy are problems related to man and society. It was not an accidental combination, since recognition

of human philosophy and social philosophy as central justified Kołakowski's diagnosis, according to which everything in this area – except details – is essentially «ready», because the list of anthropological issues and their acceptable solutions is closed.

The third determinant of Kołakowski's attitude towards philosophy was ANTI-SCIENTISM, if the term "anti-scientism" in this case can mark the thesis that the task of philosophy is "discursive expression of the same content that by other measures are expressed in art, literature, religion, partly in scientific knowledge, partly in political thinking". These contents – metaphorically speaking: views on the «sense» of the world and of human life – on "suffering, death, ideological clashes, social fighting, conflicts of values" – are rather «sense» certain insights, articles of faith, which is not subject to verification or falsification with methods used in the empirical sciences.

Complementing minimalism, anthropocentrism and anti-scientism was Kołakowski's AGNOSTICISM[37]. Since ingredients of the worldview, which are the essence of philosophy, cannot be justified by the methods adopted in science, we must recognize the right to exist for different, even contradictory anthropological (and more generally, philosophical) doctrines. Without a creed in this respect, human culture dies. However, this creed can be both: "I believe that *p*" (*e.g.*: "I believe that human life has a purpose") and "I believe that *non-p*" (in this case: "I believe that human life is pointless"). It seems that Kołakowski recognized as destructive for culture only the position that would express the declarations: "I do not believe that *p*" or "I do not believe that *non-p*".

3.2. Metaphysics

Kołakowski suggestively summarized his metaphysical views in a half-page essay-«homily» "Complete and short metaphysics". This is the text explicitly:

> Four corners support this house, in which, practically speaking, the human spirit lives. And these four are: Reason – God – Love – Death.
>
> The ceiling of the house is Time, a reality commonest in the world and the most mysterious. From birth, time seems to us the reality most ordinary and most tame. (There was something and it ceased being. Something was such, and is different. Something happened yesterday or a minute ago and never, ever will return.) Time is therefore the most ordinary reality, but also the most terrifying. Four entities mentioned are the ways of our dealing with this horror.

[37] It is about agnosticism *sensu lato* – and not specifically agnosticism as regards the question of God's existence.

> The mind must serve us to detect the eternal truths, resistant to time. God or the Absolute is the entity that knows neither past nor future, but includes all in its "eternal now". Love, in an intense experience, also gets rid of the past and the future; it is the present – focused and exclusive. Death is the end of temporality in which we were immersed in our life, and perhaps, as we guess, the entry into a different temporality, about which we know nothing (almost nothing). Therefore all supports of our thoughts are the tools by which we free ourselves from the horrific reality of time; they all seem to serve that purpose, to truly tame time [Kołakowski 2004].

What is the horror of time? It consists, according to Kołakowski, in the fact that AFTER SOME TIME everything dies – including ourselves and our artefacts, regardless of whether they have positive or negative values. And if something dies – its whole existence makes, as Kołakowski thinks, no sense; if a man dies – his whole life prior to death does not make sense.

This feeling of horror, according to Kołakowski, may only be weakened by the belief that some things are timeless: the eternal regularities, eternal God and eternal afterlife. (Kołakowski also mentions communion in love – but when it lasts, it only gives a sense of «stopping» the passage of time, not the infinite duration.)

3.3. *Horror metaphysicus*

One of the problems of traditional metaphysics is the question of the criteria to distinguish what is real from what is unreal.

Kołakowski points out that the distinction has a purely practical sense. In this sense, for example, unrealistic are illusions and dreams – and more specifically: what is the content of illusions and dreams. But "[they] are unreal as far as other people do not have access to them". The phrase "State of things *X* is real", in such a colloquial sense, must be understood as synonymous with the phrase "State of affairs *X* is intersubjectively available cognitively". In this sense, the distinction: real-unreal – "is not of metaphysical character".

Metaphysical meaning of "unreality" is that with it what we consider to be intersubjectively available cognitively; it is also "an illusion and a dream".

Kołakowski was not interested in what exactly "real" or "unreal" mean in the metaphysical sense. Rather he sought to answer the question of why people – philosophers – so persistently ask themselves whether the world is in this sense real or not. The answers which occurred to him are hypothetical. He said for example:

> If […] metaphysical senses are neurotic symptoms, it must be, so to speak, anthropologically rooted neurosis, permanent, incurable and potentially destructive

feature proper to a bright creature to see, for good or bad, […] fallibility of its knowledge [Kołakowski 1988: 23].

Or:

If nothing truly exists outside of me, I am myself nothing [Kołakowski 1988: 30].

This last implication expressed Kołakowski's conviction that consistent solipsism entails ONTOLOGICAL NIHILISM. This he called the "terror of illusion" or bluntly – "metaphysical horror": exaggerated distrust of knowledge of the world inevitably implies a distrust of knowledge about oneself, and ultimately – doubt in own existence.

3.4. Anthropology

3.4.1. The role of the philosopher: priest or fool

Kołakowski was of the opinion that a philosopher is faced with an alternative: to be a priest or be a fool. Philosophy is reduced to ideology, and ideology – or a certain "philosophical fantasy" – can be either promoted (and then one is its «priest»), or ridiculed (and then one is a «fool»). In both roles there is something of quackery. Against the background of Kołakowski's metaphilosophical position, it is not surprising, therefore, that Kołakowski ruled out a third attitude: to be a scholar. (Let's be precise, however: scholar may be methodologist and historian of philosophy. Kołakowski himself successfully practiced both.)

Both philosophical priesthood (sometimes using unfair means of persuasion), as well as philosophical foolery (not shunning caricature) – are a social activity. If – as it is done in a traditional terminology – research and constructing theories are passive, it is hardly surprising that the priest's attitude and fool's attitude are in the general program of ACTIVISM, as advocated by Kołakowski.

3.4.2. The function of myth in culture

There are two types of views cherished by us: some are knowledge, others – faith. Both can be considered from two perspectives: the strength of beliefs and their validity. When we say that we are more or less certain of something – we take the first viewpoint; when we say that we consider something to be a more or less reasonable – we take the second viewpoint.

In the case of views belonging to knowledge – we strive to make them more reliable and more reasonable: here the ideal is absolute certainty and

unquestionability. In the case of views belonging to the faith – there can be no question of any justification; faith can be judged only in terms of strength.

Some believe that there is a transition between faith and knowledge: that – so to speak – we can elevate what we believe with insistent work to what we know. Kołakowski did not share this opinion. In his opinion, between faith and knowledge there is an insurmountable gap. And it is so, because there are different fields of faith and knowledge, and only the latter – let's repeat – may be the subject of increasingly adequate recognition.

Kołakowski vividly called the whole of «articles» of faith – «a myth».

Some believe that culture can and must be freed from thusly understood MYTH. This is in particular – according to Kołakowski – a program of radical positivists: myth is harmful to the culture, so it should be exposed and stigmatized. But there is also a conciliation version of the positivist programme. From its point of view metaphysics free of scientific claims is legitimate. Kołakowski went further in that direction. He strongly objected both against the programs of both versions of positivism: against program of demythologization (in particular: desacralization) of culture – but also against only tolerating the presence of myth in culture.

Demythologization of culture – and neutralization of myth – leads, in his opinion, to disappearance of culture. A man without culture – lose «the essence» of humanity. The existence of myth should not only be tolerated: a myth – SOME myth – must be cultivated.

The culture-creating myth of European civilization – is Christianity. He wrote:

> [Europeans] are in need of Christianity, […] which teaches them this simple truth that there is not only tomorrow but also the day after, and the difference between success and failure is clear [Kołakowski 1972a: 157].

Therefore, the removal of Christianity from our culture must result in «de-culturization». And since the people cannot remain people without culture and, *eo ipso*, myth, de-Christianization of Europe must in practice rely on implementation in place of our tradition – some other (*i.e.* foreign) cultural mythology.

3.4.3. The necessity of taboo

Just as there is no culture without myth, there is no culture-creating myth without taboos.

> The presence of taboo is both an indelible pillar of any viable moral system (as opposed to the legal system) and an integral part of religious life; thus taboo is

a necessary nexus of operation of eternal reality and knowledge of good and evil [Kołakowski 1982b: 129].

It is not enough that the standards have the sanction of its «fair» and «efficient» enforcer. Standards acquire the moral status when going beyond them produces guilt: a sense of violation of the taboo.

3.5. Ethics

3.5.1. Situational ethics

One of Kołakowski's teachers, Kotarbiński – following his master, Twardowski – called for an autonomous ethics, *i.e.* one which does not require reliance on God as the ultimate religious authority. One could say that Kołakowski went further: he postulated ethics «without a code», that is, as it is sometimes said, SITUATIONAL ETHICS. Kotarbiński did not deny that we need a certain set of moral standards, which could be followed in daily behaviour towards other people – but questioned the need for a transcendent sanctioning those standards. Kołakowski, on other hand, was of the opinion that the code is useless for two reasons: first, because usually we do not know how to apply a given general rule in a particular ethically valent situation; secondly, because compliance with the standards contained in the code exempts us from personal responsibility for the moral choices made.

It seems that Kołakowski's anti-code approach to ethics, had some form of moral intuitionism behind it: the belief that in the face of certain situations we «see» directly – without any additional considerations – what in them is morally praiseworthy or blameworthy. Kołakowski however realized that ethical subjectivism easily turns into ethical relativism. If there is no common code, then – if we not assume the commonness of intuition – how to decide the relevance of individual moral choices?

This eventually led Kołakowski to the aforementioned view, expressed in the formula: if God does not exist, then everything is allowed. There are many indications that Kołakowski rejected the consequent of this implication – an undoubtedly nihilistic thesis. Since not everything is allowed, then – after all – God exists. And God is the guarantor that people have basically identical moral intuitions.

3.5.2. Moral intuitions

Kołakowski considered a sense of revulsion against the lies one such common moral intuition. According to Kołakowski's situational attitude – one can «explain» this sense by the existence of a general norm, "Speak always

the truth!", but the standard is «empty» to the extent that in some – in fact, a great many situations – it must be replaced by the formula "Speak the truth, unless *p*!". Various reasons can be given for the fact that lie in a given situation is «justified».

According to Kołakowski, sincerity is a secondary value: it is a symptom of "respect for dignity" of other people. If our lie does not target someone else's dignity, then there is no basis for its condemnation. It is not easy to capture the essence of respect for dignity, stipulated by Kołakowski. Let's limit ourselves to stating the necessary condition:

If the behaviour of person O_1 towards person O_2 lacks respect for the dignity of person O_2, person O_1 disregards to person O_2.

It may be said that lying is wrong, if, while lying someone shows disregard to a person being lied to.

3.6. History of philosophy

There are two basic approaches to tasks which should be carried out by a historian of philosophy.

According to the first approach – a historian of philosophy, having made proper interpretation (or reinterpretation) of doctrines or philosophical theories emerging in the history, has an obligation to «weave» them in a string of progressive improvement of solutions to specific problems. In this case, historian records primarily the historical-philosophical facts which constitute steps on the way to better theoretical solutions. It is history – in short – from the CUMULATIVE perspective: the gradual approximation to the truth (here: of how things are in reality). The history of science is usually written in this way.

Under the second approach – there is no significant (theoretical) progress in the history of philosophy. Therefore, the duty of historian is to register all the "great" ideas or systems that have been developed by philosophers. It is the story from the ANTI-CUMULATIVE perspective: here originality is a determinant, not truth. The history of literature (and more broadly, art) is usually written in this way.

Kołakowski was closer to the second approach: anti-cumulative. Hence, the titles of three subsequent volumes of his monumental history of ideology, for which he so strongly advocated in his youth, and which later he rejected so fiercely: *Origins. Growth. Dissolution*. It should be noted that in describing the three stages of the history of «movement» (*i.e.*, changes) of communist ideology, Kołakowski used the «usual» analytical tools. Once again: philosophy according to him was not science, but history of philosophy – was. Another thing is that minimalism made itself known here. History of

philosophy should be practiced in aspects, as it cannot be practiced otherwise. It is so complicated that it cannot be recognized in a comprehensive manner. A historian must – because he cannot otherwise – choose one aspect of history and try to reconstruct this aspect in the development of history. Historian of philosophy *de facto* keeps track of history of chosen ideas – and around these ideas focuses his description. It is no accident that historians who operated according to Kołakowski's programme were referred to as "historians of ideas".

4. Impact

Kołakowski is considered to be the initiator and the main representative of the so-called Warsaw School of History of Ideas. It included: Bronisław Baczko, Krzysztof Pomian, Adam Sikora, Jerzy Szacki and Andrzej Walicki; from the younger generation – Bohdan Chwedeńczuk and Jerzy Niecikowski.

Kołakowski also influenced philosophers outside his «own» School – primarily Józef Tischner.

15. Jakub Karpiński

Summarizing statements of someone
who did not write unnecessary words – is a difficult procedure.

[Karpiński 1964: 97]

1. Life

He was born on 17 June 1940 in Warsaw; he died on 22 March 2003 also in Warsaw, and was buried there, in the Old Powązki Cemetery.

In the years 1958-1964, he studied philosophy and sociology at Warsaw University, listening to lectures, among others, of Kotarbiński, Tatarkiewicz, Ajdukiewicz and also of Maria and Stanisław Ossowskis.

After attaining his university degree he was employed in the Philosophical Faculty of this university; four years later he was dismissed for political reasons. In 1978, he got his doctorate at Stefan Nowak, based on the dissertation *Problematyka przyczynowości w teoriach i badaniach społecznych* [*Problems of Causality in Theories and Public Examinations*].

After 1968, he took an active part in the civil movement directed against the communist government in Poland. He was held prisoner by the regime from 1968-1974 (on and off). He cooperated with underground and emigration magazines. He was a co-founder of the Association of Scientific Courses, incurred in 1978.

In the years 1978-1992, he stayed in exile, mainly in London and New York. After his return to Poland, he managed the Political Institute in Warsaw; in 1997, he worked as an assistant professor at the Institute of Sociology of Warsaw University.

2. Writings

The following books constitute the main philosophical works of Karpiński: *Wprowadzenie do metodologii nauki społecznych* [Karpiński 1980], *Przyczynowość w badaniach socjologicznych* [Karpiński 1985], *Nie być w myśleniu posłusznym* [Karpiński 1989] and *Kultura i wielość rzeczywistości* [Karpiński 1992].

Moreover he published many texts concerning political-historical subjects.

3. In the range of the Lvov-Warsaw School

The Library of the Faculty of Philosophy and Sociology at the University of Warsaw keeps a copy of the off-print of the article "Postulat operacyjności definicji w naukach społecznych" [Karpiński 1962] with the following dedication of the then 22-year-old author: "To Professor Kazimierz Ajdukiewicz, allows himself to offer – Jakub Karpiński". On October 27, 1963, after the death of Ajdukiewicz, Karpiński delivered a lecture at the University of Poznań, "Metodologia nauk w twórczości K. Ajdukiewicza" during a student scientific session dedicated to his memory [Karpiński 1964]. In the book *Przyczynowość w badaniach socjologicznych* Karpiński referred to Ajdukiewicz's recognition of the difference between experiment and observation [Karpiński 1985: 73]; mentions of Ajdukiewicz's views can also be found in his other works [Karpiński 1965: 35, 36; Karpiński 1976: 317; Karpiński 1977c: 35; Karpiński 1980: 329, 332]. A large part of the book *Nie być w myśleniu posłusznym* [Karpiński 1989] – are articles devoted to Maria and Stanisław Ossowskis. In Karpiński's texts, there are also references to other undoubted representatives of the Lvov-Warsaw School – including its founder: Twardowski [Karpiński 1992: 8, 18].[38] These references are not random with someone, who – like Karpiński – belonged to that generation of Polish sociologists, which cemented empirical sociology in Poland: after all, its methodological foundation should be sought in Twardowski's School.

From this point of view, saying that scientific work of Karpiński REVOLVED around the Lvov-Warsaw School tradition is justified even in the eyes of readers of his writings who do not know that Karpiński was just a student of Ajdukiewicz.

However, I would like to put forward a stronger thesis: this work not only revolved in this tradition, but also GREW from and DEVELOPED this tradition. In the words of Karpiński: Karpiński "recalled […] the tradition, showing

[38] It is also worth noting the presence of Chwistek, close to School in many respects, an allusion to whom was a title of Karpiński's book: *Kultura i wielość rzeczywistości* [Karpiński 1992].

The Karpiński's gravestone on the Old Powązki Cemetery, Warsaw

some of its hidden assumptions in order to later […] expand it" [Karpiński 1992: 30].[39]

4. Views

4.1. Ontological tolerance

The specificity of the Lvov-Warsaw School was ontological tolerance. The adoption of this or that ontology is for representatives of the School not a philosophical matter «to be or not to be» – but an issue of theoretical «necessity».

Karpiński had the same attitude towards ontological issues. The question targeting ontological analysis is for him not "What, and possibly how EXISTS?" but "What and possibly how – due to the needs of science – SHOULD BE CONSIDERED AS EXISTING?".

In his excellent *Wprowadzenie do metodologii nauk społecznych* [Karpiński 1980] – written in a communist prison – Karpiński shows two output ontological assumptions that scientists take in general "thoughtlessly". The first – is a "thesis about the existence of the world", so that "statements formulated in science relate to something beyond science" [Karpiński 1980: 12]. The second – is a thesis, which states "how research subjects of science exist" [Karpiński 1980: 12]. It is worth noting that the second assumption is «named» by Karpiński, but he does not say explicitly what it says: that research subjects exist so and not otherwise.

It is not coincidental. The idea is that scientists differ as to determining the manner of existence of studied objects. Two main ontological "trends" can be indicated: monistic and pluralistic. Karpiński characterizes them in the textbook – but does not clearly favour any of them, though he indirectly rejects monism, writing:

> One can […] practice science and examine mythology as a scientist or consider the reality depicted in literary works. One does not have to then identify the manner of existence of the examined objects with the manner of existence of elements of

[39] An example of such creative development – in this case Ajdukiewicz's erothetics – is the outline of the theory of questions contained in the *Wstęp do metodologii nauk społecznych* [Karpiński 1980: 136 ff.] (*cf.* also [Karpiński 1965: 36-37]). Development in this case is based on, *e.g.* enriching the concept of Ajdukiewicz with the categories of completive questions (questions about the description, questions of value of variables, questions about the scope and questions about relationships between features) and the concept of a proper response in extended sense.

the real world. It can be argued that these examined objects exist only intentionally […]. Someone who investigates cultural artefacts, has to do with the objects existing intentionally and assigns features to those objects [Karpiński 1985: 105].

In the extra-didactic texts, he was firmly in favour of ontological pluralism. There are, in his opinion, multiple realities: there is therefore a world of things and people; world of events involving things and activities undertaken by people, including their experience; finally, the world of culture (artefacts). The third one is not in any significant sense reducible to two previous ones – although it is to some extent dependent on them: it has its source in a world of human activities and experience, and it has the basis of existence in a world of things and people [Karpiński 1992: 44]. It may be said: the world of culture is only in part created by people; in an important part (comprising at least some regularities) it is revealed. It should be added: the world of culture cannot exist without some carriers, being components of the world of things and people – but in its existence it does not depend on these particular rather than other carriers.

Karpiński does justice to two Polish philosophers who – in his opinion – in a satisfactory and pioneering manner (with regard to, *e.g.* Popper) formulated similar thoughts: Chwistek and Ingarden. The first – was the creator of the modern form of pluralism, which he dubbed the "theory of plurality of realities" [Chwistek 1921] and tried to characterize in a manner appropriate to the twentieth-century standards of precision. The second – recognizing the world of culture as the domain of the so-called purely intentional objects, subjected this area, and especially literary work [Ingarden 1931] – and its relationship to other areas of reality – to subtle analysis. Karpiński wrote:

> Ingarden has created a thorough and extensive theory […] [of the world of culture], relating primarily to those of its constituents, which are interesting to aesthetics. […] It is not easy to determine the nature of the relations between […] [artefacts and psychophysical actions which are their source]; one needs to analyse more accurately, what the recording of cultural content with material objects, and reading the contents of the properties of objects is based on and how it takes place. These and similar problems have been noticed by Ingarden and acceptably worded or even resolved [Karpiński 1992: 25].[40]

Promoting ontological pluralism, Karpiński rejects both reistic monism and idealistic interpretation of the world of culture. In an original way he

[40] In a weaker version of the assessment – Karpiński said that weighty reasons speak for assigning to artefacts (in particular literary works), "the status of a *sui generis* reality, for example, intentional creations" [Karpiński 1992: 69].

argues against the idealism in the theory of law, assigning to norms some extra-spatio-temporal character:

> If one assumes an ideal existence of the law, but does not identify the ideally existing law with the law available in experience, it is difficult to protest against such behaviour by staying on scientific grounds; on the other hand, assuming the existence of such a law has little impact on what happens in science, as it (at least in so far as it is an empirical science) refers to experience [Karpiński 1992: 45].

This could be called an "argument from theoretical neutrality"; indeed similar type of argument is aimed against monism – with reistic and psychologistic monism at the helm.

4.2. Causal relationships

Two further assumptions adopted by Karpiński in science – are an assumption of repeatability of events and an assumption of their coexistence, which can be combined in the determinism thesis. Its correctness is supported, among others, by the fact that people can make accurate predictions.

A special type of co-existence is co-existence, in the background of which there is a causal relationship. Karpiński, not without reason, calls such co-existence "conditioning". To the analysis of this relation – within areas studied by sociology – Karpiński devoted a separate monograph: *Przyczynowość w badaniach socjologicznych* [Karpiński 1985].[41]

According to Karpiński [1985: 93], there are three necessary conditions for *A* to cause *B*:

(1) *A* and *B* are events;

(2) *A* is the condition of *B*;

(3) *A* is not later than *B*.

An "event" referred to in point (1), can be construed as change of an object in some way at some time (*i.e.* at the moment or in longer period) or a sustained state of affairs [Karpiński 1985: 8]. With the first meaning, the cause cannot be considered non-occurrence of the so-called disturbing conditions.

Recognition of the cause in terms of the condition – and thus identification of causal relationship with conditioning – is a reference to the trend of thought begun in the Lvov-Warsaw School by classical treatise of Łukasiewicz "Analiza i konstrukcja pojęcia przyczyny" [Łukasiewicz 1906].

The condition, which in point (2) is identified with the cause, may be either random, sufficient or necessary (then causal law is without exception),

[41] *Cf.* also [Karpiński 1977b].

or a favourable condition (then causal law has exceptions) or necessary (essential) component of a sufficient condition. For a cause understood as a favourable condition – one can only say that *A* causes *B* to the extent *S,* wherein *A* is a favourable condition of *B* when *B* occurs more frequently with *A* than without *Z* and it is not a so-called apparent dependence [Karpiński 1985: 15]. As for reasons identified with a necessary component of a sufficient condition, we should add that if at the same time all the sufficient conditions have one and the same common component, it is simply a necessary condition; it is not so, however, when there are sufficient conditions with different to all necessary components.

In view of the condition of cause not-later than result formulated in point (3), Karpiński holds the position of an understatement. He writes:

> Perhaps […] the thesis about one-way causal interaction is an analytical proposition [Karpiński 1985: 95].

Karpiński notes that sometimes to conditions (1)-(3) another condition is added:

(4) *A* affects *B*.

In view of this condition – just like Ingarden – he reports the following disclaimer:

> Sometimes it is said that the cause affects the effect. But it is not always easy to explain how an event may affect an event that has not yet started (affect, not causing it right away) [Karpiński 1985: 14].

Therefore, he does not accept condition (4). In my opinion – it is, as Ingarden would say, premature resignation. Assumption (4), according to which influence is «harnessed» in the causal relationship, so that it is «dynamic», seems most correct. It is enough to rephrase it accordingly – and it will not have the paradoxical consequences indicated. If I could discuss this matter with Karpiński, then I would suggest that causal situations should be stated with the formulas of the structure:

(ZP) Impact of certain *x* on given *y* is the cause of a particular state (in particular: change) in that *y*.

The field of relationship of causality remains a set of events, but according to the (ZP) type formula it is not the cause that impacts the effect, but the fact that something (*x*) affects object (*y*), is the reason that that object changes in a certain way (or – more generally – is in a certain condition).

I would also present Karpiński with objections to his characteristics of the process as "course of events in time" or "temporal ordering of events", between which "causal connection occur" [Karpiński 1985: 48, 49]. This characteristic bears a categorical error: the PROCESS is neither the COURSE nor the ORDERING of relevant events – but a STRING (and thus generally: a set) of appropriately ordered and related events.

Karpiński considers as "peculiarities of causal analyses in the social sciences" [Karpiński 1985: 20], that condition (1) is not narrowed to changes and condition (4) is in general very rarely adopted: in particular in sociology, causal relationship is rarely treated as a dynamic relationship, *i.e.*, as the transfer of energy or information by cause to an effect. Therefore, one can say that since "the relationship of causal conditioning is considered […] as a relationship between characteristics or between variables" [Karpiński 1985: 20], this relation may be simply identified with co-existence of these attributes or variables (*resp.* sets of attributes). It is worth mentioning Karpiński's general statement on the terminology decision – well characterizing his attitude in this regard:

> Perhaps it would be useful to adopt a more restrictive use of the word "cause". However, it seemed appropriate before making a decision limiting the meaning of the term to review meanings and situations in which one speaks of the causes. Above, we used a broader concept of conditioning, whose various types were distinguished. The realization of this variety can be useful regardless of how one chooses to understand the causal relationship. Moreover, a similar distinction may give rise to a relatively rational decision-making in the domain of terminology [Karpiński 1985: 20].

Let us note that the above reconstructed concept of cause – is a concept that could be called "an observational concept". Karpiński mentions the so-called operational (*resp.* manipulative, experimental) concept of cause [Karpiński 1985: 72, 98, 100], according to which:

(PE) *A* causes *B* when *B* occurs after intentional (conscious) causing *A* by experimenter *E*.

The concept of cause from the formula (PE) becomes operational for a price. Namely, the operational concept of cause is, of course, a narrower concept than the observational concept of cause; on the basis of the latter, we may at most say that if *B* comes after deliberately causing *A* by experimenter *E,* then *A* is the cause of *B* – but not *vice versa*. It is understandable that more than one sociologist would be willing to pay such a price; for a philosopher it is not acceptable for reasons of principle, because it would

necessitate removal from the fields of causal relationships of, *e.g.*, mega-objects, which no experimenter is able to manipulate.

4.3. Valuation of theories

It would seem that the matter is clear: a theory is good, always and only when it is true – or at least when "seeking the truth". The history of science shows that this is a double idealization: neither "always", nor "only".

Karpiński wrote:

> It has long been believed that science aims at truth. But for a long time also the attention has been drawn to the fact that, first, this criterion is not entirely clear and should be clarified; secondly, this criterion is not always used (in all stages of the proceedings); thirdly, even if this criterion applies, it is not the only one [Karpiński 1992: 94].

Thus, firstly, when choosing among competing theories of equal alethic «power» – and such happen – the criteria external to truthfulness are applied, for example a criterion of "economy, informational value, explanatory power" [Karpiński 1992: 94].

The final shape of a theory is, secondly, defined not only by the shape of the world described in this theory, but the shape of the language, by means of which the description is made. Distancing himself from Ajdukiewicz's radical conventionalism, Karpiński, however, did not rule out a significant impact of the conceptual apparatus on the image of the world:

> Not all […] believe that the choice of description language in science is a matter of indifference, or a decision whose only justification would be convenience – usability of the solutions adopted to carry out some objectives that lie within science or outside it [Karpiński 1992: 5].

Thirdly, sometimes there are theories, in which the notion of truth – as a regulative idea – is not used "in the usual sense." It is so, *e.g.*, in deductive theories.

Fourthly, the theories are also evaluated due to their use of research methods, and in the case of the latter the veracity criterion is not applicable: the methods are evaluated by the costs of their use, "understood as any type of loss", *e.g.* "destruction or damage to the subject of the study" [Karpiński 1992: 95]. It is a kind of moral criterion. Its presence is particularly visible in sociology:

> The specificity of […] [social] sciences is […] valuation of publishing the results due to the possible impact of published information directly on the subjects [Karpiński 1992: 99].

Quite similarly – albeit in a different context – Łukasiewicz wrote in his essay *O zasadzie sprzeczności u Arystotelesa* [Łukasiewicz 1910] about the truth and how to justify logical truths.

Someone might say – to paraphrase a well-known court formula – that although science must not speak only the truth about the world, but it has an obligation to speak the whole truth about it. It would be a misconception again.

Karpiński wrote – modifying again (and in this case – radicalizing) the views expressed by Łukasiewicz in the article "O twórczości w nauce" [Łukasiewicz 1912b]:

> In science we do not seek the truth about everything. And in any case, we do not seek to ensure that knowledge of all is available to everyone [Karpiński 1992: 98].

Therefore, a theory is not disqualified by its fragmentariness; on the contrary: it is – according to Karpiński – a part of the ethos of science.

4.4. Operationalization of definitions

At the end of a short text, "O jasnym i niejasnym stylu filozoficznym" – one of the program texts of the Lvov-Warsaw School – its founder wrote:

> An author unable to express his thoughts clearly also does not think clearly, […] so his thoughts do not deserve an attempt at guessing them [Twardowski 1919: 348].

Karpiński had a strong conviction that the ambiguity of language, criticized here by Twardowski, is one of the main sources of "idle disputes" [Karpiński 1962: 141] in science. One of them – the operationalism-anti-operationalism pseudo-controversy [Karpiński 1962: 135] – he subjected to a detailed analysis in order to dissect real problems hidden under a layer of verbal misunderstandings, indicated by "evolution" of the slogans of operationalism [Karpiński 1962: 136].

The main problem here is the issue of the criteria to be met by the procedure for defining in science. Karpiński comes from a very liberal concept of definition. He writes:

> The word "definition" will be understood very generally, as any verbal determination of the meaning of a term [Karpiński 1962: 140].

Well, at some point, the definition in science was expected to meet the operational requirement. History of the operationalism-anti-operationalism

dispute is, according to Karpiński, a story of "gradual liberalization of the postulate of operationality of definitions" [Karpiński 1962: 41].

Let us take as a starting point the following, cited by Karpiński, definition of "operational definitions":

> Operational definitions are definitions, which include a description of the verifying operations and certain results of those operations [Karpiński 1962: 139].

Operational definition of the term *'T'* has therefore the following general scheme:[42]

(DO_1) If *x* undergoes operation *X*, then (*x* is *T* when *x* is *Y*).

The property signified by *'Y'* is observable, and its occurrence is the result of operation *X*.

Karpiński in reconstructing the postulate of operationality of definition refers to Przełęcki – supplementing his proposals of precisation (and schematization) of this postulate. He further indicates that:

> Operability is not a sufficient condition of [scientific] correctness of concepts. For the concepts to be correct, they must meet two necessary conditions: (1) [concepts] must have theoretical significance […]; (2) defining operations must be reliable.
>
> It is best if these concepts also meet the following conducive conditions: (3) when they are ordering; (4) when their definitions indicate essential features; (5) when they are accurate; at last – but not least – (6) when […] they are used [and] (7) when their definitions are reporting [Karpiński 1962: 147].

As a result: different methods of verification – define different concepts.

Karpiński proposes – as he puts it – "to differentiate terminologically" [Karpiński 1962: 150] operational definitions and operative definitions:

> Operative definitions are […] definitions giving descriptions of observable states of affairs. […] The postulate of defining terms by giving descriptions of observable states of affairs leaves operationalism with what was rational in it, namely the desire to provide empirical character of scientific terminology; on the other hand, it removes the chief drawback of the first stage of this doctrine, namely denying the scientific value to concepts, in the definitions of which descriptions of verifying operations are not stated [Karpiński 1962: 150].

Therefore, one can – again simply – say that it is ultimately postulated that the definitions of *'T'* have the following scheme:

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[42] More precisely, this is one of the acceptable schematizations. This scheme can be reduced by giving an implication in the consequent rather than equivalence, preceding the consequent with operator "is very likely", and so on.

(DO_2) *x* is $\mathcal{T}$, when *x* is $\mathcal{Y}$.

'$\mathcal{Y}$ in (DO_2) is an observational term, of course. This postulate may probably be identified with the postulate of diagnosticism of definitions [Karpiński 1985: 145]. So understood diagnosticism is a necessary condition to ensure that scientific terminology is intersubjectively communicable and that scientific statements are intersubjectively controllable.

Karpiński – for use in the practice of psychology and sociology – extends the requirement of operational defining scientific terms to the so-called indicators (in particular, indicators which he calls – in contrast to the relational indicators – "definitional indicators"), *i.e.* α type properties being indicators of β properties on the grounds that having β property is defined by having α type property:

> The postulate of operationality of a definitional indicator of a given property is identical with the postulate of operationality of a definition of a given PROPERTY [Karpiński 1962: 152].

Note that Karpiński speaks not only of operational definitions, but also constructs a general theory of definition which, by the way, is a source of some troubles.

First of all, he opposes semantic definitions – to nominal definitions. Semantic definitions are to express assignment: term-denotation [Karpiński 1985: 100]; nominal definitions introduce defined expressions to the language, "apart from the semantic relations" [Karpiński 1985: 103]. An example of the first is to be the wording: "Social classes" are called large groups of people differing in relation to the means of production. An example of the second would be the words: Instead of saying "a situation in which an individual has at least two convictions such that the adoption of one of them makes probable rejection of the other", we can say "cognitive dissonance". Karpiński – and not only him – overlooks the fact that this second definition (and any other so-called nominal definition) can be easily converted to an equivalent semantic definition, saying for example: "Cognitive dissonance" is called a situation in which an individual has at least two convictions such that the adoption of one of them makes probable rejection of the other – and because of this paraphrase the statement "Cognitive dissonance is a situation in which an individual has at least two convictions such that the adoption of one of them makes probable rejection of the other" will also be an analytical thesis.

Secondly, Karpiński also maintains the traditionally distinguished type of real definitions, *i.e.* definitions stating "unambiguous characteristics" of an object [Karpiński 1985: 143].

Closer analysis shows that the differences between the so-called semantic, nominal and real definitions may eventually be reduced to a difference in modes of expression.[43]

4.5. Methodological schemes

The main methodological postulates of the Lvov-Warsaw School are considered to be the already mentioned call for clarity of language and demand for sufficient justification of the views held – or even more so, proclaimed. These two postulates may be expressed briefly: the greatest possible precision and the best possible argument. But there was also a third postulate: of correct classification.

Karpiński alluded to this latter postulate, when he lamented not only "low-grade" of specification of individual research methods used in sociology – that they are "very far from being algorithms", but also because of "strange rules" (or rather the lack of rules specified explicitly) of classifications of subjects fields examined conducted by sociologists [Karpiński 1976: 315]. A prime example of the latter methodological shortcoming is what is considered the classification of methods used in sociological research: it often turns out that traditionally separated types of research methods are the result of the intersection of several simpler, «single-principle» classifications.

Instead of traditional – methodologically erroneous – classifications of sociological methods ("schemes"), Karpiński suggests their following typology:[44]

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[43] It is so anyway in case of identity definitions; equivalence definitions (with equivalence as definitional link) do not have, of course – for purely syntactic reasons – identity paraphrase.

[44] Note that Karpiński's proposals do not exhaust the typological wealth, possible to achieve by using all combinatorial possibilities here. Supplementing Karpiński's analysis in this respect would be a fruitful and useful task to be performed by those who would want to be his continuators – ideally, if it was made in his style, whose beautiful example is his range of typologies of social structures [Karpiński 1992: 27 ff.], and whose another example – *in extenso* – I have included below (*cf.* initial characterization of comparative method). Such supplement would require a "qualitative" adjustment of Karpiński's proposal. For example, individual phases of a community studied diachronically may be treated as two different communities studied comparatively; with this approach, diachronic study would be a subtype of comparative studies. Another example, casually mentioned by Karpiński: instead of exploring relationships between members of some community taken as individuals – one may investigate relationships between them taken as elements of certain subclasses of that community. Besides, one would have to decide what here is really a method; in the spirit of Karpiński's comments on schools in science – structural studies, comparative and diachronic studies were distinguished not due to the applied research method, but due to the research subject (properties of elements of the examined community, relationships between the elements of this community, relationships between two communities *etc.*). From this point of view, experimental research – doubtless distinguished due to the manner of

(a) structural studies – which take into account not only the objects of the examined population taken in isolation, but also the relationships between them;

(b) comparative studies – which examine not one but at least two different communities with separate arrays of data, but with at least one «shared» column of unknowns (indicators);

(c) diachronic studies (including panel studies) – wherein for the population, and more precisely for the various time phases of this group, we have more than one data matrices (having the same, similar – or entirely different columns of indicators);

(d) experimental studies – in which outside observation of the surveyed population, an experiment is applied, and so they have to take into account the parameter of "researcher impact on the community" [Karpiński 1976: 323].[45]

Perhaps, we should add that Karpiński is willing to interpret the above mentioned data matrices, constructed by a sociologist, in terms of answers to completive questions as construed by Ajdukiewicz.

Among the types of studies indicated, Karpiński most thoroughly – in a separate paper [Karpiński 1977a] – examines the comparative studies. It may be worth quoting the initial fragment of this paper – as a clear example of Karpiński's scientific prose:

> In a very broad sense, the "comparative studies" would refer to […] the studies, in which at least two objects are studied in at least one aspect. In these studies, one might consider various relationships between objects: dissension and equality in a given aspect, as well as the majority and minorities, and the differences and ratios (size ratios) of objects in a given respect (depending on whether a variable in terms of which objects are studied is only a classifying, organizing, additive or quotient variable). In all these cases objects are compared and comparison leads to determining their equality or difference, majority or minority, or the magnitude of difference or relationship between objects. The result of so understood comparative studies may be the classification of objects based on the comparison. And contrary: to make the classification, one needs to compare (and possibly measure) objects.
>
> "Comparative study" in the narrower sense would be a study in which at least two communities are examined (and not any two objects) and which takes into

conducting it – would not be as Karpiński wants, "both" comparative and diachronic; it is only that both one and the other research sometimes use the experimental method.

[45] Karpiński also discusses – as a separate type – questionnaire research. However, methodological status of these studies is not clear, particularly their relation to empirical research. The same applies to the so-called content analysis in the sociology of literature [Karpiński 1992: 77 ff.], investigating the "social references" of characteristics of literary works [Karpiński 1992: 81].

account both the characteristics of this group's elements and characteristics of this group. Comparative studies in this sense are multilevel studies: in this sense that they concern both the community and its elements [Karpiński 1977a: 197].

On the occasion of the debate on the methodological schemes, Karpiński compiled the concept of scheme with the concepts of paradigm and idealization. It is a curious issue – although its recognition by Karpiński raises various concerns. Methodological scheme – is, as we have seen, a type of method used to study certain fields of objects. Paradigm – is, apparently, a «substantive» theory in this field regarded at that time as binding (generally reductionist, *i.e.* meeting the demand of not multiplying entities beyond need), although, admittedly, the paradigm may also include an obligation to apply certain methodological scheme. Idealization – one would say – is a procedure which substitutes for studied reality an abstracted "model situation" [Karpiński 1992: 29] (*cf.* [Karpiński 1985: 89, 91]). This is what entitles us to say that "in science […] non-existent phenomena are also considered" [Karpiński 1992: 89]. This particular type of methodological scheme is not actually favoured by Karpiński. His main objection is, however, unconvincing: that in sociology – and related disciplines, and unlike for example physics and related disciplines – "it is still difficult to control the correct approximations to reality" [Karpiński 1976: 329], which threatens with idealizing theory losing its semantic function.

4.6. Identification of schools

On the threshold of Karpiński's promising academic career, a famous work by Ossowski *O osobliwościach nauk* [Ossowski 1962] was published. One of its chapters was titled "Stanowiska i szkoły" ["Positions and Schools"]. Karpiński referred to it in seeking substantive criteria for identifying schools in science.

In his search, he reached, moreover, to the earlier tradition of the Lvov-Warsaw School: to the introduced by Twardowski – and later widely accepted – distinction between actions and products of these actions [Twardowski 1912]. When one speaks about science – one needs to rigorously observe this distinction. There is a difference between science as a research activity, and science as a product of this activity. Sociologist may be interested in both the one and the other.

Let us start with the functional understanding of science. Karpiński wrote about science in this sense:

> Science is a collective activity involving the acquisition, storage and processing of information [Karpiński 1977c: 28].

> Scientific activity can be regarded as a sequence of activities. The choice of research area and choice of terminology are initial activities. Later, there may be formulation of issues (possibly in the form of questions), choice of methods and formulation of statements [Karpiński 1977c: 32].
>
> If we agree to treat the practice of science as an activity of discovery, then repeating the assertions should be included in teaching rather than science understood as creative work [Karpiński 1977c: 33].
>
> Selection of a specific type of areas surveyed, terminology, questions, statements, methods or explanations is a restriction of freedom in science. […] Schools in science may be subject to methodological dogmatism [Karpiński 1977c: 35].

Let us add to the pair actions-creations yet a third element: subjects of these actions – and it becomes clear why Karpiński warns against calling sociology of scientists as subjects of science-creating actions "sociology of science", understood as sociology of products of the actions undertaken by scientists [Karpiński 1992: 6].

Schools in science – which became the subject of Karpiński's interest – were distinguished usually as a school in science understood functionally. Thus, they would be just some specific social groups. Their identity – as the identity of any community – would be presumed by internal links (especially energy and information links), the degree of organization and a sense of belonging (consciously declared or derived from an assignment of such affiliation by outsiders).

Karpiński, however, was looking for not purely sociological criteria, but – as he put it – "substantive" ones. What distinguishes science understood in terms of product from other spheres of culture is that it has – and in any case postulates – semantic reference; art is at the other extreme in this respect. Therefore, a substantive (in Karpiński's meaning) criterion of distinction of schools of science (orientation) is – knowingly or not – the choice of such and not other factors of that reference. It is in particular selection of:

(a) an area of research (the question is, "what part of reality is selected for the study" [Karpiński 1977c: 30]): *e.g.* observable or unobservable objects, separated historically or ahistorically, *i.e.* due to the similarity);

(b) a description language of area of research;

(c) a manner of learning this field (*e.g.* introspection, understanding);

(d) research questions;

(e) a set of recognized assertions;

(f) a manner of justifying assertions;

(g) type of sought explanations (*e.g.* univariate and multifactorial);

(h) a manner of creating theories (*e.g.* adherence to or departure from experience, use or non-use of mathematics);

(i) extra-scientific program, controlling the research (*e.g.* meta-scientific or ideological).

Karpiński was fully aware that individual items in this list come into intricate correlations. In particular, *e.g.*:

> Sometimes, it is difficult to determine whether to include […] [in the case of distinguishing scientific schools] issues related to the choice of fields of study, or to the choice of terminology [Karpiński 1977c: 30].

Different choices in terms of points (a)-(i) are subject to disputes between the schools – and representatives of individual schools. Karpiński made a thorough review of the types of such disputes. What's more: he developed the outline of the theory of disputes in science, which up until now has not become obsolete. According to Karpiński:

> [Disputes are] situations in which someone states a thesis, for example thesis *R*, and communicates, first, the belief that if *R* then not *T*, and, secondly, the belief that someone else claims or might claim the thesis *T* [Karpiński 1965: 31-32].

So characterized theses *R* and *T* – are contentious theses. In other words – contentious theses are theses which are mutually exclusive (*i.e.* cannot be both true). In this approach to contentious THESES, there is nothing … contentious. However, an approach to a contentious SITUATION proposed by Karpiński is original. Usually, it is believed that such a situation should have two protagonists: two disputing «parties». Let them be opponents *A* and *B*. Thus, it would be that at the same time:

(1) *A* claims that *p*.

(2) *B* claims that *q*.

(3) $p \Rightarrow$ non-*q*.

Meanwhile, Karpiński believes that just one «active party» is enough for a dispute to occur. It only must be so, that at the same time:

(1′) *A* claims that *p*.

(2′) *A* claims that *B* claims that *q*.

(3′) *A* claims that $(p \Rightarrow$ non-*q*$)$.

With this approach, Karpiński can neatly introduce the concept of a pointless dispute – if *A* is wrong to claim what it claims in (2).

In view of contentious theses one can take one of the following attitudes:

(A) not recognize any of them;

(B) recognize one and reject the other;

(C) acknowledge both.

If the attitudes (a)-(c) are legitimate, in the case of (a), we will deal with the irresolvable dispute, and in cases (b) and (c) – with resolution to the dispute. In the latter case, one will need to consider the dispute as apparent, *i.e.* to agree that the so-called contentious theses, in fact, are not mutually exclusive. It will be so not only when *'p'* and *'q'* are sentences not meeting the condition (3), but also when at least one of them is not a sentence in a logical sense at all [Karpiński 1965: 46]. This is the nature, according to Karpiński, of non-utilitarian assessments. On such assessments, he wrote firmly:

> A (non-utilitarian) assessment can usually be treated as an expression of approval (or disapproval) for the occurrence of a phenomenon; a dispute about whether we approve rightly – is not decidable. Sometimes we express this approval directly – by using the predicate "good" or "bad" – but in science wording such as: "It is good that this-and-this occurs" is almost unheard of. If we valuate phenomena in scientific work, we take an attitude of assessment towards them, then we do it rather without the mentioned predicates – we use a much wider range of possibilities of extra-cognitive language functioning, broader impressive and expressive functions of speech [Karpiński 1965: 44].

5. Conclusion

There is a striking simplicity in Karpiński's writings. He even formulated … a simple directive in this case:

> In order to speak of something, one should, at least initially, somewhat simplify the matter [Karpiński 1992: 29].

And since the "tendency of the human mind to simplify phenomena […] facilitates their understanding" [Karpiński 1976: 331] – simplicity in Karpiński's writings goes hand in hand with their intelligibility. What Karpiński attributed to Tatarkiewicz's works – "clarity, accuracy, explicitness" [Karpiński 1992: 106] – he himself also practiced to a very high extent. There is a simple test for that: the point is that it is not easy to summarize his comments (just like with Tatarkiewicz) – in the sense of an original report from not ABOUT WHAT he wrote, but WHAT he wrote. This is a result of the implementation of the principle, which Karpiński himself – according to the testimony of Antoni Sułek [2013] – put in a few words: "The shorter, the better".

The implementation of these ideals reveals following – as Sułek would put it – a certain PATH: namely a path initiated by Twardowski – a path,

whose main direction was then demarcated by the works of his most prominent disciples: Łukasiewicz[46] and Ajdukiewicz[47] (to a much lesser extent – we should add – *e.g.* Kotarbiński, who many times happened to walk on its shoulder, and even, sadly, wander astray[48]).

In science, Jakub Karpiński followed this path – the path of Lvov-Warsaw School.

It is a shame that for such a short period of time.

[46] From Łukasiewicz, Karpiński took over, among others, the theory of reasoning.

[47] Directly from Ajdukiewicz, Karpiński took over a large part of ontological and logical conceptual apparatus – including notions of state of affairs and events; the notion of language as well as: semantic notions; the notion of measurement, experiment and observation; the notion of theory; the notion of question and answer *etc*.

[48] Let us note that the flagship ontological «invention» by Kotarbiński – reism (*resp*. somatism) – was subjected to criticism by Karpiński: harsh in content, although full of gallantry in words [Karpiński 1992: 6 ff., 46 ff.].

16. Jerzy Perzanowski

The role of logic in scientific philosophy
is so far unquestionable,
that questioning or neglecting this role
is one of the essential symptoms of scientific irresponsibility.

[Perzanowski 1988c: 7]

1. Life

He was born on 23 April 1943 in Aix-Les-Bains (France); he died on 17 May 2009 in Bydgoszcz, and was buried in the Rakowicki Cemetery in Cracow.

In the years 1960-1965, he studied philosophy at Jagiellonian University; his professors were: Roman Ingarden and Izydora Dąmbska (philosophers), and Kazimierz Pasenkiewicz and Stanisław J. Surma (logicians). Concurrently, in the years 1961-1968, he studied mathematics at the same university; the promoter of his mater's thesis in this field was Andrzej Lasota.

He got his doctorate in 1973 on the grounds of his dissertation *The Deduction Theorems for Modal Logics Formalized After the Manner of Lemmon* (with Pasenkiewicz as the promoter); the book *Logiki modalne a filozofia* was the base of his habilitation in 1990.

He worked first at the Institute of Philosophy of Jagiellonian University (since 1965), and then (in the years 1992-2009) additionally at the Department of Logic of Nicolaus Copernicus University in Toruń. He was a guest lecturer in Great Britain, Austria, Brazil and Liechtenstein.

In the years 1980-1991, he was actively involved in the movement of *Solidarity*.

2. Personality

Perzanowski's scholarly and pedagogical personality is owed to three factors: the tradition which he acknowledges, his own psyche and the style connected with it, and his activity.

2.1. Tradition

Perzanowski writes about himself:

> I was nursed in the circle of the phenomenologico-logical tradition, and I try to be faithful to this tradition [Perzanowski 1996c: 177].
>
> I am connected with what is described as analytical philosophy, as well as with classical phenomenology; generally speaking, I am connected with the Brentanian tradition [Perzanowski 1996c: 184].

This tradition, in both its branches, is, at the same time, the best Polish tradition. In the area of pre-formal ontology, it is Ingarden's tradition; in the area of formal (logical) ontology, it is Leśniewski's tradition; Ingarden and Leśniewski are, according to Perzanowski, the most distinguished Polish ontologists [Perzanowski 1994a: 181-182].

Strong ties link Perzanowski with the native tradition *via* his successful realization of Łukasiewicz's programme from 1927 [Perzanowski 1996c: 183], namely the program of logical philosophy. In realizing this programme, he is consistent with the native tradition, because "logical philosophy is […] a kind of crowning of analytical and phenomenological philosophy" [Perzanowski 1994a: 69].

Above all, Perzanowski is connected with the Polish tradition by his claim of a doubly responsible mode of practicing philosophy. He answers the question "How to philosophize?" in the following way:

> By respecting the achievements of one's predecessors and the results of sciences. Systematically. By being careful with facts. Integrally and responsibly – as a matter of science, and as a matter of philosophy. […] Practicing philosophy in a scientifically responsible way consists in clear, critical and justified philosophical thinking [Perzanowski 1988c: 6].
>
> Philosophical responsibility consists in taking into account the specificity of philosophical notions and methods [Perzanowski 1988c: 7].

One hears here the echo of Twardowski, who demanded a "responsible way of doing philosophy" [Perzanowski 1989a: 239], as well as the echo of Ingarden, who demanded just the indicated double responsibility in this context [Perzanowski 1989a: 240].

The Jerzy Perzanowski's gravestone in the Rakowicki Cemetery, Cracow

2.2. Psyche

The main parts of the psyche of any individual are: intellect, fantasy conscience, will and heart.

Numerous «nutritious» fruits of Perzanowski's studies speak well for his intellectual abilities. These abilities are connected in him with a great creative fantasy: with his capacity of making distant associations as well as of finding hidden similarities.

Perzanowski is a man of strong and sane principles of life. What his «voice of conscience» sounds like, we will state easily on the ground of the fact that nothing can be heard about a «Hegelian» sting in his case. Like his beloved teacher, Dąmbska, he has borne witness many times to his "responsibility in thinking and doing" [Perzanowski 2001: 18].

Will power appears in extremities: first of all, in the face of own or relatives' serious illness. Perzanowski has found himself in both situations, and he has showed a rare fortitude and a much more rare elegance – bearing witness of being a true aristocrat of soul.

The greatest «evidence of heart» is for Perzanowski the necessity of links with the community. Only for naïve people can it be surprising in a man who is not always «pleasant», «gentle» and «controlled» in daily personal attitudes. However, real care for the community appears in a special «tutelarity»: first of all, in making great efforts to find a staff of honest co-operators. It is not an accident that among the components of "a recipe for scientific philosophy", given by Perzanowski, we find the following one: "Aim at creation of scientific environment!" [Perzanowski 1994a: 73]. The same motives determine Perzanowski's efforts to «logicize» the school system, or university studies at least, since logic plays such a decisive role in philosophy and other sciences.

This care finds its wider expression in looking after the common good of the whole community, and in looking after its language.

> Language is the space of thoughts. […] For that reason, it is so important for spiritual life of a given community to enrich the fund of thoughts expressed in its language. Thus, we should lay great stress on translating works of outstanding thinkers into our language. […] The matter is […] about enriching the spirit of this community [Perzanowski 1994b: 9].

In short: for Perzanowski, the greatest «evidence of heart» is his patriotism.

2.3. Style

Writing men's psyche is reflected in their style of writing.

Perzanowski is a master of Polish language; if his texts were not to be studied, one would read them in the manner of listening to music – to Polish music: *e.g.*, Karłowicz's – or better – Kilar's music.

He writes in short sentences, or rather in verbless sentences: sentential equivalents. His texts are divided into short segments. He does not avoid aphorisms and metaphors; but he puts them in places which are acceptable by analysts: either in «extra-logical», or in «pre-logical» part, which ought to challenge proper lively interpretative intuitions or to «synthetize» them. And he does it very successfully: choice, suggestive – not devoid of persuasive elements.

But Perzanowski does not always write in an «easy» way. Sometimes, what he writes is difficult to understand. The situation is as in the case of Heraclitus. As Aristophanes expresses it, what we can «easily» read from his works drives us towards understanding the rest.

2.4. Activity

Perzanowski's activity – leaving aside the publication of his own works – is imposing.

He is a member of ten societies and a number of scholarly committees; he serves on advisory boards of several philosophical journals; he edited his own periodical and many anthologies. All of these features can perhaps be considered as standard. But two kinds of Perzanowski's activity considerably overstep these standards: his published reviews and delivered papers.

Perzanowski postulates to constantly read current philosophical literature; it is one of the remedies against the dilettantism in philosophy. He himself tries to realize this ideal: over fifty reviews (mainly in *Mathematical Reviews*) speak well for this fact. Over two hundred papers delivered at home and abroad are a telling testimony of this; some of them present the results of his own inquiry, but many of them present the newest results achieved by native or foreign colleagues.

3. Views

3.1. Philosophy

Jerzy Perzanowski distinguishes two kinds of philosophical texts on the basis of how they approach philosophical problems: scientific and non-scientific ones. He writes:

> Philosophy breaks into logical and extra-logical philosophy. And the latter divides into pre-logical or non-logical philosophy. […] Non-logical philosophy contains […] everything in philosophy which tolerates neither clarity nor the light of reason [Perzanowski 1994a: 74].

Scientific philosophical texts cover only texts from logical philosophy, *i.e.* formal, mathematical philosophy [Perzanowski 1993a: 11], or from pre-logical philosophy, *i.e.* "descriptive-analytic" philosophy [Perzanowski 1988b: 87]; and non-scientific texts are texts from non-logical philosophy.

3.1.1. Logical philosophy

Scientific philosophy is scientific, because it uses methods of investigation common to all the sciences, namely analysis, *i.e.* the art of decomposing, and synthesis, *i.e.* "the art of reasonable composing" [Perzanowski 1994f: 258].

In the domain of this investigation, pre-logical philosophy gives the conceptual apparatus only for an introductory description of a given examined universe [Perzanowski 1988b: 87]. The procedure is as follows: (i) establishing the basic problems of this universe; (ii) sketching the conceptual frame (categories) and the basic oppositions in particular; (iii) describing the paradigms of inquiry; (iv) juxtaposing its basic principles [Perzanowski 1993b: 329].

Logical philosophy – containing axiomatic theories [Perzanowski 1994f: 256] – uses logical analysis (and synthesis?), *i.e.* a logical calculus [Perzanowski 1994f: 261], giving us the opportunity, *i.e.*, to catch the structure of the language of the theory, and to fix, in particular, "which names of a given language are indefinable" [Perzanowski 1984b: 228]. Perzanowski gives logical philosophy a key position, because – as he writes:

> Only by creating an accurate theory, [can] one supply a felt want of understanding, or an imperative to answer definite, «science-creating» questions "How?" and "Why?" [Perzanowski 1996c: 185].

Formalizing is, according to Perzanowski, not only one of the ways of clarification [Perzanowski 1996b: 63]; it is the most proper way. Hence it follows that logic plays a special role in philosophy.

Logic is one of the philosophical disciplines. As such, it is, of course, a science in itself.

> The main logical problem consists in the question of legitimacy of […] inferences [Perzanowski 1989a: 244].

But apart from pure logic, we have also applied logic. Perzanowski writes:

> Logic is a science at the intersection of four disciplines: philosophy, mathematics, linguistics and the theory of information […]. It is traditionally most strongly connected with philosophy; it is directly connected with rationalistic philosophy, giving it a basic tool of cognition [Perzanowski 1984a: 316].

It is "a tool of practicing scientific philosophy" [Perzanowski 1994a: 70].

> The role of logic in scientific philosophy is unquestionable to such a degree that doubting this fact or neglecting logic is one of the main symptoms of scientific irresponsibility [Perzanowski 1988c: 7].

At the same time, it is a "proper, and not only methodical" tool of philosophy [Perzanowski 1996b: 184], because it serves not only as a tool of ordering ready results.

> Logic governs philosophizing. It helps to reorganize ideas into theories [Perzanowski 1989c: 346].

Perzanowski rejects the view according to which introducing logic into philosophy leads to the latter's annihilation. He writes:

> The great success of applying logic in philosophy leads to […] transformation of it into a strict science, and does not lead to its liquidation [Perzanowski 1989a: 254].

The logicisation of philosophy is not its ruin, but its hope. Thus:

> We should get over being afraid and begin to use recently developed logical tools for exploring the essence of philosophy [Perzanowski 1989a: 256].

"Formalization is injurious not for depth but for woolliness" [Perzanowski 1988c: 9] – so long as it is used carefully, because "exaggerated formalism kills intuition" [Perzanowski 1988c: 8].

3.1.2. Philosophical disciplines

Concerning the object of inquiry, Perzanowski distinguishes two types of philosophical disciplines. The first type contains general disciplines, including (first of all): ontology, metaphysics and (pure) logic; the second type contains particular disciplines, including (*i.a.*): epistemology, semiotics ("philosophy of language"), axiology (ethics and aesthetics), anthropo-philosophy [Perzanowski 1989a: 241] and theo-philosophy or philosophy of God [Perzanowski 1994f: 244].

As yet, disciplines of the second type are, to a high degree, "autistic" and are up to now in a "semi-scientific" phase [Perzanowski 1989a: 242]. Disciplines of the first type are more advanced and for a long time (axiomatic) theories have been built within many of them.

Among general philosophical disciplines, ontology is the philosophy of being or of possibilities [Perzanowski 1988a: 63; Perzanowski 1988b: 87; Perzanowski 1993b: 9; Perzanowski 1994f: 252], metaphysics is the philosophy of existence or reality [Perzanowski 1994f: 252; Perzanowski 1995: 15], and logic is the philosophy of inference or "transforming information" [Perzanowski 1988b: 90].

Referring to Ingarden, Perzanowski contrasts a fundamental (general) ontology with metaphysics [Perzanowski 1996c: 181]. They are different, because their objects are different. He writes:

> Any attempt of identification of being [or possibilities] with existence [or particularization of possibilities] closes the way to the positive [or "specifying"] theory of existence [Perzanowski 1996c: 181].

The real world is a proper part of ontological space – or the set of all possibilities [Perzanowski 1995: 15; Perzanowski 1996a: 26].

Pre-logical ontology, *i.e.* "the conceptual part of ontology" [Perzanowski 1988a: 63], as practiced in Poland, *e.g.*, by Ingarden, is given the name "ontics" by Perzanowski, while logical ontology, *i.e.* "the theoretical-formal component of ontology" [Perzanowski 1989c: 285], as practiced, *e.g.*, by Leśniewski, is described as "ontologic" [1996c: 181-182]; Perzanowski mentions also one «branch» of ontology, *i.e.* the so-called onto-methodics [Perzanowski 1988b: 87-88].

3.2. Ontology

The schema of the principal question of ontology has the form: "How is *x* possible?" [Perzanowski 1995: 15]. An answer to this question is to indicate what makes (occurrence of) *x* possible, its principle (sufficient condition): source, and the primordial constituents of the most general regularity of (the mode of) acting. In the case of general ontology, this question has the form: "How is possible that which is possible?" [Perzanowski 1995: 15]. In traditional terms, the principal question of ontology is the question about the hidden essence – *i.e.* the primordial substance [Perzanowski 1994f:273] or the reason [Perzanowski 1994f: 252] – of secondary phenomena [Perzanowski 1994f: 268]: what is given, "created according to rules" [Perzanowski 1994f: 252], «written» in the essence of these phenomena.

3.2.1. Types of ontologies

Existence and inference are particular possibilities; thus metaphysics and logic can be considered as special (particular) ontologies. If so, ontology – *i.e.* the philosophy of possibilities – appears to be the principal [Perzanowski 1988b: 90-91], the most general philosophical discipline. It is not surprising that "all attempts of making philosophy a science are accomplished […] by the effort to explain the modal phrases it employs" [Perzanowski 1989c: 263].

Perzanowski mentions (also?) *expressis verbis* such particular ("secondary") ontologies as physico-ontology, psycho-ontology [Perzanowski 1995: 15] (or (?) the ontology of mind or thoughts [Perzanowski 1988b: 97]) and semio-ontology [Perzanowski 1988b: 87-88] (or (?) the ontology of language or culture in general [Perzanowski 1988b: 97]).

With regard to the mode of (re)constructing "secondary" objects from "primordial" objects, one should distinguish transformational and combinatorial ontologies [Perzanowski 1996c: 178-190].

At first, together with these two ontologies, Perzanowski mentioned «reistic», situational and eventist ontologies – and existential, predicational [Perzanowski 1988b: 93], (functional-)relational and mereological ones [Perzanowski 1988b: 92-93], and then he added attributive, identificational, distributive, «Boolean» and, last but not least, locative ontologies [Perzanowski 1993a: 16]. The first chain contains ontologies distinguished for the sake of the kind of "primordial" objects, *i.e.* with regard whether these objects are things, states of affairs or events. The second chain includes various versions of combinatory ontologies of the pluralistic type; what differentiates them are the kinds of relations between pairs of categorially different entities, these relations being described by particular contexts of the word "is" [Perzanowski 1996b: 64].

Unexpectedly, Perzanowski finally distinguished three main type of ontologies: qualitative, relational and «verbal» ones. The latter ontologies are divided by him into transformational (processual) and «copulative» (de-connectival) ones; predicative, attributive, identificational, distributive, «Boolean», mereological and locative ontologies being classed as «copulative» [Perzanowski 1993a: 9]. However, Perzanowski emphasizes that the most general «verbal» ontology is the theory of relations [Perzanowski 1996b: 64].

The foundation of transformational ontologies is the belief that "secondary" objects arise from "primordial" ones by change, *i.e.* by transformation (modification) of substance or by the recombination of combinations [Perzanowski 1994f: 300; Perzanowski 1996c: 180]. The foundation of combinatory ontologics, deriving form Leibniz, the young Kant and the young

Wittgenstein [Perzanowski 1994f: 301], is the belief that the ontological «gemmation» takes place by organizing substances, otherwise «internally» invariable, into wholes of a higher order [Perzanowski 1996c: 179]. From a historical point of view, transformational ontologies emerge in a natural way out of ontological monism, according to which there is just one substance; combinatory ontologies, on the contrary, emerge from ontological pluralism, according to which there are many substances [Perzanowski 1994f: 253].

3.2.2. Combinatory ontologies

Perzanowski regards combinatory ontologies – or, more precisely, onto-logics – as the fundamental [Perzanowski 1988b: 99] general theories of analysis and synthesis [Perzanowski 1995: 22]. He writes:

> Combinatory ontology is the general ontology of analysis and synthesis of objects, ordered by the relation […] of being more simple, and combined in wholes (complexes) according to the form of the object, determining, for the pure combinatory set of objects, whether such a combination is possible or not. The form is given by the inner properties of objects, generating their objective modalization. It determines the basic ontological modalities: affording […], dis-affording […] and ontological neutrality [Perzanowski 1992: 439].

Thus, combinatory onto-logic is *ex definitione* a modal onto-logic, as is the theory of the relation of making-something-possible – occurring in the context: "Substance *x* makes the complex *y* possible" [Perzanowski 1989c: 288] – and the kindred relations: making-something-impossible and mutual ontic neutrality [Perzanowski 1989c: 287].

The role of the central category in combinatory onto-logic is played, of course, by combination. Combination is a complex (configuration, collection) of correlated – or being one to another in relations determining the structure of complex – objects, establishing its material (parts) and substance (elements), and included in the unified system of connections, constituted by determinants, *i.e.* by ontological modalities [Perzanowski 1995: 19-21]. These modalities belong to the larger class of alethic modalities (modificators) [Perzanowski 1991a: 560] and constitute the inner properties of objects participating in complexes; these properties determine "all possible combinations in which a [given] object can participate" [Perzanowski 1995: 18].

Objects, creating a combination, are located in it; thus combinatory onto-logic must contain locative onto-logic: the theory of generalized (relational) location, *i.e.*, the relation whose particularizations are: physical

(spatio-temporal) and extra-physical location [Perzanowski 1995: 19]. Thus, creating locative onto-logic is the first step towards combinatory onto-logic [Perzanowski 1993a: 10].

One of the examples of an effective application of modal combinatory onto-logic to solving essential philosophical problems is the explication of the difference between ontological rationalism and determinism (or, strictly speaking, causalism) drawn by Perzanowski. As it is known, rationalism proclaims that *nihil sine ratione,* and causalism – that *nihil sine causa* [Perzanowski 1994e: 169]. The difference between the reason of a certain component of the world and the cause of it, intuitively treated, consists, *i.a.*, in the fact that reasons can be «from behind» this world, and causes must «inhere» in it [Perzanowski 1994e: 170]. Perzanowski interprets this difference contrasting the (ontological) operation of making-something-possible (by reason) and the (metaphysical) operation of realizing-something (by cause). The common factor of both of the operations is EFFECTING [Perzanowski 1994e: 169]: to make something possible is to EFFECT it to be possible [Perzanowski 1994e: 178]; to realize something is to EFFECT it to be real (factual) [Perzanowski 1994e: 186],

Detailed analysis leads Perzanowski to the conclusion that being a reason is a non-reflexive, non-symmetrical and non-transitive relation; thus, being a cause – as an irreflexive, asymmetric and transitive relation – is a relation «stronger» than that of being a reason [Perzanowski 1994e: 171-172] and can be, after suitable «preparation», transformed into a function. The incidental – and, in a way, surprising – conclusion is that causalism implies ontological infinitism: the thesis that the world – as the sum of facts – is infinite [Perzanowski 1994e: 187]. If we do not want to accept such a consequence, we should consider the hypothesis that probably some facts have their «external» cause beyond the world of facts [Perzanowski 1994e: 188].

3.3. History of philosophy

Perzanowski does not avoid historical analyses of problems, even those which are very distant one from one another.

On the one hand, the object of his studies is the Cartesian version of the ontological proof of God's existence, *i.e.* the version explaining the notion of the most perfect entity by determining God as a subject of all perfections [Perzanowski 1991b: 626], and Gödel's version, founded on the former. On the other, he examined, *i.a.*, circumstances which forced Cantor to distinguish non-consistent and consistent magnitudes, *i.e.* sets in the narrow sense of the word [Perzanowski 1968: 230].

Among philosophers especially valued by Perzanowski, we find: Parmenides, Plato, Leibniz, and Wittgenstein. He regards Plato and Leibniz as philosophers who, *i.a.*, first noticed that the clue to resolving central philosophical questions could be the correct theory of similitude. Perzanowski has written extensive and subtle studies of Parmenides, Leibniz, and Wittgenstein.

3.3.1. Parmenides

The most famous thesis of Parmienides – εστιν τε και ωσ ουκ εστ με ειναι – is some-times interpreted as the ontological principle of identity (according to which being is, and non-being is not); as such, it is supposed to be tautological and trivial [Perzanowski 1996b: 62], *ergo* clear and evident. In fact, Perzanowski states, it is neither clear, nor evident. Each of its key words – "being" and "non-being", "is" and "is not" – calls for «clarification», and the whole thesis becomes evident only on the basis of assumptions which should be reconstructed [Perzanowski 1996b: 63].

Perzanowski's point of departure of explorations is the rejection of the "anti-ontological" belief (held, let us add, *i.a.* by Dąmbska) that the word "being" and derivative expressions are syncategoremata [Perzanowski 1996b: 63]. They are, indeed, universal in some of their senses, but as such they are categoremata [Perzanowski 1996b: 127]. On the other hand, on Perzanowski's approach the word "object" – as a variable with unlimited scope – is a *syncategorematum* [Perzanowski 1996b: 126].

Assuming the categorematicity of "being", Perzanowski undertakes a detailed semantic inquiry of this word, finding its five main meanings [Perzanowski 1996b: 73]; he notices some characteristic differences between words corresponding to "being" in the particular languages: Greek, Latin, English, and Polish; in Polish, *e.g.*, the content of the phrase "*x-a* nie ma" contains a modality, which we can grasp in the paraphrase – "it is impossible to find *x*" [Perzanowski 1996b: 86].

An adequate reconstructing of Parmenides' thesis requires taking into account these polisemies and giving different versions of that thesis. Perzanowski does not only want to present a list of possible versions, but also to examine their justification. For that reason, he introduces a formalism – different from the formalism proposed by Pelletier [Perzanowski 1996b: 101 ff.] – which allows for a logically satisfactory solution to the problem. He constructs the theory of ontological connection [Perzanowski 1996b: 67] between any objects, named "*obiectum*" and "*obiectivum*" respectively [Perzanowski 1996b: 66]. In the primary version, it is a theory operating – in addition to the main constant – with notions of particular, universal and

defective being. In the enlarged version we find also the notions of being as the sum of particular beings and of Being as the unity (idea) of all beings [Perzanowski 1996b: 102 ff.].

In his theory, Perzanowski gives us proofs of the most important paraphrases of Parmenides' thesis: that particular being is, whereas particular non-being is not – and that if something is, then it is; *ergo* if something is not, then it is not; he also demonstrates the paradoxical thesis that Being and Non-being are (*i.e.* exist?). As he writes:

> Thus, in the light of logic, the way of truth is the following: Being is and Non-being is not; [on the other hand] beings are, and non-beings are not [Perzanowski 1996b: 128].

3.3.2. Leibniz

Leibniz – "the prince of philosophers" [Perzanowski 1996a: 24] – according to Perzanowski, "occupies the central place in the main stream of European metaphysics" [Perzanowski 1996a: 27], and his work is "probably the most large-scale intellectual system of Western civilization" [Perzanowski 1994f: 350]. Perzanowski regards Leibniz as "one of the greatest masters of deep, penetrating reflection, able to see the whole and unifying order of the surrounding world through its details" [Perzanowski 1994f: 361].

According to Perzanowski:

> Leibniz's metaphysics gives the foundations for the natural sciences and these foundations are confirmed bit by bit; it opens up one of the most promising perspectives on the mind-body problem and it includes the complex of fundamental truths of Christianity into the domain of truths accessible to understanding, giving many of them proofs of their coherency [Perzanowski 1994f: 250].

It is not surprising that Perzanowski reconstructs Leibnizian philosophy – and theo-philosophy – with great piety. Thanks to its reconstruction, it is beyond doubt that Leibniz was, *i.a.*, a forerunner of:

(i) a «pan-informatic» approach to the world [Perzanowski 1994f: 284];

(ii) the distinction between two logical versions and two ontological versions of the principle of non-contradiction [Perzanowski 1994f: 266];

(iii) an approach to existence as possessed by elements of maximal (as regards its variety) non-contradictory (*i.e.* having inner order) set of objects [Perzanowski 1994f: 317-318, 330];

(iv) linking such an approach of existence with theodicy: "the mechanism of the world […] does not allow much leeway for evil"; "such leeway would

exist only if everything were possible"; "but not all is possible […] [and thus] order persists, [and] evil passes" [Perzanowski 1994f: 341].

3.3.3. Wittgenstein

Wittgenstein interests Perzanowski only as the author of the *Tractatus*. Perzanowski wanted, in particular, to show that

> The ontology and semantics of the *Tractatus* […] are more consistent and are more closely connected than it is commonly assumed [Perzanowski 1984b: 224].

It appears that difficulties with the supposed polysemy of some fundamental categories of the *Tractatus* – such as "form", "form of representation", "object" and "thought" [Perzanowski 1984b: 228] – disappear if one «mounts» them in a suitable ontological frame.

Perzanowski regards the modal combinatory ontology as such a suitable frame, being founded on the principle of ontological modality – *i.e.* making-something-possible [Perzanowski 1990: 185]. In the language of such an ontology, *e.g.*, the form of x – "the central notion of the *Tractatus* – is interpreted as all in x which affords its determined structure y" [Perzanowski 1984f: 226]. The theory of form is the base for a certain enlargement of von Wright's construction, being, according to Perzanowski, a suitable theoretical background of the ontology of the *Tractatus*, enabling, *i.a.*, the explanation of the non-symmetry of the operators of necessity and possibility in the *Tractatus* [Perzanowski 1994f: 254].

Perzanowski also studies the semantics of the *Tractatus*, and, in particular, its distinctness in comparison to Frege's semantics. He finds that there are two main differences between them. The first difference consists in the fact that Wittgenstein put in opposition to names – as simple signs – not sentences, but complexes of signs, creating "pictures", which represent the structure of pictured objects [Perzanowski 1993b: 327]. The second difference resides in the fact that Frege's semantics is homogeneous: names as well as sentences have reference and meaning; in Wittgenstein, on the other hand, names do not have meaning, and the sense of sentences is a chain of many functions: in particular, sentences do not refer to their logical value, but they objectify facts referred by propositions which mean meaning projected on these sentences [Perzanowski 1993b: 368].

4. Results

"Every inquiry finds its justification – writes Perzanowski – in its fruits" [Perzanowski 1995: 23].

Here there are the most important fruits of his own considerations.

Firstly, Perzanowski is the author of new philosophical theories:

(i) on the basis of subtle analyses of the notion of "being" – in nominal, possessive, identificational, locative, adverbial, passive and existential contexts, in [Perzanowski 1988a: 73 ff.], he created an outline of his own modal theory of being [Perzanowski 1988a: 82 ff.];

(ii) starting from the observation that the theories of pre-orders, pre-mereology, mereology and of Leśniewski ontology are ill-fitted for use in the formalisation of location, *i.e.* one of the key categories of combinatory ontologic, he constructed his own locative onto-logic, generalizing the theory of pre-orders – using two initial notions: location or being-in [Perzanowski 1993a: 44] and allocation or being-inside [Perzanowski 1993a: 46-48] as the nucleus of the whole «net» of other important notions of this onto-logic, such as: placing-somewhere, identification, moving *etc.* [Perzanowski 1993a: 45].

Secondly, Perzanowski developed a new – ordering – presentation of existing conceptions, in particular:

(i) modern positions in the philosophy of mathematics [Perzanowski 1970a – Perzanowski 1970d; Perzanowski 1970f; Perzanowski 1970g];

(ii) the theory of categories and functors – *i.e.* "objective domains described by mathematicians" [Perzanowski 1970e: 35] – as a certain metamathematical theory being more general than the set theory and competitive to it (even if it is perhaps reducible to one of the versions of the set theory);

(iii) modal logic [Perzanowski 1989c: 262 ff.].

Thirdly, Perzanowski indicated new applications of existing theories, and, *i.a.*, he used modal logic (interpreted in combinatory terms) to:

(i) formalize the *dictum* of ontological rationalism that nothing is accidental [Perzanowski 1989c: 326 ff.];

(ii) contrast unilateral with bilateral accidentalness [Perzanowski 1989c: 306 ff.];

(iii) analyse the metaphysically important axiom [Perzanowski 1994c: 336] stating that the necessity of implying the necessity of the occurrence of something by this occurrence itself is equivalent to the necessity of implying the occurrence of something by the possibility of the occurrence of it [Perzanowski 1994c: 311];

(iv) demystify so-called modal paralogisms, such as deriving the necessity of occurrence of one of the arguments of a certain relation from the occurrence of this relation itself (which is commonly considered as an obviously incorrect reasoning) [Perzanowski 1989c: 301 ff.] as well as deriving the

possibility of the coexistence of certain states of affairs from the possibility of the occurrence of these states themselves [Perzanowski 1984a: 317 ff.];

(v) reconstruct the ontology of the Wittgenstein's *Tractatus* [Perzanowski 1989c: 297 ff.] and the fragment of Ingarden's ontology, formalizing Ingarden's conception of ontic primordiality and derivativeness [Perzanowski 1989c: 333 ff.].

Fourthly, Perzanowski threw new light upon certain traditional philosophical and metaphilosophical problems, and in particular:

(i) he contrasted problems with questions – expressing "mature problems" [Perzanowski 1989a: 232] – and he noticed the role of the problems in the development of particular sciences [Perzanowski 1989a: 234];

(ii) he described the place of philosophy in the system of sciences, and the place of ontology and logic in the system of philosophical sciences [Perzanowski 1995];

(iii) he justified the methodological hypothesis that "language not only gives us forms making possible the expression of various ontologies, but it also makes possible the comparison of these ontologies thanks to the fact that they are expressed in one language" [Perzanowski 1988a: 85];

(iv) he «synchronically» strengthened the «diachronic» hypothesis assumed, *i.a.*, by Brückner [Perzanowski 1993a: 1], that "historically first were linguistic (locative!) forms corresponding to logically first (combinatory!) ontologies" [Perzanowski 1988a: 85];

(v) he noticed that the Leibnizian principle of identity can be interpreted not only epistemologically, but also ontologically; in the first case, it concerns objects cognitively indiscernible; in the second case, it concerns object qualitatively indiscernible [Perzanowski 1994f: 267];

(vi) he showed that the ontological proof of God's existence (or rather a certain fragment of this proof concerning God's perfection) is valid provided that we assume so-called Leibniz's ontological lemma [Perzanowski 1994d: 95], which says that "existence of the most perfect entity is possible" [Perzanowski 1994f: 321; 26, 90].

5. Position

Perzanowski was a professional philosopher and he was in favour of professionalism in philosophy [Perzanowski 1996c: 177]: here he imitated his master, Dąmbska, whose "earnestness in treating philosophy" striked him especially [1988c: 12].

He was a scientist – in the sense that he considered philosophy as a science: "a science […] which is general, abstract and formal […] and very difficult" [Perzanowski 1996c: 182].

He was a systematician – but he did not suffer from historio-phobia; he declares for making a history of problems, theses and arguments, and he was not concerned with the history of men and their views, "jokes", "anecdotes and allusions" connected with them [Perzanowski 1989a: 238-239].

He was – as one would want to say – a «prudentist»: he was a careful scholar, being especially an adversary of pre-matured decisions in the sense of Ingarden.

He was an «emergentist»: he was against radical forms of reductionism, which sometimes reminded him of "a method of treating a hand by cutting a head" [Perzanowski 1989c: 267].

He was a «purificator»: according to him, an important aim of philosophy – if not the main one – is to "clarify notions" [Perzanowski 1989a: 240].

He was a «profundist»: his words written about Dąmbska's analysis are also true about his own analyses; his "analysis does not slide over the surface of problems, but it goes to their bottom" [Perzanowski 1984a: 313]; that what is striking in his analysis is "brevity, precision in words and in argumentation" [Perzanowski 1984a: 313].

He was a rationalist, and rationalists "believe that the reality is organized, and that its mechanism is, in principle, comprehensible" [Perzanowski 1994f: 244],

He was a theist: he regards God – God of philosophers, at least – as the source of organization of the reality [Perzanowski 1994f: 244].

He was a fictionalist, or, in his own words, "not a fully consistent but rather skeptical Meinongist" [Perzanowski 1984a: 310]; in semiotics, the symptom of this fictionalism is that he accepted two modes of referring: designation (of real objects) and supposition (of possible objects), and that, in consequence, he rejected the existence of empty names [Perzanowski 1984a: 319].

6. General estimation

Perzanowski belonged to the vanguard of modern Polish philosophy: as a scientist and as a lecturer. He belonged to it as a scientist, because his views were always splendidly articulated; many of his results are throughout original; and his theoretical position is well grounded. He belonged to this vanguard as a teacher, because he had the personality of a naturally gifted pedagogue.

University is the place to cultivate and propagate science. Thus university philosophy ought to be *ex definitione* scientific philosophy. Perzanowski was a real coryphaeus and an indefatigable propagator of such a philosophy.

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Abbreviations

A. – Amsterdam; B. – Berlin; Br. – Bern; Ch.B. – Chateau Barly; D. – Dordrecht; F. – Fribourg; FB. – Freiburg im Bresgau; G. – Gdańsk; H. – The Hague; Hn. – Hannover; K. – Kraków; Kt. – Katowice; L. – Lwów; Lb. – Lublin; Ln. – London; Lp. – Leipzig; M. – München; NY – New York; O. – Oxford; Od. – Odessa; P. – Poznań; Pt. – Petersburg; Pr. – Paris; R. – Roma; Rz. – Rzeszów; S. – Sandomierz; T. – Toruń; W. – Warszawa; Wl. – Wilno; Wr. – Wrocław; ZG. – Zielona Góra.

A – Ateneum; *AHFiMS – Archiwum Historii Filozofii i Myśli Społecznej; E – Etyka*; *KF – Kwartalnik Filozoficzny*; *PF – Przegląd Filozoficzny*; *PSS – Prace Seminarium ze Skarbowości, Prawa Skarbowego oraz ze Statystyki*; *RF – Ruch Filozoficzny*; *SF – Studia Filozoficzne*; *SL – Studia Logica*; *SPAUK – Sprawozdania z czynności i posiedzeń Polskiej Akademii Umiejętności w Krakowie*; *CnKy – Собрание протоколов заседаний секции физико-математических наук Общества естествоиспытателей при Казанском университете*; *SS – Studia Socjologiczne*; *STNW – Sprawozdania z posiedzeń Towarzystwa Naukowego Warszawskiego*; *WM – Wiadomości Matematyczne*; *ВОФиЭМ – Вестник Опытной Физики и Элементарной Математики*; *ZN – Zagadnienia Naukoznawstwa.*

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