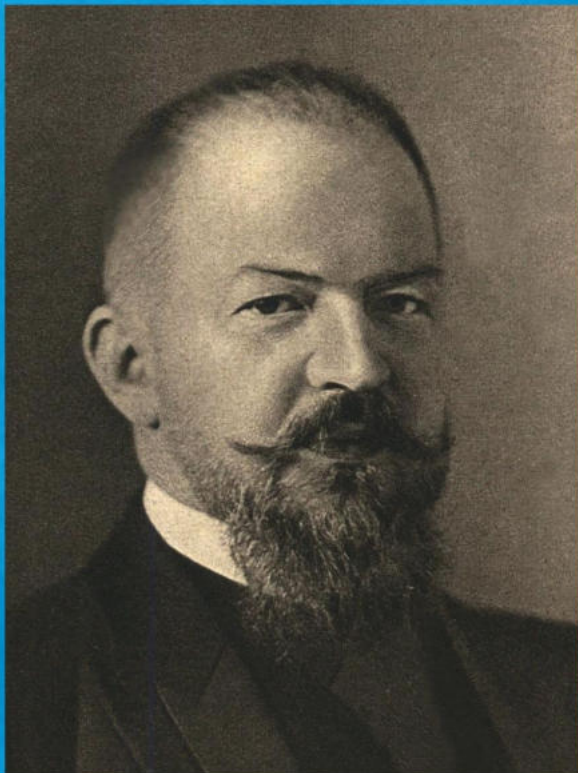


At the Sources of the Twentieth-Century Analytical Movement
Anna Brożek and Jacek Jadacki (Eds.)

At the Sources of the Twentieth-Century Analytical Movement

*Kazimierz Twardowski and
His Position in European Philosophy*
Edited by Anna Brożek and Jacek Jadacki



At the Sources of the Twentieth-Century Analytical Movement

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Opening Word



Varieties of Scientific Philosophy

From Modest Proposals to Implausible Conceptions

Tadeusz Szubka

1 Introduction¹

The idea of scientific philosophy is inextricably connected with the analytic philosophical tradition, though one should bear in mind that not all analytic philosophers are keen to describe themselves as pursuing philosophy in a scientific way, and there are some who declare that this tendency leads to pernicious scientism. However, there are also analytic thinkers more attached to the idea of scientific philosophy than to the category of analytic philosophy.

A conspicuous historical example of this terminological preference, undoubtedly having significant implications, is an epistolary exchange between Rudolf Carnap (1891–1970) and W.V. Quine (1908–2000). While Carnap was preparing for his visit to the United States to deliver at Harvard University two sets of lectures, one elementary and the other more advanced, he found the following suggestion by Quine particularly apt:

It would be most convenient for you and likewise for the public if not only the first but also the second course consisted chiefly of your ideas. I recommend, therefore, something under the title “Scientific Philosophy”, in which you can present in an elementary and non-technical way the sort of ideas that you have developed in *Erkenntnis* and other works.

CREATH 1990: 179

This recommendation was put into doubt by Ernest Nagel, an American philosopher of science. Carnap reported to Quine in letter dated 28th July 1935:

Thanks for your suggestions concerning the titles of my courses. As to the elementary one, Nagel wrote me that there are difficulties in translating “wissenschaftliche Philosophie”; therefore he proposes “analytic philosophy”. But I should not like this title very much. Would you think

1 The text was prepared as part of the project 2016/23/B/HS1/00684 “Kazimierz Twardowski’s place in Polish culture and European philosophy”, financed by the National Science Centre (Poland).

that “Introduction into Scientific Philosophy” would not be quite suitable? Does it sound for American ears as meaning “Philosophy of Natural Sciences”, which of course would be – though not quite false – nevertheless too narrow. Or how would you translate “wissenschaftliche Philosophie”?

CREATH 1990: 181

In his response Quine wrote:

The designation “Scientific Philosophy” does not convey at all the philosophy of the natural sciences (which, on the contrary, would be designated “Philosophy of Science”) but rather philosophy done in a scientific way. In this respect the designation seems to suit. Nonetheless it does not sound good to me at all – I do not know exactly why. Perhaps it somehow depends on the misuse which the word “scientific” has suffered in America (e.g., in dishonest commercial advertising – for toothpaste etc. – also with religious fadism). The word remains useful, but one must watch out for the sound of the combination. I can state no general rule, only express my feeling in individual cases. E.g., “Philosophy as a Science” sounds good – also “Scientific Method in Philosophy”, if this were not already preempted by Russell.

CREATH 1990: 188

The message from this exchange is clear: such a paradigmatic analytic philosopher as Carnap strongly preferred to describe his research activity as doing scientific philosophy, and for some reason he distanced himself from the category of analytic or analytical philosophy.

For Carnap, doing philosophy scientifically way meant first and foremost doing it as scientists pursue their investigations: formulating problems in the most careful and exact way, considering meticulously all available data, and putting forward duly constrained and testable theories. However, at the same time, Carnap took great pains over the proper understanding of this statement. In his 1964 interview he emphasized:

Of course, this is not to be misunderstood as if philosophy were scientific in the sense that it used the same method and had the same content as science. This is quite certainly not the case. There is a quite obvious difference. The task of science is to find facts about nature, to organize and compare them, to explain etc., and to thus give us a picture of nature. Philosophy on the other hand should not intrude into the field of science.

CARNAP 1964: 13; quoted in English translation by [KIENZLER 2012: 81]

To put Carnap's metaphilosophy in a nutshell: philosophy is not one of natural sciences, it is not a way of doing science, but rather a way of elucidating science, of investigating its language and logic. One may also say that for Carnap truly scientific philosophy is the logic of science (*Wissenschaftslogik*): "The meta-logical investigation of the logical structure of the total language of science" [Friedman 2012: 3].

The unique role of logic was also highlighted by members of the Lvov-Warsaw School in their conception of scientific philosophy. Although they were vaguely familiar with the category of analytic philosophy, they favoured to be described as engaged in doing and propagating scientific philosophy. A very good example of this preference is a little booklet on contemporary philosophical movements by a notable student of Kazimierz Twardowski, Zygmunt Zawirski (1882–1948). According to him, the most conspicuous philosophical movements of that time (at least the ones having then advocates in Poland) were: scientific philosophy, dialectical materialism (Marxism), Catholic philosophy, and phenomenology. Zawirski stated that the project of scientific philosophy was clearly and explicitly formulated by Jan Łukasiewicz in 1927. Its gist may be put as follows:

The point is that philosophical problems should be solved by the scientific method, and, at the same time, the highest possible precision and scientific exactness are required, namely such to which we are accustomed by contemporary symbolic logic, also called mathematical logic or logistics.

ZAWIRSKI 1947: 3²

Zawirski remarked that the idea of scientific philosophy gained currency among positivistic philosophers in the nineteenth century, but it was then often burdened with subjectivist and idealistic tendencies. These unfortunate leanings were shaken off by the new positivism of the twentieth century, initiated by the Vienna Circle (M. Schlick, R. Carnap, O. Neurath), and

2 Łukasiewicz himself advertised this project in grandiose words: "Thus it arises, like in the times of Kant, the need of philosophical reform. However, not a reform in the name of some elusive «criticism» and in the spirit of unscientific «theory of knowledge», but a reform in the name of science and in the spirit of mathematical logic. The future scientific philosophy must begin its edifice from the very beginning, from foundations. To begin from foundations means to undertake in the first place a review of philosophical problems, and select among them only those questions which may be intelligibly formulated, and reject all others" [Łukasiewicz 1928: 159].

known as neo-positivism or logical positivism. Neo-positivists shared with the proponents of scientific philosophy from the Lvov-Warsaw School the belief in the utmost importance of the new symbolic logic for making philosophy more precise and fruitful. However, philosophers from Lvov and Warsaw were not ready to follow Carnap and his colleagues in turning philosophy into the formal logic of science and banning from its province any substantial and objectual talk about the way the world is. For the same reason, they did not think that all problems and conceptions of traditional metaphysics are unscientific and, in principle, cannot be rationally and rigorously discussed. The elaboration of these points allowed Zawirski to draw the following conclusion:

To recapitulate the outcome of our considerations, we can say that Polish scientific philosophy stands firmly on the realist grounds in opposition to the old German positivism, which at this point was rather vague, that similarly to neo-positivism it tries to obtain from mathematical logic the highest possible amount of benefits and lessons for recent philosophy, that it is not so afraid of questions of traditional philosophy as the Vienna Circle neo-positivism is, and it does not approve “the formal mode of speech”, in which it sees some kind of escape from reality.

ZAWIRSKI 1947: 9

In his brief account of Polish scientific philosophy and its distinctiveness, Zawirski did not mention that this idea was introduced in the Lvov-Warsaw School by Kazimierz Twardowski, who, in turn, was heavily influenced by Franz Brentano. And although Łukasiewicz and his followers gave it a rather new turn, Polish scientific philosophy could not be properly understood without putting it in the context of Twardowski’s metaphilosophical program.

2 Twardowski’s Idea of Scientific Philosophy

Kazimierz Twardowski (1866–1938) did not attempt in his writings to give a detailed and systematic account of his program of scientific philosophy. Seweryna Łuszczewska-Romahnowa in her excellent paper on Twardowski’s program gives the following explanation of this startling situation:

It can presumably be accounted for by the fact that the proper originator of the theoretical content of the program under discussion was to a large

extent not Twardowski, but his master Franz Brentano, and Twardowski took it as his task to merely implement in Poland those ideas of Brentano among which he himself grew up and which he considered as undeniably correct.

LUSZCZEWSKA-ROMAHNOWA 1967: 155

Of course, a more mundane explanation is also available, namely, the one invoking the fact that Twardowski was too busy to implement and practise his program and was unable to find some extra time to elaborate its theoretical principles.

For Twardowski, scientific philosophy is above all “a philosophy that is exact, clear, and based upon scientific results” [Schaar 2016: 161]. It is philosophy pursued as a rigorous academic discipline and not as a speculative metaphysical system taking the form of a world-view.

Clarity and exactness are constitutive features of good philosophical discourse. In his brief essay on clear and unclear philosophical style, Twardowski was arguing against the view that the nature of some philosophical problems and their solutions makes it impossible to express them clearly.

Indeed, many scholars claim that sometimes even a philosopher who thinks clearly and wishes to express his thoughts as clearly as possible is, for all that, unable to do so because the intricacy of the matters and issues discussed by him does not allow it. Not only does this serve as an excuse and justification for authors who employ an unclear style (sometimes they themselves portray the matter in this light), but by way of a very common logical error the belief is moulded and perpetuated that unclarity of style in philosophical works bears a direct relation to the profundity of their content.

TWARDOWSKI 1920: 257

It is simply not true, Twardowski insisted, that one may think clearly and express one's thoughts in completely unclear and convoluted way. Thinking and talking are closely connected and one's thoughts are taking shape in a verbal clothing. Twardowski assures us that “our thought, especially when it is abstract, manifests itself from the beginning in verbal attire, having the most intimate connection with expressions of speech” [Twardowski 1920: 258]. Hence if one writes in an unclear and confused manner, one's thought must be unclear and confused as well, and it is not worthy of our efforts to understand it.³

3 In the course of a lively discussion that followed the original publication of Twardowski's essay on philosophical style, it was pointed out (e.g. by R. Ingarden and J. Metallmann) that

For Twardowski, exactness and rigour in philosophy did not necessarily mean the extensive use of formal tools and mathematical or symbolic logic. He warned philosophers and scientists against quite common tendencies of human mind, dubbed by him symbolomania and pragmatophobia. The former consists in regarding formal symbols not only as mere tools in acquiring and formulating knowledge, but as autonomous objects of investigations, irrespective of that what they symbolize or refer to. As the result of such an attitude “the symbols and the operations performed on them, originally the means to an end, become for them an end in itself, an object of ardent affection and the source of great intellectual delight” [Twardowski 1921: 262]. Symbolomania is usually associated, as its negative accompaniment, with pragmatophobia that Twardowski defines as an aversion “to the things which the symbols (being the signs of things in the broadest sense of the term) symbolize” [Twardowski 1921: 263]. These two intellectual vices are common not only among mathematicians and natural scientists, but also among philosophers who insist upon deploying new symbolic or mathematical logic for reformulating and (re)solving philosophical problems. For philosophers enthusiastically embracing this approach “the road to symbolomania and pragmatophobia will not be far off” [Twardowski 1921: 268].⁴

Twardowski was convinced that philosophy done in clear and properly exact way is a necessary prerequisite of pursuing it as a critical and collaborative enterprise.⁵ Criticism and collaboration are further important features of truly scientific philosophy. Philosophy, Twardowski insisted, should

this recommendation is too radical, since one can provide many examples of unclear philosophical ideas that happened to be inspiring and influential. Other examples may be also found in history of science. For instance, as Łuszczewska-Romahnowa rightly notices, the early conceptual foundations of differential and integral calculus were very unclear indeed, but working on these foundations and not neglecting them contributed to the progress of mathematics [Łuszczewska-Romahnowa 1967: 160–163].

4 It seems that this road was (at least sometimes) taken by some of Twardowski’s students. Recently it has been regularly trodden by proponents of the so-called formal philosophy. Even one of its major exponents, Hannes Leitgeb, is well aware that “everyone who works as a mathematical philosopher knows some papers in which the respective authors HIDE behind the symbols – where mathematical clothing is meant to conceal lack of philosophical content. Or where mathematics does not do much other than complicate some states of affairs that could, and should, have been described in more elementary terms. Or where a mathematical method is applied blindly without any awareness of its potential limitations” [Leitgeb 2013: 274–275].

5 In the final paragraph of his expository and critical essay on Nietzsche, he states: “scientific philosophy will continue to demand severely and unrelentingly that the first condition of philosophical investigation is precision of expression” [Twardowski 1895: 380].

avoid any form of dogmatism, search for justification of all accepted, even tentatively, claims and theories, and endlessly reconsider evidence for them. Although the idea of relentless criticism in philosophical research brings to mind the conception of Kant's critical philosophy, Twardowski urged that while engaging in scientific philosophy one should not follow unwittingly Kant's principles, but "apply the same method to his beliefs as he taught philosophers to apply to others" [Twardowski 1904: 48]. Collaboration and cooperation among philosophers is a matter of the utmost importance, since philosophy is an extremely abstract discipline dealing with questions important to human life, and thus, it is easily misled by available meagre data and is subjected to various pressures and constraints. Twardowski writes:

Nowhere else are facts so easily overlooked; nowhere else are they interpreted so erroneously, as in the area of facts which is the subject matter of philosophy. Thus continuous peer control is indispensable; it is impossible to forgo hearing the judgment of one's coworkers who, seeing the matter from a different point of view, can successfully prevent it from being perceived from one side only. Therefore, common discussion of problems as well as endeavors toward their resolution have to occupy the foremost place.

TWARDOWSKI 1904: 47

To put it briefly, collaborative philosophy consists in an intensive exchange of views among its practitioners, in a mutual assessment of reasons and arguments, and discussion.

So far Twardowski's program of scientific philosophy has emerged as consisting in large, sweeping, and rather uncontroversial statements that may be summarized as follows: PHILOSOPHY NEEDS TO BE DONE AS CLEARLY AND EXACTLY AS POSSIBLE, AS WELL AS PURSUED IN CRITICAL AND COLLABORATIVE SPIRIT. However, one should not forget that in the teaching and writings of Twardowski this program was embedded in more substantial and controversial claims concerning the nature of philosophy, its evidential basis, and its relation to metaphysics. Among them there was, first, the disunity thesis strongly advocated later by other members of the Lvov-Warsaw School (especially by Tadeusz Kotarbiński) and rejected by their opponents (in particular by Roman Ingarden). This was the thesis that philosophy is not a single unified discipline. Twardowski puts it as follows:

The term “philosophy” designates a *group* of sciences, just as do the expressions “theology” and “natural science”. We speak about philosophical sciences, just as we do about theological or natural sciences.

TWARDOWSKI 1987: 60

Among philosophical sciences or disciplines the most prominent are logic, epistemology, psychology, metaphysics, and ethics. Originally Twardowski assigned psychology a central role in this group, as he believed that inner introspective experience is the main source of philosophical data. However, he later abandoned, or rather modified, this psychologistic view. Be that as it may, one should bear in mind that, as perceptively noticed by Izydora Dąmbska, for Twardowski psychology was a descriptive psychology, as conceived by Brentano, that is, “some kind of phenomenology of the given in inner experience”, and the proper scientific method of such a psychology was “an analysis of concepts obtained from inner experience” [Dąmbska 1989: 24].

Twardowski had a complicated, shaky, and changing opinion about the status of metaphysics and its relation to scientific philosophy. It is sometimes held that he had some sympathy towards positivist view that metaphysics is a wholly unscientific discipline and must be excluded from the field of philosophy pursued in the scientific spirit. However, there are also scholars who claim that he did not share positivist attitude towards metaphysics and believed it can be a scientific discipline that provides us with a general description of various phenomena, objects, and relations, and that it “makes use of inductive and deductive methods which are also used by representatives of the natural sciences” [Brożek & Jadacki 2014: 10]. Presumably, this clash of apparently incompatible accounts may be resolved by pointing out that Twardowski took some parts of metaphysics (mostly ontology) as susceptible of fully scientific treatment, but at the same time he was strongly convinced that the activity of doing metaphysics that leads to the construction of comprehensive and speculative philosophical systems, that, in turn, provide the framework and content of one’s world-view, is far from being a scientific activity. Here is an unambiguous expression of this conviction:

It seems to me that an unbridgeable abyss yaws between a philosophical – that is metaphysical – world-view and science, as David Hume, among others, had already emphasized prior to and more vigorously than Kant.

TWARDOWSKI 1929/1931: 272

There is an abyss or a gap in question because metaphysical world-views surpass all available scientific evidence, they contain rationally unsupported

beliefs or claims, and often comprise expressions of personal preferences and sentiments. In general, scientific philosophy as a form of critical philosophy sets itself against metaphysical visions or systems of this kind. Twardowski makes it clear in what respect:

Now, critical philosophy does not direct itself against such personal visions of the world and of life, regarding them as the personal affair of those individuals who hold these views. Criticism raises its voices in order to counter the belief that human reason is capable of coming up with a vision of the world and of life that would be *scientifically well-founded*, and would thereby possess undubitable objective status.

TWARDOWSKI 1929/1931: 274

But even though metaphysical visions or system are not entitled to full scientific legitimacy, some of them may be better supported and more cohesive than others, and they may include more ingenious ideas worthy of future scientific attention than their rivals. Hence, there are better and worse metaphysical systems or world-views.⁶

3 Reichenbach's Manifesto

In the first part of the paper it was mentioned that for Rudolf Carnap, certainly the most important figure in the Vienna Circle and a towering representative of logical positivism, scientific philosophy was the logic of science. And although he preferred the term “scientific philosophy” to “analytic philosophy”, he was not particularly attached to the former, and sometimes suggested that perhaps it could be a good idea to abandon the ambiguous term “philosophy” altogether, even with the honorific adjective “scientific”, and simple replace it with the name “logic of science”.

The most ardent advocate of the idea of scientific philosophy within logical positivism movement was undeniably Hans Reichenbach (1891–1953), the founder and the key figure of the Berlin Society for Empirical Philosophy. He begins his popular book *The Rise of Scientific Philosophy* (1951), written in unusually dogmatic and confident style, with the contention that, for many, philosophy is inseparable from speculation that is not amenable to verification,

⁶ Detailed accounts of Twardowski’s complicated and ambivalent attitude towards metaphysics may be found in two instructive books: [Kleszcz 2013] and [Rechlewicz 2015].

and thus, it is not a science in the strict sense. Reichenbach declares he wrote his book in order to show that this is not the case.

It maintains that philosophic speculation is a passing stage, occurring when philosophic problems are raised at a time which does not possess the logical means to solve them. It claims that there is, and always has been, a scientific approach to philosophy. And it wishes to show that from this ground has sprung a scientific philosophy which, in the science of our time, has found the tools to solve those problems that in earlier times have been the subject of guesswork only.

REICHENBACH 1951: vii

To put it in a nutshell: philosophy can become a science.

Reichenbach's book is an attempt to illustrate the transition from traditional or speculative philosophy to scientific philosophy by comparing these two ways of doing philosophy. On the one hand, we have speculative philosophy which

sought to acquire a knowledge of generalities, of the most general principles that govern the universe. It was thus led to the construction of philosophic systems including chapters that we must regard today as naïve attempts at a comprehensive physics, a physics in which the function of scientific explanation was assumed by simple analogies with experiences of everyday life. It attempted to account for the method of knowledge by a similar use of analogies; questions of the theory of knowledge were answered in terms of picture language rather than by logical analysis.

REICHENBACH 1951: 303

On the other hand, we have scientific philosophy which does not engage in the task of description and explanation of the world, since only natural and social sciences are competent to undertake and accomplish this task:

It constructs the theory of knowledge by the analysis of the results of science and is aware of the fact that neither the physics of the universe nor that of the atom can be understood in terms of concepts derived from everyday life.

REICHENBACH 1951: 303

Traditional or speculative philosophy, Reichenbach emphasized, wanted incontrovertible certain knowledge, modelled on mathematics.

If it was impossible to foretell individual occurrences, at least the general laws controlling all occurrences were regarded as accessible to knowledge; these laws were to be derived by the power of reason. Reason, the lawgiver of the universe, revealed to the human mind the intrinsic nature of all things – a thesis of this kind was at the basis of all forms of speculative systems.

REICHENBACH 1951: 303–304

For proponents of scientific philosophy, this is an unattainable aim, since knowledge of the world, no matter how well supported, can only be probable.

Neither the individual occurrences, nor the laws controlling them, can be stated with certainty. The principles of logic and mathematics represent the only domain in which certainty is attainable; but these principles are analytic and empty. Certainty is inseparable from emptiness: there is no synthetic *a priori*.

REICHENBACH 1951: 304

Traditional or speculative philosophy includes also moral theory or ethics. It very often proceeded in this field by inventing practical reason as “the giver of the moral law as well as of the cognitive law”, and claiming that ethical rules are “discovered by an act of vision, analogous to the vision revealing the ultimate rules of the cosmos” [Reichenbach 1951: 304]. Scientific philosophy disagrees with this cognitive and rationalist approach to ethics:

It regards moral aims as products of acts of volition, not of cognition; only the relations between aims, or between aims and means, are accessible to cognitive knowledge. The fundamental ethical rules are not justifiable through knowledge, but are adhered to merely because human beings want these rules and want other persons to follow the same rules. Volition is not derivable from cognition. Human will is its own progenitor and its own judge.

REICHENBACH 1951: 304

Briefly, ethics is the domain of non-cognitive, emotional impulses.

Given the brave new world of scientific philosophy, Reichenbach is disappointed that

there are philosophers who refuse to acknowledge scientific philosophy as a philosophy, who wish to incorporate its results into an introductory

chapter of science and claim that there exists an independent philosophy, which has no concern with scientific research and has direct access to truth. Such claims, I think, reveal a lack of critical judgment. Those who do not see the errors of traditional philosophy do not want to renounce its methods or results and prefer to go on along a path which scientific philosophy has abandoned. They reserve the name of philosophy for their fallacious attempts at a superscientific knowledge and refuse to accept as philosophical a method of analysis designed after the pattern of scientific inquiry.

REICHENBACH 1951: 305

He even suggests that this stubborn resistance to glittering scientific philosophy and persistent attachment to murky traditional speculative philosophy should be explained psychologically, and calls for the development of the psychology of philosophers.

It does not require too much insightfulness and efforts to realize that Reichenbach's extensive manifesto of scientific philosophy is burdened with contentious assumptions that are a subject of persistent philosophical disagreements in the traditional sense. At least three of them are worthy of mention.

Michael Friedman, an extremely sympathetic (perhaps too sympathetic) reader of Reichenbach's book who describes it as written "with characteristic clarity and verve, and with very few sacrifices of accuracy and rigour" [Friedman 2004: 75], accurately notices that in the light of the development of logic and mathematics, the view that these disciplines are analytic and devoid of substantial content, is indefensible. There is a residue in them, Friedman convincingly argues, of the Kantian synthetic a priori, although, "unlike Kant's original conception, it is relativized, historicized and dynamical" [Friedman 2004: 87]. It is presumably slightly ironic that the early Reichenbach's account of this matter is "much closer to the truth than the more starkly empiricist position he articulates in 1951" [Friedman 2004: 87]. Hence, given the development of Reichenbach's views, defenders of scientific philosophy who proclaim its steady progress are on shaky grounds.

Reichenbach repeats like a mantra that scientific philosophy advances by avoiding metaphorical and pictorial language of traditional philosophy, and performing logical analysis, but:

What he means by logical analysis he does not fully explain [...], though he has much to say about the historical development of symbolic logic and the general nature of its operation.

HARRIS 1952, p. 154

Presumably, like in the case of other logical positivists, what does the real work here is not logical analysis, but the verifiability theory of meaning, considered by Reichenbach as “an indispensable part of a scientific philosophy” [Reichenbach 1951: 257]. Nevertheless, it is well known that this theory is haunted by serious difficulties, and especially that as an attempt

to reduce scientific evidence to bare direct observation deprives it of everything that makes it scientifically relevant – namely, its interpretation in terms of a developed and developing body of systematic knowledge, apart from which no purely sensuous apprehension can have any scientific value or significance.

HARRIS 1952: 159

The verifiability theory of meaning is also completely unsuitable, even in its weakest form, for any credible account of philosophical enterprise which by its own nature goes beyond all empirical evidence in the ordinary sense.

Reichenbach’s view on ethics, according to which we should “stand on our own feet and trust our volitions” [Reichenbach 1951: 291–292], which is to admit that volition is the only source of the legitimacy of moral rules, may be taken, on a charitable reading, as an early version of ethical expressivism [Sinclair 2021: 96]. However, this is evidently a definitive philosophical position, one among various other rivals within metaethics, and on top of that, not very carefully worked out, since Reichenbach has nothing to say about what to do in the case of conflicting volitions, and how to explain the propositional nature of moral statements. There is nothing particularly scientific about such a crude form of expressivism.

4 Ducasse’s Metaphilosophy

A completely different attempt to turn philosophy into science was undertaken in the middle of the past century by a French-born American philosopher Curt John Ducasse (1881–1969), who in recent years has fallen back into obscurity.

Ducasse believed that philosophy is “a knowledge-seeking enterprise”, which entitles one to say that “philosophy resembles the natural and other sciences, and itself is, or seeks to be, a science” [Ducasse 1941: 113]. This imposes on philosophy general requirements concerning its method:

If philosophy is to be a science, then the method of inquiry it employs must be scientific: that is, must be the kind of method that yields

knowledge, not just dogmas, guesses, wishful beliefs, articles of faith, or irresponsible opinions.

DUCASSE 1959: 4

So far this is nothing more than a preliminary clarification of the idea of philosophy as a knowledge-seeking enterprise that could be endorsed by philosophers of many different persuasions. What is distinctive for Ducasse's metaphilosophy is his further proposal that philosophy has its own unique subject matter. He introduced it as follows:

But to say that the method of philosophy must be scientific does not imply either that philosophy must seek to borrow and to build upon the results of the other sciences, or that knowledge-yielding method will, as applied to philosophical problems, take the same specific forms as when applied to the problems of, for instance, physics or biology or even mathematics. For the specific devices which make for the attainment of knowledge in each of these sciences are dictated by the specific nature of the subject matter to be dealt with, and vary even as between one and another of these sciences. We may therefore expect that this will be the case also with philosophy.

DUCASSE 1941: 114

The *prima facie* startling view put forward by Ducasse is that the proper subject matter of philosophy are evaluative statements, or, for short, appraisals and valuations. And this is true of all philosophical disciplines:

A theory of appraisals of the sort expressible by the adjective "wrong" would be an ethical theory; by the adjective "erroneous", an epistemological theory; by the adjective "beautiful", an aesthetic theory; by the adjective "real", an ontological theory, etc.

DUCASSE 1941: 143

Appraisals constitute for Ducasse primitive facts of philosophy: they are the starting point of philosophical enterprise and the final appeal in testing philosophical theories. However, only these appraisals are suitable for this role that are singular or particular (as opposed to general evaluative rules or maxims), spontaneous (not deduced from a theory, and not the result of simulation or pretence), and formulated, that is "expressed in public and commonly understood symbols" [Ducasse 1941: 141]. To sum up:

The facts primitive for philosophy [...] consist of spontaneous particular appraisals, in so far as made available for public study through veracious formulation of them.

DUCASSE 1941: 218

In his original metaphilosophical program, Ducasse did not make it absolutely clear whether primitive facts of philosophy are for him psychological occurrences of appraisals in individual minds (and if so, what is the difference between the psychology of appraisals and philosophical study of them), or rather their content and correctness [Hall 1942]. In response to this concern Ducasse replied:

I would answer it in terms of the distinction between the *causes* of appraisal and the *reason* – the rationality or irrationality – of an appraisal. Observation and theory as to the various factors which may cause men to make the appraisals (whether correct or incorrect) which they make would be a psychological task. On the other hand, construction of an adequate theory of the meaning of a given term of appraisal would be a philosophical task, for only in terms of such a theory can a given application of the given term be itself appraised as rational or irrational, i.e., as relationally correct or incorrect.

DUCASSE 1942: 122

This reply unambiguously suggests that philosophy should focus, first and foremost, on providing a satisfactory theory of meaning for the key terms of appraisals in question. In other words, philosophical investigations are semantical in the broad sense. This suggestion is reinforced by Ducasse's later metaphilosophical publications.⁷ He states there that the central philosophical problem is the semantical question: "What precisely does it mean, to say of something that it has value *V* not the opposite value *W*?" [Ducasse 1959: 8]. While answering such a question we take the extension of value-terms *V* and *W* as given by the relevant particular, spontaneous and duly expressed appraisals, and try to determine their intensions. This an arduous and complicated

⁷ This change of emphasis is sometimes taken as the reason for a distinction between the earlier and the later metaphilosophy of Ducasse. One of its advocates makes the following comment about this distinction: "In his «later» view, Ducasse explicitly asserts that the theoretical problems of philosophy are *semantical*. This may have been implied in his «earlier» view but it was not so obvious there, or so explicitly asserted" [Dommeyer 1961: 448].

task, that will involve other philosophical problems, seemingly not about values. Nevertheless, Ducasse assures us:

All the technical problems of philosophy that are not immediately and patently about values sooner or later crop up as semantically implicit in and derivative from one or another of the primitive, patently axiological philosophical problems.

DUCASSE 1959: 10

And this pervasive axiological character distinguishes philosophy as a science from other sciences.

A rather unusual and idiosyncratic program of scientific philosophy proposed by Ducasse, evoked mixed reactions. In his early review of Ducasse's metaphilosophical book, Morris Lazerowitz pertinently noticed:

Philosophers will quite naturally be very puzzled by this novel view. Most of philosophy, e.g. theories regarding the nature of causation, our knowledge of the external world, truth, obviously seems not to be concerned at all with appraisals, and Ducasse fails to do enough, in the opinion of this reviewer, by way of adequate explanation as to why he holds a view which would so *naturally* strike one as being wrong. For on more careful consideration it turns out that it is not *obvious* that Ducasse's view is wrong. Moreover, and this is much more important, it has *point*, in that it helps us get important insight into the nature of philosophical problems.

LAZEROWITZ 1942: 286

The insight which Lazerowitz had in mind was an observation that philosophical disputes are unlike ordinary factual controversies, even in apparently factual disciplines like ontology. Philosophical debates are, right across the board, about appraisals, and hence, given the persistent diversity of appraisals, interminable and unresolvable. Of course, in his conception of philosophy as a science, Ducasse thought quite otherwise, but his project was doomed to failure from the start, like other attempts to make philosophy scientific.

Peter H. Hare and Edward H. Madden, the authors of a comprehensive study of Ducasse's philosophy, while they assess highly his purely philosophical achievements, are mostly critical of his metaphilosophy. They think Ducasse's insistence that philosophy is a science in all possible respects was mostly unfortunate and drove him to invent a distinctive subject matter of philosophy, namely, appraisals and their key predicates. This, in turn, forced him to make an artificial rearrangement and interpretation of philosophical problems the

result of which was downgrading some fundamental philosophical questions to derivative issues. For instance:

A problem as basic as the nature of causality he must consider derivative despite the fact that when he is *doing* philosophy (as opposed to talking about its nature), he treats the analysis of causality as the most basic analysis in relation to which other philosophical analyses are derivative.

HARE & MADDEN 1975: 197

It would be much better if Ducasse had been satisfied with the claim that philosophy is a science in a minimal sense, namely, that it is a discipline deploying scientific method, “and had not strained to find additional resemblances between philosophy and science” [Hare & Madden 1975: 197].

5 Concluding Remarks

The foregoing overview of different versions of scientific philosophy, and their assessments, seems to support two general conclusions.

The programs of scientific philosophy characteristically begin with modest and rather uncontroversial requirements that philosophy should aim at providing objective knowledge expressed in clear language and properly justified, and that philosophical enterprise ought to be constrained by some general rules of scientific method. Twardowski, for the most part, tried to stay at this modest level, especially in his account of clarity in exactness in philosophy, but he was not totally successful, since, partially under the influence of Brentano's heritage, he introduced into his program the thesis about the disunity of philosophy, the belief in its roots in inner experience, and variously stated contention about the opposition between scientific philosophy and, supposedly largely unscientific, metaphysical world-view philosophy. However, in comparison with the twist which the idea of scientific philosophy received from logical positivists, and especially from Hans Reichenbach, its extremely enthusiastic and dogmatic exponent, Twardowski's assumptions were far from being excessively powerful, and, if not defensible, then they were at least intelligible from the historical point of view. Although Ducasse in his conception of philosophy as a science went into completely different direction than logical positivists, he encumbered it with a heavy and highly controversial supposition about the subject matter of philosophy. All this shows that in programs of scientific philosophy it is difficult to confine oneself to incontrovertible and relatively

uncontroversial postulates, and it is extremely easy to commit oneself to substantial and controversial philosophical or metaphilosophical theses.

It has been fittingly pointed out that the idea of scientific philosophy is beset with crucial and fundamental ambiguity [Friedman 2004: 94]. On the one hand, it can mean philosophy that is clear, rigorous, and conforming to the general pattern of scientific investigations. It is often also philosophy “that is intimately engaged with the very deepest results of the best available science of its time” [Friedman 2004: 94]. On the other hand:

It can mean a philosophy that emulates the sciences, insofar as it aims for cumulative consensus and stable «results» comparable to the results of the sciences themselves.

FRIEDMAN 2004: 94

Textual evidence may be provided that varieties of scientific philosophy discussed in this paper, and their advocates, trade on this ambiguity. Unfortunately, as the history of contemporary philosophy has made it overwhelmingly evident, pursuing scientific philosophy in the first sense, as diligently as possible, does not produce noticeable agreement or consensus in philosophy and does not put it, to use the Kantian phrase, on the sure path of science. Hence, one can justifiably claim that scientific philosophy in the second sense is an illusion, and, consequently, philosophy will never become a science.⁸

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⁸ An earlier version of this paper was delivered at the international symposium on the legacy of Kazimierz Twardowski, held at the University of Warsaw, 24–26 October 2019.

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PART 1

Philosophy and Humanities



Judgement and Inference

The Relevance of Twardowski's Distinction between Actions and Products for Philosophy

Maria van der Schaar

Abstract

Twardowski introduced his distinction between actions and products as an answer to the problem of psychologism in logic. Whereas psychology studies the act of judgement, the judgement product is the object of logic; for, judgement products, not the acts of judgement, are the bearers of truth and falsity. Friederike Moltmann has shown with ample linguistic evidence the relevance of Twardowski's notion of product for philosophy today. In contrast to Twardowski and Moltmann, I will argue that both product AND act of judgement and inference are relevant for philosophy in general, and for logic in particular. The distinction is especially relevant to understand the role of the judgement stroke in Frege's logic.

Keywords

Actions – inference – judgement – product – psychologism – Franz Brentano – Gottlob Frege – Friederike Moltmann – Kazimierz Twardowski

1 Introduction¹

How are we to account for the objectivity of logic and science? Kazimierz Twardowski has a unique answer to this question, made possible by his distinction between actions and products. For Twardowski, the product of the act of judging, the judgement made, is the bearer of truth and falsity, and is thereby the central notion in his account of the objectivity of logic and science.

1 The text was prepared as part of the project 2016/23/B/HS1/00684 "Kazimierz Twardowski's place in Polish culture and European philosophy", financed by the National Science Centre (Poland).

When I have made an assertion, I can be held accountable for it. The assertion is thus standing as a claim also after the speech act of asserting. We say such things as that the assertion is justified, that it is correct, or that the assertion made by the witness was the basis for the conviction of the accused. The assertion made thus seems to have a certain independence of the act of assertion. Likewise, the speech act of promising results in a promise made. The promise made is valid until one's word is redeemed. The promise made is thus to be distinguished from the act of promising. At the same time, there could not be a promise made unless there had been an act of promising. Assertions and promises made are the products of these acts.

In order to understand the relevance of the distinction between act and product, I first (section 2) give the philosophical background to which Twardowski reacted when he introduced the distinction. Regarding questions of logic, Twardowski follows in principle the views of Franz Brentano. But, according to Twardowski, there is an element of psychologism in Brentano's thinking, because, for Brentano, the rightness of the act of judgement is to account for the objectivity of logic and science. A counterpart influence on Twardowski is provided by the writings of Bernard Bolzano, who accounts for the objectivity of logic and science by acknowledging a realm of Platonic *Sätze an sich* as bearers of truth and falsity. In contrast to Bolzano, though, Twardowski does not want to allow for such abstract, Platonic entities in his philosophy.

Then (section 3), I explain Twardowski's distinction between actions and products, and, how Twardowski uses the distinction in his answer to psychologism. In section 4, I show to what extent Twardowski's notion of product is relevant for logic and philosophy in general. I agree with Friederike Moltmann regarding the importance of Twardowski's notion of product. She has given ample linguistic evidence that we need to distinguish between act and product, and that the notion of product is not to be identified with that of a proposition. In the sentence 'John kept his promise', the promise referred to can neither be the speech act of promising, nor merely an abstract proposition; it is the promise made, the product of the act of promising. The notion of product is not only relevant to speech act theory, but also to logic insofar as inferential relations obtain between judgements made. I will explain that the notion of product is relevant to philosophy, but that it cannot fulfil all the roles that is given to it by Moltmann and Twardowski. Besides the act and product of judgement, we need the notion of judgement-candidate. This notion is to provide for several roles: the meaning of the declarative sentence, that to which our inference rules apply, the bearer of the epistemic notion of correctness, and, perhaps, it is also the content of judgement. Judgement products play a

role in science and logic, for conclusions of inferences, axioms and demonstrated theorems are judgements products.

In section 5, I explain that logic is in need, not only of the JUDGEMENT PRODUCT and the JUDGEMENT-CANDIDATE, but also of the ACT OF JUDGING and the ACT OF INFERENCE. I thus have to face the question: How is one to prevent a form of psychologism if one is giving a prominent role to the act of judging and inferring in one's answer to the foundational questions of logic?

2 The Philosophical Background of Twardowski's Distinction between Actions and Products

For Brentano, descriptive psychology is foundational to logic in that it aims at a universal language of thought, a *characteristica universalis*. Natural language, with its ambiguities and misleading grammatical structure, is not to be taken as a guide to the universal language; instead, the logician needs to take account of the conceptual analysis that is provided by descriptive psychology, the precursor of phenomenology. A truth of descriptive psychology is, for example, that acts of judgement are founded on acts of presentation that provide the judgement with a content. Such truths are not empirical generalisation, but *a priori*, conceptual truths. Acts of judgement are not to be understood as a special combination of subject and predicate, but as acknowledgements or denials of the existence of certain characteristics. Essential to all mental acts is their intentionality: all acts have a content. For descriptive psychology, it is irrelevant whether the object of the act exists, for one merely aims at an analysis of mental phenomena as they appear to us. For Brentano, when we ask a philosophical or a logical question we have to start with the results of descriptive psychology.

According to Brentano, basic philosophical notions are to be explained by pointing to their origin in our experience. For example, the notion of truth has its origin in a reflection upon our acts of judgement, of which some are evident or right and others are blind (cf. [Schaar 2018a]). In *Vom Ursprung sittlicher Erkenntnis*, Brentano writes that we call something true, when the acknowledgement of it is right: "Wir nennen etwas wahr, wenn die darauf bezügliche Anerkennung richtig ist" [Brentano 1889a: 19]. Ultimately, for Brentano, the objectivity of logic is founded on the rightness of the act of judgement. By claiming that truth is to be explained in terms of the rightness of the act of judgement, Brentano does not have a timeless bearer of truth and falsity. Furthermore, the same judgement may now be true, and later be false [Brentano 1889b: §55].

For Twardowski, around the time he introduced the distinction between actions and products (1911), there are three important problems with Brentano's account of truth, judgement and logic. In principle, Twardowski follows Brentano and Aristotle in attributing truth primarily to judgements. The first problem with Brentano's account is that premises in our reasoning change their truth-value over time. By the time we reach the conclusion, the premises would have changed their truth-value; we can thus not account for the validity of our inferences. Truth, for Twardowski, is absolute in the sense that it is not relative to time. Second, the notion of act of judgement is for Twardowski a psychological notion, and should therefore not be used in our account of the objectivity of logic. Thirdly, Brentano's account of intentionality in terms of "having a content" is incomplete, as the early Twardowski has shown (cf. [Twardowski 1894]). By acknowledging both a content and an object of the act, one is better equipped to account for the objectivity of semantics and logic. This last point I will not address in this paper: Twardowski's early views on the distinction between content and object is well known by now. Furthermore, I do not think that Twardowski's early semantics is able to give an account of the objectivity of semantics by means of his notion of content (cf. [Schaar 2016: ch. 3]). Insofar as the later Twardowski replaces the early notion of content by that of product, now under the term 'inner object', the topic will be addressed.

For a solution of these problems in Brentano's philosophy, Twardowski took inspiration from Bolzano's *Wissenschaftslehre* [1837]. Bolzano's theory seems to be able to answer the question of the objectivity of logic and science, because he acknowledges timeless bearers of truth and falsity: the *Sätze an sich*, or propositions, as they are called today. These propositions are independent of language and thinking, and their truth or falsity is thus likewise independent of language and thought. They do not change their truth-value over time, and they can stand in logical relations. They have further the role of being the meaning of the declarative sentence, and of being the content of the judgement (*Inhalt des Gedankens oder Urteiles*, [Bolzano 1837: §19]). Bolzano makes it clear that the *Satz an sich* is not to be identified with the judgement product: it is not the result of an act of proposing (*ein Setzen*), or judging [Bolzano 1837: §20]. Bolzano thus distinguishes the *Satz an sich* from the judgement made (*das Urteil*), which is an effect (*eine Wirkung, etwas Gewordenes*) produced by a judging (*Urteilen*). The objective *Satz an sich* is not to be understood as a result of something. There are *Sätze an sich*, but they do not have any actual being in the sense that they are in time and space, and can stand in relations of cause and effect (*kein Dasein, keine Existenz oder Wirklichkeit*, [Bolzano 1837: §19]). On Bolzano's account, logical validity is ultimately to be explained in terms of

the holding of a consequence relation between propositions and their being true or false, and the objectivity of logic is thus accounted for by means of abstract propositions and their timeless truth-value. For Bolzano, the act of judgement is not relevant to the question of the objectivity of logic. Only in the third part of the *Wissenschaftslehre*, after the foundation of logic, semantics and science has been given, Bolzano gives an account of epistemic notions such as judging, belief and knowledge as mental state.

Brentano and Bolzano agree in their understanding of judgement as a *sui generis* act – judgement is not to be explained as a special kind of presentation, but as a unique act; furthermore, for both the distinction between the act of judging and the content of judging is relevant to logic. Otherwise, Brentano reacted vehemently against Bolzano’s account of judgement. Not only was he opposed to the *A-has-b* structure that Bolzano acknowledges for all propositions; Brentano’s main criticism is directed at the acknowledgement of Platonic entities in Bolzano’s account of the objectivity of logic and science. And, Twardowski follows his teacher Brentano in this respect.

Twardowski is now confronted with two issues: How is one to account for the objectivity of logic without committing oneself to Bolzanian abstract propositions? And, how could one give a role to the act of judgement in logic, and account for the objectivity of logic at the same time?

3 Twardowski’s Distinction between Actions and Products

Twardowski elucidates his distinction between actions and products by means of a grammatical distinction. Although Twardowski already made a distinction between mental functions and their products in lectures delivered in 1908/09,² a full account is published in Polish in 1911 under the title ‘Actions and Products; Some Remarks from the Borderline of Psychology, Grammar and Logic’.³

Twardowski acknowledges a grammatical difference between the two sentences:

- (1) Hans is reading a letter.
- (2) Hans is writing a letter.

² See [Twardowski 1908–1909].

³ Wioletta Miśkiewicz [2017b: 162] explains that the Polish version was already published in 1911 by the bookshop of the Jagiellonian University of Cracow, although the text is better known from its edition in 1912. Miśkiewicz argues convincingly that this dating of the text is crucial to understand the influence of Twardowski on Roman Ingarden’s development. The German text, “Über Funktionen und Gebilde”, Twardowski probably made upon his temporary return to Vienna at the beginning of the First World War.

Although ‘a letter’ is in both sentences the direct object, the accusative, there is a difference between the two occurrences. In (1), as grammarians say, ‘a letter’ is the *accusative of the external object* of the sentence: the indicated object or person is the scope of the activity indicated by the verb. In (2), ‘a letter’ is the *resultant accusative*: the object indicated is brought about by the activity of writing.⁴ When the distinction is applied to non-linguistic entities, and thus may become relevant as a philosophical distinction, Twardowski uses the term ‘inner object’ (*inneres Objekt*), or “result”, as a counterpart to the grammatical notion of resultant accusative. The inner object, whether enduring or non-enduring, is to be distinguished from the external object, which is already there before the act is directed to the object.

According to Twardowski, the distinction between the action indicated by the verb, and the inner object indicated by the resultant accusative need not correspond to an ontological distinction. When I say that I dreamt a fascinating dream, I do not presuppose that there is a dream besides the activity of dreaming. The dream is a non-enduring product, existing only as long as the dreaming exists. On the one hand, there is thus not some extra entity, say the dream, besides the dreaming; on the other hand, we can say something of the dream that we cannot say of the activity of dreaming, and *vice versa*. The dream may be calm and serene, although the activity of dreaming itself is restless. Although there may not be an ontological distinction, there is always a semantical, or, as Twardowski says, a “logical” distinction corresponding to the linguistic distinction. In the sentence “they kept on making noise”, the topic is the activity of noise-making, whereas in “the noise made at your party was too loud” the noise made is at issue. There is thus a logical, conceptual distinction between the “dynamic” aspect of making noise and its “phenomenal” or “static” aspect, the noise made. For Twardowski, the distinction between act and product may thus merely be a distinction of aspects. Sometimes a purely logical difference, as that between erring and the error made, is accompanied by an ontological difference. When the erring is made on paper, by an act of writing sentences, the error obtains an enduring existence in the written sentences, themselves enduring products of acts of writing. At any later time, the error exists in the written text, although the act of making the error no longer does. In such cases, the non-enduring product is preserved by means of an enduring product, here: the written sentences. These enduring products may then be

4 For a fuller account of the grammatical distinction and its relation to the philosophical distinction between action and product, see [Schaar 2016: 32–34].

called PETREFACTS, as though they are facts made in stone, as though they were fossils [Twardowski 1911: §42]. If one thinks of the Latin verb *facere*, a fact, *factum*, seems to be the product of an action of making. Twardowski seems to notice the point in his German translation of the paper, where *Tatsache* is contrasted, not with FICTION, but with *Tat* or *Tätigkeit* as a function producing the *Tatsache* or fact (Twardowski 1912: §2, 158). One may strengthen the notion in order to obtain the notion of a scientifically established fact, and say that a historical fact, resulting from the historian's act of judging, is a judgement made by a historian acknowledged as such by other historians. We thus see that the notion of judgement plays an important role in science.

Philosophically, the distinction between action and product becomes relevant, when it is used to disambiguate terms such as "presentation", "cognition", "assertion" and "judgement" [Twardowski 1911: 111ff].⁵ Each of these terms may denote an act or the product that arises in the act. It is important to disambiguate these terms, according to Twardowski, because the activity of presenting, conceiving or judging is to be studied by psychology of thought, whereas logic is concerned with judgements and concepts as products. Confounding the two leads to psychologism in logic. Whereas psychology is interested in the causal relations between acts of judgement, the passing of judgement (*ein Urteil fällen*), logic is concerned with the judgement as product, the judgement made (*das gefällte Urteil*).⁶ There is thus, at least, a conceptual distinction between passing a judgement and a judgement passed. The conceptual distinction is of logical importance, for the judgement product is the proper bearer of truth and falsity, according to Twardowski. Whereas the acts of judgement stand in relations of cause and effect, logical relations obtain between judgements

5 The distinction between act and product is acknowledged in the scholastic tradition, especially the Thomistic one; compare Jacques Maritain's *Petite Logique* from 1933: "La distinction essentielle entre l'acte de l'esprit (jugement) et l'ouvrage logique construit par lui (proposition ou énonciation)" [Maritain 1933: § 35]. It is to be noted that this traditional notion of proposition is not to be identified with the modern notion of proposition: the former has a declarative structure, whereas the Russellian proposition has the structure of a that-clause. Furthermore, the proposition in the traditional sense is standardly the product of a judgemental act, although it may in non-standard cases be the product of a non-judgemental, propositional act. In Aquinas, the product is called the *terminus (ad quem)*. As in Twardowski, the *terminus* of an act of knowing, the 'inner word' or inner object, is for Aquinas distinguished from the external object of knowledge.

6 To give an example of its use in German: "bei einem ästhetischen Urteil macht es einen Unterscheid, ob man es fällt oder ob man das gefällte Urteil objektiviert und zum Gegenstand einer theoretischen Analyse macht" [Wieland 2001: 210]. Other uses can be found in court. In English we speak of judgements passed by the Court.

made.⁷ The judgement as act can be called the JUDGEMENT IN THE PSYCHOLOGICAL SENSE; the judgement made is the JUDGEMENT IN THE LOGICAL SENSE [Twardowski 1911: 111, §14]. The distinction is thus used to overcome the problem of psychologism without assuming that there are abstract propositions, such as Bolzano's *Sätze an sich*.

What is precisely the relation between an act and its internal product? Do they stand in a relation of cause and effect? If that would be true, it would, at least in some cases, be possible to have the act, although its product would not arise, due to special circumstances. This does not seem right. If we think of philosophically relevant acts like that of assertion, one can only speak of an act of asserting if it is completed; precisely at that moment, the inner object, the assertion made, is necessarily, on the basis of what it is to assert, constituted. There is thus a more intimate connection between an act and its product than that of cause and effect. In the act the product necessarily arises. The relation between act and product is internal: the act would not be what it is, if the product did not arise; and the product would not be what it is, if it would not be the product of such and such an act.

One might argue against the claim that there is such a strict relation between act and product. If we take a psychophysical action like building a house, it seems that one may talk about the action, the building of a house, suspecting that the house will never be finished. It thus seems possible that no psychophysical product, the built house, arises from the action of building a house. Against this argument, I say: If one has started the action of building a house, there is always some psychophysical product, say the foundation of the house, because one was not in any precise sense building a house, but building the foundation of a house. If the action is interrupted, there has not been an action of building the house in any precise sense of that term. If we apply the problem to a philosophically relevant notion, such as assertion, one should say that as long as the act of asserting is not finished, one cannot speak of an act of assertion in the full sense. This point becomes relevant when we think of assertions with a disjunctive content. If I start my assertion thus: "(I hereby assert that) the king is mad ...", and I would suddenly die, this may not mean that I had asserted that the king is mad. Perhaps, I intended to assert "The king is mad, or he made a mistake". My act of assertion was interrupted, which means that I haven't really asserted anything, although one may talk about the utterance as a product of uttering certain words. The most one is

7 [Twardowski 1912: 165] & [Twardowski 1911: §14]; cf. [Twardowski 1925: 186]. Below we will see that logical relations, for Twardowski, also obtain between judgements that are not judged but merely thought of.

entitled to say is: she aimed to assert something while dying. So, one can only speak of an act of assertion or an act of judgement the moment it is finished. This explains that the assertion product, or the judgement made, arises only at the final moment; only at this final moment, we are entitled to say what the act of assertion PRECISELY is. Likewise, only when a murder is the result, one is entitled to speak of an action of murdering; as long as the result is unknown, one is only entitled to speak of an attempt at murder.

The murder case seems to be a refutation of the claim that the relation between action and product is to be understood as an internal relation. Is the relation between action and product not a cause-effect relation in this case? It is true that there are cause-effect relations involved, how otherwise could there be a house (partly) built or a dead body? Some physical action has to happen, but the crucial point is how we describe these actions. John's being dead is the effect of certain events, a bullet being in the heart, but a murder cannot simply arise from something that accidentally happens: without the action of murdering no murder is committed. The point can also be made with respect to non-intentional actions: the death of John is the result of him dying, but this does not mean that John's dying is the cause of his death. So, the relation between action and product is not a cause-effect relation.

How does Twardowski account for the fact that logical relations may not only occur between judgements and assertions made, but also occur between declarative sentences that are not judged or asserted? In the standard case, the utterance of a declarative sentence manifests a judgement as product of the action of judging [Twardowski 1911: 129, §44].⁸ Twardowski acknowledges that not all declarative sentences are used in this way. Some sentences do not manifest judgements made, but representations of judgements [Twardowski 1911: 130, §44]. These representations of judgements play a crucial role in logic, "because the logician ... who enunciates or writes out sentences as examples ordinarily does not actually pass the judgments that comprise the meanings of these sentences" (*idem*). A formally valid inference may consist of false judgments, or we may give an example of such an inference without actually judging the premises. In an earlier lecture, Twardowski already pointed out that "it is possible to artificially construct judgements that have never been passed" [Twardowski 1908–1909: 117]. In [Twardowski 1911], he explicitly claims

8 Twardowski himself writes that the sentence "expresses" the judgement made; that the judgement made is the meaning of the sentence. A sentence, for Twardowski, is primarily an occurrence on paper, and the judgement made is, according to him, the "meaning" of this particular use of the sentence, at least, in one sense of "meaning of a sentence".

that such constructions are made through acts of presenting, whose object is a possible judgement.

What is precisely a represented judgement? Twardowski understands it as an artificial or surrogate product, an artifact. What is an artifact? A psychophysical product like a footprint in clay is in standard cases the result of impressing a foot in clay; the same physical product may arise, though, in an artificial manner, by an impression of a sculpture of a foot, and may thus function as a footprint [Twardowski 1911: 129]. The product of such an action is not really a footprint; it is rather an ARTIFICIAL footprint, an artefact. An actor on stage does not truly assert; there are no assertions made. Instead, there is an act that looks like an assertion, and functions as an assertion within the context of the play. The product of such an act on stage is therefore an artificial product. The sentence used to make assertions-on-stage thus manifests not a judgement made, but an artificial product, a surrogate, a represented judgement. The terms “artificial” and “represented” thus function as modifying terms, just as “false” in “false gold”, and “toy” in “toy-duck”: false gold is not a special kind of gold and a toy-duck is not a special kind of duck. Similarly, a represented judgement is not a special kind of judgement. At the same time, we cannot understand what a represented judgement means without first grasping the notion of judgement. The notion of represented judgement is not to be defined in terms of JUDGEMENT plus something, but rather as JUDGEMENT minus something. For, a characteristic is deleted from the original notion, the judgement is not actually judged, in order to obtain the new notion of represented judgement. The distinction between attributive and modifying terms plays a crucial role in Twardowski’s philosophy, and later he devoted a small paper to the distinction.⁹

What is the act, whose product is a represented judgement? This product is the result of an act of merely thinking of, an act of presenting. The result, the presentation of a judgement, is thus not a judgement made, but a thought, a presentation. One merely thinks of a judgement; the judgement is the object, not the content, of an act of presentation, A POSSIBLE OBJECT as the early Twardowski says [Twardowski 1894].

Is Twardowski able to make a distinction between asserted and unasserted propositions? Through the distinction between judgements made and represented judgements Twardowski is, in a certain sense, able to make the distinction, but he does not allow for an identical content, and thus would not

9 [Twardowski 1927]; for a logical account of the distinction and its philosophical relevance, see [Schaar 2016: 35 ff].

formulate the point as a distinction between asserted and unasserted PROPOSITIONS, unless one reads “proposition” as “declarative sentence with its meaning”. There is for Twardowski no identical content when John asserts what Mary was merely entertaining as a thought. Only as a result of an act of abstraction can we obtain a notion of identical meaning for the different uses of a specific sentence, according to Twardowski. But, what is the act of abstraction supposed to do? Either it presupposes an identical meaning that gives direction to our act of abstracting, or it is merely a psychological act, in which case we will not be able to reach an identical meaning for different subjects on different occasions. The philosophical relevant notion of abstraction presupposes an identical meaning that tells us how we have to abstract. The problem in Twardowski is thus not so much that these abstract meanings have no ontological status independently of the products from which they are abstracted, it is rather that the relevant act of abstraction cannot occur without presupposing an abstract identity. No explanation can thus be given of the problem that different mental acts or attitudes may be related to each other through a common content, which I will call the ATTITUDE PROBLEM. Take, for example, the assertion “What we all feared, that it would rain in August, was hoped for by the farmers”. What is it that we feared, and that others hoped for?

Allowing for an identical meaning as a separate entity is no guarantee, though, that one is able to solve the attitude problem in any clear manner. What I have called the attitude problem is perhaps better known as the “propositional attitude” problem. This term I consider to be problematic, for what we fear or hope for in the example is certainly not a proposition. What one fears or hopes for is that the proposition that it will rain IS TRUE, that it IS A FACT that it will rain. Even Bolzano himself does not use his notion of *Satz an sich* to solve the problem, at least, not in any satisfying manner. For Bolzano, to doubt a *Satz an sich* is to have a presentation of it. The *Satz an sich* is thus the object, not the content, of doubt. In the judgement “Snow is white”, the *Satz an sich* SNOW IS WHITE is the content of the act, whereas the same *Satz an sich* is the object of the act in case one merely entertains the thought that snow is white [Bolzano 1837: §143]. For Bolzano, the *Satz an sich* does have the role of content of an act of judgement, but if one merely entertains a proposition, the act does not have the same content, for in entertaining a proposition, the *Satz an sich* is the object of thinking, while the content is merely a *Vorstellung an sich*. “Ein bloss gedachter Satz”, what Kant called a “problematic judgement”, is, according to Bolzano, nothing but a presentation of a *Satz an sich* [Bolzano 1837: § 34, note 2]. The logician who asserts “If *A* is, so is *B*”, neither judges that *A* is, nor that *B* is. The logician judges that [the truth of] the proposition

that *B* is, is a consequence of the truth of the proposition that *A* is.¹⁰ The logician thus makes a judgement ABOUT these propositions, according to Bolzano. The logician has a presentation of the propositions THAT *A* IS, and THAT *B* IS; these propositions do not function here as contents of non-judgemental mental acts, but as the objects of such acts, just as for Twardowski. It may be doubted, though, that we make here judgements about propositions or about possible judgements.

The notion of represented judgement plays a role in Twardowski's account of the meaning of a declarative sentence, and as the bearer of inferential relations. Furthermore, it allows Twardowski to make a distinction between assertions and mock-assertions, as they are made on stage. The way the notion is used, though, makes it clear that no unified account can be given of cases in which a sentence is asserted and those in which they are not asserted. In section 3, I will propose the notion of judgement-candidate, a notion related to that of Twardowski's notion of possible judgement as object of an act of presentation, although it will be explained differently.

4 The Relevance of Twardowski's Notion of Product for Philosophy

Friederike Moltmann has given ample linguistic evidence for the relevance of Twardowski's notion of product besides that of act. Like Twardowski, Moltmann's aim is to show that the notion relevant to logic and philosophy in general is the product, not the act or the proposition. And, like Twardowski, she aims to give an account of semantics, propositional attitudes and truth without invoking a notion of abstract proposition. Moltmann has a linguistic background, and aims to give an ontology based upon the way we use language. Although Twardowski is a defender of bottom up metaphysics, he does not commit himself to a language based ontology. For him, it is a combination of experience and language that is to provide the basis for philosophical distinctions. Furthermore, Twardowski knows too well that language may also hide a deeper logical structure behind a superficial linguistic structure. Nonetheless, linguistic distinctions do play an inspiring role in Twardowski's philosophy. In the case of the distinction between action and product, Twardowski uses a linguistic distinction to explain a philosophical distinction.

10 Bolzano claims that the one who makes the assertion "Wenn *A* ist, so ist *B* [...] bloss darüber urtheilt, dass der Satz: *B* ist, eine Folge von der Wahrheit des Satzes, dass *A* ist, sey" [Bolzano 1837: § 34, note 2].

An important argument for acknowledging the notion of product of the act is that we can say things of the product that we cannot say of their corresponding acts, or of propositions. To start with one of Moltmann's examples [2019: 185]:

- (1) a. John kept his promise.
- b. ??? John kept the proposition that S.
- c. ??? John kept his speech act.

When we say that John kept his promise, "his promise" must refer to the product of the act of promising. We do not say that John kept his promising or that he kept a proposition. A promise made and a judge's verdict seem to have a certain validity beyond that of the speech act, and can therefore not be identified with the act. A similar situation we have for mental acts that are not accompanied by speech acts:

- (2) a. John's hope was not fulfilled
- b. ??? John's hoping was not fulfilled.

What can be fulfilled is thus the hope as a product of the act. And in the case

- (3) a. His decision had disastrous consequences.
- b. ??? His deciding had disastrous consequences.

it is the decision made, the product of the act, that has these consequences. On the other hand, we can say things of the act that we do not want to say of the product:

- (4) a. Dancing (at that moment) was inappropriate.
- b. The dance was not inappropriate, though.
- (5) a. Him advising (at that moment) annoyed us all.
- b. His advice did not annoy us, though.

In (5), we are annoyed by the act of giving advice, not by the advice itself, which may actually be very good.

In what sense is the distinction between actions and products relevant for philosophy?

Can the product notion fulfil any of the roles that are standardly given to abstract propositions? Moltmann's terminology "attitudinal objects" suggests that the first role that products have to fulfil is that of being the "object of the act". There is certainly a sense in which we can call the judgement made, the product, an object of the act, for it is the internal object of the act of judging, just as the promise made is the internal object of the act of promising. Moltmann is also right where she criticises the standard account of propositional attitudes. Judging is not a two-place relation between a judging agent and an abstract proposition: we do not judge a proposition. In contrast to Moltmann, I do not consider this to be Frege's position. Theory can be attributed to Bertrand Russell, though. Before he defended his multiple relation of judgement, more

precisely, before 1905, Russell acknowledged propositions as objects of judgement in his ontology. For Frege, in judging we acknowledge a Thought to BE TRUE. Judging is thus, for him, not a two-place relation, for both sense and signification, *Sinn* and *Bedeutung*, are involved when making a judgement [Frege 1892: 35]. The Thought, being a sense, is the content of the act of judgement, not an object to which the act is directed. As I have argued elsewhere, judging is for Frege not a relation at all, and certainly not a two-place relation [Schaar 2018b]. It is true that in the second half of “Über Sinn und Bedeutung” Frege gives an analysis of sentences in which belief is attributed to an agent, and that belief is dealt with as a relation between an agent and a Thought as object. This analysis is given, though, in order to account for substitution problems in belief-contexts; it is not meant to give an account of what judgement is. The notion of judgement that plays a central role in Frege’s logic is not to be understood as a propositional attitude in the Russellian sense. This is often overlooked, because one has not understood the role of the judgement stroke in Frege’s logic; in Frege’s logic the judgements stroke indicates assertive force. And, as Frege claims, the essence of logic is to be found in the assertive force [Frege 1915: 272]. Judgemental or assertive force plays a crucial role in Frege’s logic. I come back to the issue in section 4. Moltmann’s criticism, though, stands as a critique of the influential Russellian account of propositional attitudes, in which propositions function as the objects of the act of judgement.

How does Moltmann solve the attitude problem if she does not acknowledge abstract propositions? In the following example, the content of John’s fear seems to be the same as Mary’s hope. But, if what John fears is a product, including the force, then it cannot be identical to what Mary hoped for, if that is likewise understood as the product of her hoping.

(6) What John feared was hoped for by Mary.

Moltmann gives no account of cases like (6), but she gives an account of

(7) John’s belief is the same as Mary’s.

The sharing of propositional contents, she suggests, may consist in KINDS of attitudinal objects being shared. Unlike propositions, these kinds “generally involve a particular force” [Moltmann 2017: 274]. Such kinds, though, cannot be used to explain (6) for there the force is different in the two cases. She IS able to account for the sameness in (6), though, insofar as she acknowledges predicates like THAT IT WILL BE 30 DEGREES CELSIUS TOMORROW. In “John feared that it will be 30 degrees Celsius tomorrow”, the clausal complement, “that ...”, is treated as “predicate of the attitudinal object” ([Moltmann 2017: 272]; [Moltmann 2019: 189]). What explains the agreement is thus that both John’s belief and Mary’s hope have the same property, that it will be 30 degrees Celsius tomorrow. This move seems to bring in the abstract proposition

that she aimed to exclude from her ontology. As the property may have more than one instance, it is as abstract as the proposition in the standard account of propositional attitudes. How does she explain that predicates are general? For, a predicate can be predicated of more than one object.

This does not mean that one has to endorse the view that it is, after all, the abstract proposition to which the different propositional attitudes are directed that explains (6). What is feared by John, and hoped for by Mary, is not a proposition – the abstract proposition is not what is feared or hoped for. Their fear or hope is rather that the proposition IS TRUE. Such a proposition is made true by a truth-maker, a situation or a proof-object, depending on one's philosophy. The proposition itself may then be explained as the set of the objects that make it true. Is then THE PROPOSITION BEING TRUE to be identified with the judgement made? This cannot be the case, for there is no judgement made in the example: we hope precisely what we do not judge. I come back to the issue below.

Can products, or a notion derived from them, fulfil the role of meanings of sentences? If someone makes the judgement "It is raining today", the judgement made, the product, is manifested by this particular use of the declarative sentence. The sentence has a meaning, though, independent of the actual use that is made of it. The sentence type "It is raining today" has a linguistic meaning, but it needs to be uttered in a context in order for us to say something definite, with a complete, truth-evaluable content. For Twardowski, judgements do not change their truth-value in different contexts; the context fully determines what judgement is made. It may seem that the sentence "It is raining today" is changing its truth-value depending on the day of utterance, but this only shows that sentences are not the proper bearers of truth and falsity, according to Twardowski.

We can also use declarative sentences without asserting them. The antecedent of an if-then sentence has a meaning, too, although it is neither judged nor asserted. The meaning of the sentence can therefore not be the judgement made. On Twardowski's account, the meaning of an asserted sentence differs in kind from the meaning of an unasserted sentence. Whereas the meaning of an asserted sentence is the judgement made, the meaning of an unasserted sentence is a represented judgement, as we have noticed in the former section. We aim, though, to give an account of meaning independent of such different uses. The only answer available for Twardowski and Moltmann is that we have to make the appropriate abstraction on the different product notions. As I have argued above, I think such an account of abstraction is either too psychological to form the basis for semantics, or otherwise acknowledges an abstract notion prior to the act of abstraction.

Elsewhere, I have argued that the meaning of a declarative sentence is an assertion- or judgement-candidate, something that is apt for making a judgement or assertion, but that need not yet be judged or asserted. The declarative sentence expresses the judgement-candidate independently of what actual use is made of the sentence, but the notion is ultimately to be explained in terms of assertive force. Understanding the judgement or assertion-candidate expressed by a declarative sentence is understanding what one would have to know in order to be entitled to utter the sentence with assertive force, that is, to assert it. A judgement-candidate is thus fully determined by the context. The JUDGEMENT-CANDIDATE is not explained as the object of an act of presentation, and therefore differs from Twardowski's notion of possible judgement, which is an object of an act of presentation. Similarly, an interrogative sentence does not have a question made as its meaning, but a question-candidate. The meaning of a declarative and an interrogative sentence thus differ in kind. They differ in the meaning of mood, to be explained in terms of a difference in the notion of force, but they also may share a certain aspect of their meaning, the content expressed: the proposition being true.¹¹

For both Twardowski and Moltmann, judgement products have the role of being the proper bearers of truth and falsity. This is probably Twardowski's most important philosophical thesis regarding judgement products. In what sense can we understand judgements as bearers of truth and falsity? Do we say that a judgement is false? We do so, according to Moltmann. But, is this right? To me, it seems more appropriate to call a judgement correct or incorrect. In what sense would a judgement made be correct or incorrect? When I make an assertion, you are entitled to ask "How do you know that?" and if I cannot give a ground for my assertion, it seems that I have to withdraw it. It thus seems that the judgement or assertion is correct if it can be justified; and that, if it cannot be justified, it is incorrect.¹² Such an epistemic notion of correctness is one of the roles of truth, but there is more to truth than epistemic correctness. We have introduced above an abstract notion of proposition, the proposition as it is used in propositional logic, which can be explained as a set of situations or proof-objects that make it true. Such a proposition is that to which the connectives of propositional logic applies. Such a semantic notion of proposition is also a bearer of truth and falsity. A proposition is true precisely if there exists a truth-maker for it. Truth thus has not merely an epistemic role, but also a semantic role. Truth of a proposition is not the same as correctness

¹¹ The candidate notion is more fully explained in my paper [Schaar 2007].

¹² A grounding account of assertion I have given in my paper [Schaar 2011b].

of the judgement made, but there is a relation between the two. A judgement is correct precisely if there exists a truth-maker for the proposition acknowledged as true in the act of judging.¹³ This truth-maker may be understood as a situation, but I have given a different account in my paper (Schaar 2011a): a judgement is correct if the judging agent is able to construct a proof-object for the proposition in an act of constructing. In the next section, we will see that there is a third role of truth, truth as rightness, and it is here that the notion of act becomes philosophically relevant.¹⁴

The fact that the judgement made is a bearer of correctness and thereby of truth in one of its roles is probably the most important role for the judgement made. The assertions and judgements in science are the bearers of truth in its epistemic role. A science consists of a whole of judgements made, not of a whole of true propositions independent of our judgements. Judgements made also play a role in epistemology insofar as acts of cognition form a special case of acts of judging. Theory of knowledge concerns itself, according to Twardowski, with knowledge as products of acts of cognizing. Theory of knowledge is for him a theory of judgements insofar as these judgements are correct. Knowledge is for Twardowski not a special case of belief, but to be understood as the product of an act of cognizing petrified in written sentences. It seems that Twardowski's notion of knowledge better suits the notion of scientific knowledge than the standard explanation of knowledge in terms of belief. For, if belief means a certain degree of conviction, it seems rather to be a psychological notion.

The judgement product is also relevant to logic. As Moltmann puts it, "attitudinal objects play the role [...] of inferential relations" [Moltmann 2019: 198]. Judgement products stand in inferential relations [Twardowski 1911: § 14, see section 2]. As Twardowski is to put it later: "Logic occupies itself with judgements as products" [Twardowski 1925: 186]. An inference is made by a judging agent on the basis of former judgements made, and the conclusion is likewise a judgement made. What are these inferential relations? Do they obtain independently of the judging agent? And what is the product of an act of inferring? Furthermore, logical relations also obtain between sentences that are not asserted. Can we give a unified account of logical inference for cases where we judge the premises as well as for cases where we merely take the premises as examples without them being judged? Twardowski's account of logical validity introduces represented judgements in order to extend the notion

13 The notion of existence of a truth-maker is not to be understood in terms of the existential quantifier.

14 On the different roles of truth, see [Sundholm 2004].

to cases where we do not make any judgements. This seems to imply that we have to define validity for both represented judgements and for judgements made. How then can we give a unified account of validity. Twardowski's theory seems to be incomplete. The last section will be devoted to these philosophical questions.

5 Logical Inference: Act and Product

Could we use Twardowski's distinction between act and product to understand the notion of inference? Inferring is an act. What kind of act is it? We may start with Frege, because he is one of the few modern philosophers who give an account of judgement, and who makes room for a judgement stroke, a sign of judgement, in his logic. Frege understands the act of inference to be a special case of the act of judging: "An inference [...] is an act of judgement that is drawn according to logical laws from judgements previously made" [Frege 1906: 387]. As he puts it in his earlier writings: "Judging insofar as one is cognisant of other truths as providing a justification for it (*Rechtfertigungsgründe*) means INFERRING" [Frege 1879–1891: 3]. Just as for Twardowski, for Frege, the premises of an inference in its proper sense are judgements. Judgements in what sense? Let me first address the question of inference.

What would be the product of inferring? In English, we make a distinction between the act of inference and the inference made. This suggests that the inference made is not identical with the conclusion. In German, though, we distinguish between *schliessen*, inferring, and *Schluss*, which may either mean the inference made or the conclusion made. A language based ontology cannot help us to decide; we have to give a philosophical account of the product of an act of inference in order to decide the issue. On the one hand, one might say with Twardowski that the inference made is petrified in the presentation of the judgements made on paper, that is, in the written sentences, where the manifestation of the conclusion is separated from the manifestation of the premises by a horizontal line. But, strictly speaking, if one agrees with Frege that the act of inference is a special kind of judging, then the product of the act of inference is a judgement made. The product of inferring is thus the conclusion drawn. The act of inference has brought us from known premises, former judgements made, to a known conclusion, a new judgement made. This means that the act of inference has to be an epistemic act. The former judgements made thus function as a justification of the conclusion, but as such they are not part of the conclusion, that is, of the product of the act of inference in the strict sense.

Twardowski's distinction between act and product may help us to understand a difficult and enigmatic issue in Frege's logic. Frege's ideography consists of manifestations of logical axioms and theorems, where the theorems are demonstrated by means of the axioms and at least one inference rule, *Modus Ponens*. All the sentences manifesting axioms and theorems in the ideography are preceded by the judgement stroke. What is the role of the judgement stroke in Frege's logic? It is, according to Frege, a sign of assertive force. Does this mean that the sign is a sign of the act of judging, or is it rather a sign of the judgement product? Frege himself does not make the distinction between act and product. Given that he already acknowledges abstract propositions, he does not seem to need the notion of judgement product to prevent psychologism. I think, though, that the distinction between act and product may clarify the role of the judgement stroke in Frege's logic. It is important to understand that the judgement stroke, for Frege, is not a sign expressing any content; it is a unique sign, essential to his logic: "If one were to delete the judgement stroke from the premise sentences in the presentation of an inference in my ideography, something essential would be missing" [Frege 1976: 127]. And, in a published paper he writes, "With this judgement stroke I close a sentence, [...] and the content of the sentence thus closed I assert as being true by the same sign" ([Frege 1896: 232]; cf. [Frege 1891: 22]). It seems that Frege takes the judgement stroke to be a sign that he himself is making the judgement; that it is a sign for the act of judging. The problem of this view is that an act essentially has an agent, and that might mean that there is a psychologistic element involved in his logic. I come back to this question below.

There is also a reason to think that the judgement stroke should be considered as a sign of the judgement made. In Frege's logic, ideography sentences play a crucial role. These sentences include the judgement stroke: "The ideographical presentation of a judgement (*eines Urtheils*) by the sign '┆' I call an ideography sentence or sentence" [Frege 1893: §5]. In *Grundgesetze*, §47, Frege summarises his 'Grundgesetze', his basic laws, by means of ideography sentences, including the judgement stroke. These ideography sentences manifest assertions or judgements made, not acts of asserting or judging. For, these ideography sentences are the result of acts of writing done by Frege, being thus written products themselves, and they manifest the judgements made by Frege, his basic laws; pieces of knowledge which are the product of acts of judging and inferring. It is not essential that Gottlob Frege has made the judgement, for anyone can make these judgements, and has to make them in order to be entitled to use them as judgements made for further inferences. As Frege put it, "If I assert something as true, I do not want to speak about myself, about a process in my mind. And in order to understand it, one need not know who asserted

it" [Frege 1976: 126, 127]. Such a relative independence from the act of judging is obtained if we understand the judgement stroke in front of a sentence as a manifestation of assertive force as part of the assertion made. Would this mean that the act of judging and inference is irrelevant to logic, as Twardowski has claimed, and that logic is in need of the judgement product, but not of the act of judging and inference? In the first place, this cannot be true if one considers the ideography as a first person engagement, as I have argued elsewhere [Schaar 2018b]. The judgements made as manifested by the ideography sentences play a crucial role in logic, for each of us is thereby, in principle, able to make the acts of judgement and inference for himself in order to take care that the inference, the proof, is also a proof for me as judging agent. There is also another reason why the act of inference cannot be neglected.

Suppose we make an inference, and we are confronted with doubts whether the conclusion is correct. We might question our former judgements made, but we may also question the act of inference itself. Was the act in order? We distinguish valid from invalid inference schema's. The inference schema is valid if it is in accordance with an inference rule that we know to be correct, and the inference schema is invalid if there is no inference rule to which it may be correlated. An inference rule such as *Modus Ponens* we know to be valid on the basis of our understanding of implication. We may ask whether the act of inference is in order, thus: Is the act of inference in accordance with, say, the rule of *Modus Ponens*? If it is not, if we have made a mistake in the application of the rule, we are not entitled to call it an act of inference: there is merely a purported act of inference; the act is only an apparent act of inference. We thus see that implicit in our description of a mistake in inference is the notion of rightness of the act. Earlier in the paper we distinguished two roles of truth, the semantic notion pertaining to propositions and the epistemic notion pertaining to judgements made. We now see that we are in need of a third role of truth: rightness of the act. There is some linguistic evidence that "rightness" is here the appropriate term when we speak of acts. We ask such things as: What would be the right thing to do? To be understood in the sense of: What should we do? The rightness notion pertaining to acts seems to capture the normative role of truth, as terms like "ought" and "should" are appropriate here.

In inference and proof the question of rightness arises in the case of doubt, when we are confronted with a possible mistake. Only then, we ask whether we did the right thing: was our act of drawing the conclusion an act of inference as it ought to be? If it was not as it should be, it was not an act of inference at all, only an apparent act of inference. Unlike truth and correctness, rightness does not have an equal conceptual counterpart, such as falsity or incorrectness. The opposite of rightness is APPEARANCE, a form of absence; here, the contrast

between appearance and reality is at stake. We also say that the apparent act of inference was not a real act of inference. So, in the case we suspect that a mistake is made, we have to go back to the act, and ask whether the act was an act of inference. So, acts ARE relevant to logic; they are not merely of psychological value. It is the act of inference that needs to be in accordance with the rule of inference. And we always have to go back to them in order to correct our mistakes. Only when the act turns out not to be a true act of inference, we can say that it merely has a psychological value.

We may now see how important Twardowski's distinction between attributive, modifying and restorative terms is when it comes to these basic logical notions. Although we may speak of valid and invalid inference schema's, it does not make sense to speak of an invalid inference rule or invalid inference. If the rule or the act are not valid, we do not speak of inference in any proper sense of the term. We can at most speak of a purported act of inference, an apparent act of inference. The term 'apparent' functions as a modifying term, for an apparent act of inference is not an inference, just as a dead man is not a man. We may doubt whether our act of inference was a true or real act of inference, using 'real' or 'true' as a restorative term. In such cases, the negative use wears the trousers, as J.L. Austin once put it. Only when there is a suggestion that there is not a true act of inference, or when we want to assert that it is, after all, a true act of inference, we use the term 'true', in its special, restorative sense. This means that the primary use of the normative role of truth, the notion of rightness pertaining to acts, is a negative one. This is, for example, shown by the fact that if we use the term in a positive way, it becomes redundant. There is no difference between an act of inference and a true act of inference, for we would not be allowed to call it an act of inference if it wasn't a true act of inference. If there is no suggestion of there being a stuffed bear, there is no difference between a bear and a true bear; true bears are not a special case of bears.

The point can be generalised to science in general. If we have found that the conclusion of our proof is contradicted by a well-established law, we have to go back to the act in which the conclusion seemed to be demonstrated, in order to see where the mistake was made. A science as a whole consists of judgements made, but in order to correct our mistakes, we have to go back to the acts of judging that had these judgements as products. Both the act of judging and the judgement made are thus relevant for logic, philosophy of science and epistemology.

There is one important issue still to be addressed. As Twardowski has pointed out, we also speak of inference in examples, when the supposed premises are not judgements made. And it seems that Frege is also making inferences in those cases where there are no judgements made. In the

afterword of the *Grundgesetze*, Frege derives a contradiction by means of his basic law *V* together with the other laws of his system. Frege does not speak in this context of inference [Frege 1903: 256]. We are not allowed to use the judgement stroke, for no judgements are made. Furthermore, Frege is not allowed to speak of acts of inference, because the rule, say, of *Modus Ponens* is only defined for cases where the judgement stroke is present: the rule includes the judgement stroke (cf. [Frege 1893: §14]). That a contradiction follows is shown rather partly by means of formulas with meaning but without the judgement stroke, partly in the German language, the expository language. It is thus not shown by means of an ideographical presentation. In a letter to Dingler, Frege introduces the terminology of a PURELY FORMAL ACT OF DERIVATION (*rein formal ableiten*, [Frege 1917: 30]). Frege uses the term *ableiten*, deriving, instead of inferring in case the premises are not judgements made. A purely formal inference is an inference only in a modified sense, not an inference as it should be; it is merely a pseudo-inference, a *Pseudoschluss* (*idem*). One can speak of validity here, insofar as the purely formal derivation is made in accordance with valid inference schema's, but there is no true act of inference as Frege understands such acts. No judgements are made when writing down the formulas in the derivation of the contradiction. The formulas in the derivation express substitutes for judgements, as Twardowski would say. These substitutes are artefacts standing in for judgements. Crucial to this account of inference is that we first have to understand what inference is, that it is drawn from judgements made. Only then, we can obtain a notion of purely formal derivation, by withdrawing the idea that the "premises" have to be judgements made. Strictly speaking, though, as *MP* is defined only for judgements made, no inference is made.

To what then do the inference rules apply? Is it to judgements made, their surrogates, or to both? Twardowski and Frege are not able to give a unified account of the different applications of inference rules. We have to give a less complicated account of our derivations from assumptions, and of derivations from examples. The reason that the inference rule applies to both inferences and mere derivations is that in both judgements and surrogate judgements a judgement-candidate is involved. Both assertions, assumptions and premises in examples express judgement-candidates. Inference rules may thus be understood as primarily applying to judgement-candidates. Above, in section 3, I have explained the judgement-candidate in terms of assertive force, but one may also understand it as a declarative sentence *with* its meaning. This shows that the notion is not unrelated to the central logical notion in the Lvov-Warsaw School: the declarative sentence. For, the notion of sentence within

the Lvov-Warsaw School has always been an interpreted sentence, never the purely physical object that Quine made of it. The only difference is that the judgement-candidate, if it is to function as the meaning of the declarative sentence, abstracts from the different ways it is expressed in different languages.

6 Conclusion

Twardowski's distinctions and notions can thus be used to solve several problems in logic. His distinction between act and product is crucial to understand to what extent judgement and inference are to play a role in logic; his distinction between attributive, modifying and restorative terms can be used to illuminate the conceptual relation between inference and derivation; his notion of judgement made can be used in philosophy of science, for a science can be understood as a whole of judgements made; and, finally, the notion of represented judgement, the surrogate for judgements made in case no judgement is actually passed, can be used as a starting-point in order to develop a notion of judgement-candidate.

Judgements made may not be able to fulfil all the roles that Twardowski, and Moltmann, take it to fulfil. It is less apt as the meaning of a declarative sentence and also less apt to account for the attitude problem. But, it is relevant as a bearer of logical relations and as a bearer of epistemic correctness and incorrectness. Twardowski, though, and Moltmann as well, understood quite well that we need a more abstract notion to function as meaning of the declarative, to allow for its different uses, both asserted and unasserted. Twardowski thus introduced a notion of identical meaning. Identical meanings are the result of acts of abstraction. This notion is not completely satisfying, though, as Twardowski is not able to give a non-psychologistic account of abstraction.

Finally, with the distinction between act and product in hand, we are better able to understand the enigmatic role of the judgement stroke in Frege's logic. We can understand the judgement stroke as a sign of the judgement made, the product of the act of judging. It thus seems that we can prevent a psychologism that an introduction of the act of judging seems to lead to. I have argued, though, that we also need the notions of act of judging and inference in logic. We need them to build up the logical system in such a way that a proof is also a proof for me. And, we need acts of inference to be able to get back to them if questions of doubt are raised.

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Twardowski's Action/Product Distinction and Philosophy

Jan Woleński

Abstract

In the paper, I present the action/product distinction as proposed by Twardowski himself and some of his students. We can say that the majority of problems analyzed in the philosophy of science and the philosophy of language begin with a remark that, for example, we should distinguish science (language) as an activity, doing science or speaking language, and scientific results and expressions as products of related actions. Due to my philosophical interests and competences governed by analytic way of doing philosophy, I restrict my considerations to the mentioned domains (more accurately, to some problems occurring within them). I start with a sketch of the history of modifications of this distinction in Twardowski. Then I analyze various classifications of action/product pairs in terms of ontology and applications of this distinction made by representatives of the Lvov-Warsaw School.

Keywords

Action – humanities – knowledge – language – object – product – psychologism – science – Kazimierz Ajdukiewicz – Franz Brentano – Kazimierz Twardowski

1 Introduction¹

According to Roman Ingarden:

The study “On Actions and Products” is an attempt to overcome psychologism. One can agree with this contribution or agree with it, especially

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as far as the issue concerns some details proposed by Twardowski himself. However, one must admit that this study as a way of going bet when Scilla and Charibde deserves the most watching attention and detailed re-thinking.

INGARDEN 1938: 264

Although Ingarden is right to some extent, because the action/products distinction (APD, for brevity) was primarily designed to solve the problem of psychologism, Twardowski had a more general intention. One could even say that he did not foresee himself various philosophical applications of APD. Władysław Stróżewski told me once that the distinction in question entered into philosophy and the humanities so deeply that recalling its authorship is almost trivial. I experienced this situation myself as well, because when I started my academic career as a legal philosopher, nobody denied that law as a product of legislative activity must be considered as something different than this activity (action) itself. Similarly, we should distinguish legal interpretation as a series of actions of a given interpreter and their product, that is, a given interpretation. The task of the present paper consists in presentation of APD as proposed by Twardowski himself and some of his students. Without an excessive exaggeration, we can say that the majority of problems analyzed in the philosophy of science and the philosophy of language begin with a remark that, for example, we should distinguish science (language) as an activity, doing science or speaking language, and scientific results and expressions as products of related actions. Due to my philosophical interests and competences governed by analytic way of doing philosophy, I restrict my considerations to the mentioned domains (more accurately, to some problems occurring within them). In particular, I will almost omit axiology, that is, ethics and aesthetics, although APD has a natural applications in both fields, especially in the latter.

2 Historical, Bibliographical and Terminological Remarks

Twardowski 1912 is the *opus classicus* as far as the issue concerns APD – German summary of this contribution (see [Twardowski 1911]) appeared even earlier than Polish original. Twardowski himself prepared French and German translations (the former is accessible under the link <http://www.elv-akt.net/data/items/show/70>; for the latter see [Twardowski 1912b]; English translation see [Twardowski 1912a]). He immediately observed that APD can play a special role for analysis of the humanities ([Twardowski 1912c], [Twardowski 197d]). Several Twardowski's works as well as written by other authors contain more

or less extensive mentions of APD (I quote some of them in what follows). Although this distinction, as I already remarked, gained a quite remarkable recognition as well as it is frequently mentioned and/or briefly reported, also critically (I will return to some objections below), references to it are made on margins of elaborating other problems, particularly, psychologism, the nature of the humanities or various semiotic problems. Yet there are only a few more extensive comments in contemporary philosophical literature (see for example, [Brandl 1996], [Bobryk 2001], [Rechlewicz 2015: 371–406] and [Schaar 2015: pp. 103–113]).

Twardowski consequently used the terms *czynności* (ACTIONS) and *wytwory* (PRODUCTS) in his Polish works, especially in [Twardowski 1912a] as well as later writings (see [Twardowski 1912d: *passim*], [Twardowski 1924–1925: 186]). This terminology became standard in Polish philosophy. French translation employs *functions* and *produits*, and German *Funktionen* and *Gebilde*. Carl Stumpf [1906] is considered (see [Ingarden 1938: 263]) as the predecessor of APD. Twardowski himself mentions [Twardowski 1912a: 109, footnote] also Bernard Bolzano, Justus Bergmann, Alexius von Meinong, Stephan Witasek and Josef Kreibig as authors generally speaking about actions and products. Particularly, Twardowski attributes the distinction (but in a very general sense) to Witasek, and its applications to Kreibig. This brief (certainly, incomplete) survey shows that (a) terminology differed from one author to another, and (b) Twardowski considered problems often analyzed by philosophers at the break of 19th and 20th centuries. Yet philosophical vocabularies and encyclopaedias published at that time (and later) do not contain, at least to my knowledge, separate entries or papers devoted to APD. This fact can be considered as providing evidence that interests concerning the distinction in question were still somehow specialized and did not belong to the standard area of philosophical problems.

Let me return to terminology. Due to the variety of terms, we have a question whether they represent the same meanings or at least similar preliminary intuitions. Limiting to a comparison of Twardowski and Stumpf, the latter describes mental (psychic) products as *psychische Funktionen* and contrasts them with *Ercheinungen* (what appears, appearances – this does not imply that the issue concerns actions, but Twardowski spoke about *Funktionen* and *Gebilde*). The full German title of Twardowski's study is *Ueber Funktionen und Gebilde. Einige Bemerkungen Grenzgebiet der Psychologie, Grammatik und Logik* (the second part of this phrase is an exact counterpart of Polish sub-title *Kilka uwag z pogranicza psychologii, gramatyki i logiki* as well as its English translation "Some Remarks from the Borderline of Psychology, Grammar and Logic"), and the word *Gebilde* can be rendered as *product*. French version contains

fonctions, but is followed by *produits*. Although *Funktionen* (*fonctions*) have a natural translation in the noun “actions”, the title of Stumpf’s essay does not exactly corresponds with Twardowski’s intentions, because the latter had in his mind not mental actions but their products. The situation is still more complicated, because Stumpf employed the term *Gebilde psychischer Funktionen*. The above remarks justify adopting the phrase *On Actions and Products* as English title of Twardowski 1912 (see various remarks by the translator signed by the abbreviation Tr.). Still it should be recalled that Twardowski himself had some reservations related to the term *action* (more precisely, to its Polish counterpart). He remarked:

Doubt may arise whether the distinction of mental actions and products can also be employed to regard to sensing or experiencing of sensations as action, and the sensation as the product of this action; or [to regard] feeling – that is to say, the experiencing of emotions – as an action, and the emotion as the product of this action. This doubt may arise from the fact that all sensing is predominantly in the nature of a passive rather than active state and that it is therefore difficult to refer to sensing and feeling as actions. However, once it is acknowledged that the term “action” is very frequently employed as not in contradistinction to passive states, but in a more general sense in which it can be replaced by the term “function”, the doubt will dissipate.

TWARDOWSKI 1912a: 110, footnote 20

This fragment should overcome possible objections against Twardowski’s terminology as well as can be regarded as a supplement to my earlier justification concerning the choice of phrases to render APD in English.

3 Twardowski’s Early Views on APD

Franz Brentano’s revolutionary idea considered the psyche as consisting of acts, not, as in British empiricism, a collection of mental contents, in particular, sensations. Moreover, every mental act is intentional, that is, directed to an object. In his famous and widely quoted passage Brentano says:

Every mental phenomenon is characterized by what the Scholastics of the Middle Ages called the intentional (or mental) inexistence of an object, and what we might call, though not wholly unambiguously, reference to a content, directed toward an object (which is not to be understood here as

meaning a thing), or immanent objectivity. Every mental phenomenon includes something as object within itself, although they do not always do so in the same way. In presentation something is presented, in judgement something is affirmed or denied, in love [something] is loved, in hate (something is) hated, in desire [something is] desired, etc.

BRENTANO 1874: 88

Brentano himself admits that not everything looks precise in his formulation. Although the same idea that mental acts are directed to something does not raise special doubts, the nature of intentional objects leads to difficulties. Brentano once says that acts refer to contents, but, just after this explanation, he remarks that they have objects as intentional references. Does it mean that terms “content” and “object” are synonymous, co-referential or essentially differ in their extensions and/or intensions? One may eventually agree that contents in-exist (exist in) acts, but a similar approach to objects looks somehow mysteriously. If the issue might concern presentations, judgments or feelings directed to non-real objects (for instance, the mountain higher than Mt. Everest), the view that such items in-exist (or subsist) within mental acts, could have (and even it has) supporters. However, the main problem reappears with respect to real objects as intentional entities. Since this question was discussed many times, we do not need to report its various solutions (see Antonelli 2001). I only note that Brentano changed his early view and in the later, that is, reistic stage of his philosophy and resigned from the concept of intentional inexistence, although he further accepted the thesis that all mental acts are intentional. Anyway, Brentano distinguished, in all stages of his philosophical development, genetic psychology dealing with forming of mental entities in our minds and descriptive psychology, oriented at description of mental acts and their contents. Yet both kinds of psychology are based on experience, inner, according to Brentano, that is, introspection.

Twardowski as a faithful Brentanist acquired the idea of intentionality and the view that psychology is genetic as well as descriptive. However, he maintained that the problem of content and object of deserves a wider discussion and definitely belongs to the latter kind of psychology. His discussion resulted in (see Twardowski 1894; it was his Habilitation work) to the distinction of act, content and object of presentation (and other mental phenomena, particularly judgements). He admitted that the distinction in question occurred to extent in Brentano’s writings, his task consisted in making it more precise. Since details and results of Twardowski’s investigations (I only remark that his analysis cannot be reduced to an exegesis of Brentano, but constitutes a very important and original philosophical contribution) are not particularly

relevant for APD in its finale version, I limit myself to quoting and commenting the following fragment (wider comments and comparisons can be found in [Cavallin 1997] and [Schaar 2015]):

On the basis of this relation [intentionality] to an “immanent” object”, which is, characteristic of mental phenomena, one has become accustomed to distinguish in every mental phenomenon between act and content, and thus each of them appears from two sides. When one talks about “presentations”, one can understand by this expression sometimes the act of presenting, sometimes, however, the content of presentation. And hence it has become customary to use instead of the expression ‘presentation’ one of the two expressions ‘act of presenting’ and ‘content of presentation’ whenever the smallest possibility of a misunderstanding exists. [...]. The present investigation is concerned with a detailed separation of the presented, in one sense, from the presented in the other sense, where it is used to designate the object – in short, of the content of the presentation and the object of the presentation – and with the mutual relationship between the two.

TWARDOWSKI 1894: 1, 2

Twardowski employs Brentanist language in this fragment and refers to what Brentano himself qualified as expressed “not wholly unambiguously” in his formulation of the distinction between the content and object of mental acts.

APD does not occur explicitly in Twardowski 1894. However, it is remarkable that he consequently uses the label “act of presentation” (in the original, *Vorstellungsakt, Tätigkeit des Vorstellens* – he did not apply the term *Funktion* at that time). If APD will be coded as the pair <actions, products>, its first component is explicitly outlined in Twardowski’s Habilitation. He observed:

In my book *On the Object and Content of Representation* [...] I referred to the function of representing as an “act”, and to the “content” of the representation (*Vorstellungsakt, Vorstellungsinhalt*). [...]. Thus, what I referred to as the content of a representation in the above cited book corresponds most accurately to what here appears as the product of [the act] of representing.

TWARDOWSKI 1912a: 114, footnote 30

If I did not overlook anything important, Twardowski 1894 did say nothing about the content of presentation as its product. This account does not follow from Twardowski way of speaking [Twardowski 1894: 17] that “the

content is presented *in*, but the object is presented *through* the presentation". Nevertheless, Twardowski's quoted remark from his book of 1894 suggests that APD was anticipated in Habilitation.

A separate question consist in the question whether the content presentation (in the sense occurring in [Twardowski 1894]) "corresponds most accurately" to the product as the latter concept understood as in APD. In fact, one can have serious doubts in this respect even if we acknowledge that in the pair <action, product> the second component is the content or it at least has a close connection with it. Twardowski's view was psychologistic in 1894 and he accordingly understood mental contents. In his unfinished philosophical autobiography written in 1926, we read:

Philosophical views of mine have of course undergone certain changes in the course of time, changes that I understand to represent an evolution toward a more secure knowledge. In this context the most worthy to mention is my position *vis-à-vis* psychology, its method and its relation to the other sciences – philosophy, especially. In this regard, my point was initially identical with that of Brentano – a view to which Marty, among others, also subscribed: psychology is the fundamental philosophical science. I promulgated this point of view, and substantiated in a paper that I read in 1897, which was subsequently published as *Psychology vs. Physiology and Philosophy* [...]. But Husserl's *Logical Investigations*, which appeared some years later (1900/1), convinced me that it is impossible to treat psychological, that is acquired, knowledge as the basis of logical, thus *a priori* propositions. My book on the basic didactic and logical concepts [published in 1901] was written prior to my study of Husserl's work, so that in it I still came forth as an "exponent of psychologism". [...]. But my psychologism of that period manifests more in the demarcation of the material to be dealt with than in the matter of its treatment. For I maintain in general that the opposition between psychologism and anti-psychologism in logic is ultimately an issue which pertains to the scope of its domain rather than to theoretical grounding of its propositions.

TWARDOWSKI 1926: 30–31

An essential question concerns the sense of the assertion that logic is a comprehensive domain and the importance of the issue for the psychologism/anti-psychologism controversy.

Let me recall that the full title of Twardowski 1912 is "[On] Actions and Products. Some Remarks from the Borderline of Psychology, Grammar and Logic". One can assume that the extensiveness of of the scope of logic consists

in the fact that discussions of logical problems invoke psychological and grammatical points. Twardowski did not avoid such questions in his earlier writings (see above). On the other hand, he had to have reasons to mention his evolution as far as the issue concerned psychologism. Doubtless, his initial understanding of the content of mental acts was entirely psychologistic. Nothing surprising, because considering or apprehending such acts and their content would be very difficult without appealing to psychology based on inner experience. Yet Twardowski employed his understanding of the concept of content in his philosophy of language, proposed in [Twardowski 1894], particularly in considerations on the meaning of names. This area of problems was otherwise treated in Twardowski 1912. It is a controversial question whether Twardowski overcame psychologism in his later writing (see below). Surely, he did not follow Husserl's radical way. Although Twardowski (see [Twardowski 1912a: 128, footnote 55]) mentions ideal senses (*ideale Bedeutungen*), but did not use this concept in his refutation of psychologism. If we take into account Twardowski's cited explanation from his autobiography, he considered (correctly or not, but it is another matter) psychologism as claiming that logical theorems are justified on the base of psychological statements, that is, *a posteriori* – this position does not require treating meanings as mental contents. Investigations in Twardowski 1912 look for a way of associating mental contents with linguistic objects to which meanings are ascribed. Anticipating my further considerations, Twardowski's strategy consists in introducing the content of psychophysical action as such that its content is expressed by its product. Even if one might say that contents are in mental acts, it does not mean that it is expressed through it.

4 APD in Twardowski 1912

Paraphrasing psychological problems (belonging to descriptive psychology) via dressing them into linguistic form (shape) was Twardowski's favourite method. This strategy consists in analysis of mental properties, that is, possessed by psychological items as features of expressions. In particular, Twardowski employed the parallelism between names and presentations. It leads to an argument for the distinction between the content and the object of presentation via that of meaning and reference of names. Further examples include, for example, treating so-called general presentations as counterparts of general (common) nouns or criticism of so-called objectless presentations as related to the word "nothing". In the last question, Twardowski argued that "nothing" is not a name at all, but a syncategorematic expression, having no

autonomous meaning outside a context in which it occurs. For instance the phrase “nothing is eternal” means “no object is eternal” and the expression “no object” contains a hidden quantifier and cannot be regarded as a name. The linguistic starting point is explicit in Twardowski 1912. This paper begins with the following explanation:

Of the two expressions that make up such parts as “to walk/the walk”, “to race/the race”, “to sing/the song”, “to speak/the speech”, “to think/the thought”, “to err/the error”, “to judge/the judgment”, “to bend/the bend” – the first denotes some sort of action. The task of the following explications is to analyze how the meaning of the second expression in each such pair is related to the meaning of the first.

TWARDOWSKI 1912a: 104

All examples given by Twardowski fall under the scheme (already indicated above)

(1) $\langle „A”, „P” \rangle$,

that is, the ordered pair with the first member being a word referring to an action, and a word referring to a product as the second member. This scheme has its counterpart in

(2) $\langle A, P \rangle$,

in which the letter A symbolizes an action and the letter P – the related product. (1) has the nominal character (its members are names), but (2) – real (its elements are objects, that is actions and products). The analytic problem consists in what one can say about the relation (every ordered pair is a member of the relation understood as the set of such pairs) expressed by (2) on the base of the relation expressed by (1). It is not Twardowski’s language, but more contemporary, but well suits that we infer conclusions about objects from premises asserting properties of words. The use of (1) and (2) in my further analysis of APD is motivated by the fact that I am interested not only in reporting Twardowski’s views, but also in their importance for contemporary philosophy, particularly Polish.

Twardowski makes several grammatical remarks on words occurring in (1). He observes that the second elements in the pairs are usually gerunds or that some of them, for example, “the race” refer to events, not necessary to objectual products. Such irregularities are not to be avoided, due to well-known difficulties in defining actions, acts, activity, etc. or the importance of psychic components, for example, the role of intentions in accounting of related categories. It is obvious that a behaviourist will have another view in this respect than a representative of the mentalistic psychology. Other examples illustrating

this problem are provided by appealing to differences in evaluating Turing's test as proving unsolvability of the problem whether we talk to a computer or to a human being, or the question whether mental activities are performed only by humans or can be also done by at least some non-human animals – according to Descartes the latter are only mechanisms, but not agents in the strict sense. For further analysis, we must admit that the set of A's is established in advance – these or that borderline cases are included in (or excluded from) by a convention.

One of grammatical Twardowski's remarks is perhaps of a special importance (it pertains to inflected languages, like Polish or German):

For a long time grammarians have drawn attention to the reciprocal relation of such expressions by speaking of a so-called "etymological figure", by which they meant a construction in which the noun, from the same stem as the verb, plays the role of the complement (object) to the latter, termed in such instances an "internal complement". [...] this complement may require the use of the accusative case, e.g. "to sing a song" or "to assign an assignment"; other situations may require some other grammatical case, e.g. "to live [through an] (intense) life" or "to scream by means of (horrific) scream". Such a relation between verb and noun is certainly not confined to the etymological figure; in other examples, the relation between the verb and the noun that is its internal complement may be of either of two types. In the one type, the verb refers to the action in a highly ambiguous fashion, without having its meaning in any way disclose the nature of the complement. As a result, such a verb (e.g. "to execute") can be linked with complements having a wide variety of meanings. One can execute an order, a jump, a turn, etc. In the other type, the meaning intrinsic to the verb indicates a specific sort of a complement. Thus, the verb "to commit" demands a complement that denotes something negative: "to commit an error, a robbery", etc.; the verb "to recite" demands a complement that denotes some sort of acoustic phenomenon: "to recite a speech", a poem", etc. The etymological figure can be regarded as an extreme case of this second type of relation, since in that construction the verb itself singles out its own internal complement directly as it were. [...]. The "internality" of such a complement, if we may put it that way, finds its expression among other ways,

(a) in the etymological figure, which depends on the stem of the verb and its complement being identical, or

- (b) in the fact that, in place of an expression composed of an verb and a noun denoting its complement, one may simply utilize the appropriate verb without appending a complement.

Hence, instead of “execute jump” – “to jump”; instead of “tell a lie” – “to lie”; instead “to pass a judgement” – “to judge”.

TWARDOWSKI 1912a: 106–107

According to Twardowski, the internality of the complement allows to speak about objects being somehow internal in the pairs falling under (2). Twardowski:

nor is it possible to speak here about *external* objects, for the action designated by the verb does not carry over to what the noun designated.

TWARDOWSKI 1912a: 117

Grammarians use another terminology. They distinguish between two kinds of complements, closer and further. The former refers to a person or thing being the subject of the action performed by the agent, but the latter – to something indirectly associated with the given action, for instance, in such a manner that the executed action somehow influences the person or thing.

The frontier between both both mentioned kinds of complement is not very sharp. Consider the sentence (in fact, this expression replaces a sentence)

(*) visiting Kraków.

Two ways of its analysis are possible. Firstly, one might maintain that the word “visiting” refers to the activity (a series of actions) – “Kraków” is the closer complement in this case. Secondly, it is also possible to think about (*) as indicating visiting referring to Krakow and even somehow influencing this city, when, for instance, when the visitor uses the municipal transportation. Let us assume, consistently with Twardowski’s intentions, that he considered such pairs $\langle A, P \rangle$ in which A creates P. Clearly, we cannot say that visiting Kraków creates Krakow, although this activity refers to this city and even physically impact it. If we adopt this view, the related interpretation of (*) decides that we have to do with such concretizations of this scheme, in which the first member has various physical interactions with the second one. In other words, it is so that without the action in question, the related product does not exist or is different. Accordingly, there is no visiting Krakow without visiting it, there is no reading *Hamlet* without reading it, etc.

In general, the above analysis (1) and (2) points out that (a) a given instance A creates or at least influences a given instance B, for instance, visiting now and here (clearly, we need to add spatiotemporal coordinates) – visiting

Kraków, and (b) a given action A refers intentionally to closer complement (as an object) of the sentence (*) – everything is related to a concrete application of this sentence. I think that Twardowski used the names “internal complement” and “external complement” by analogy to Brentano’s phrase “internal (inner) object” employed in his (Brentano) analysis of intentionality. I recall (see above) what Brentano on immanent objectivity. It means that the object of intentional relation exists inside (is a part) of the related mental act. In the terminology employed in the present paper, the situation can be rendered in the following way. The scheme (2) defines the intentionality relation between an act (now symbolized by the letter A) and its object (now symbolized by the letter P). Looking at (1), “P” is a nearer complement (internal) for “A”. However, analogy with Brentano’s view is dubious. The object symbolized by P is not a part of what is symbolized by A in any reasonable sense. One can say at most that denotations of “A” and “P” are internal parts (more simply, elements) the relation marked by the scheme $\langle A, P \rangle$. Twardowski pointed out (in his Habilitation) that Brentano confused the content of the act with its object by identification of reference to some content with directing to an object. Consequently, and it is a great advantage of Twardowski’s analysis, the assertion on intentional inexistence or immanent objectivity does not follow from the analysis of the schemes (1) and (2), independently of whether they are interpreted as accounts of the relation of intentionality or symbolizations of APD and which role is played by complements (objects) internal and external in these constructions. From the ontological point of view (naive but I do not enter into this question) possible are various situations – the intentional object can be real, for instance, Kraków or fictive, for instance, Sherlock Holmes or mixed as Sherlock Holmes in London. Anyway, Twardowski could say that contents are products of acts, because he explicitly distinguished both. On the other hand ad supplementing one of my earlier remarks, it does not suffice for a defence of anti-psychologism, especially because the content is in the act – it is a very serious question what does it mean.

Any classification of acts and products depends on the their character. Consider mentality (being psychical) and physicality of A and P. *Prima facie*, we have the following possibilities, listed in

- (3) (a) A – physical, P – physical;
 (b) A – physical, P – psychical;
 (c) A – psychical, P – physical;
 (d) A – psychical, P – psychical.

Illustrations for (3a) and (3d) are straightforward. The pairs $\langle \text{racing, race} \rangle$ and $\langle \text{jumping, jump} \rangle$ provide examples in which both members are physical, but the pairs $\langle \text{judge, judgement} \rangle$ and $\langle \text{think, thought} \rangle$ – in which both elements

are psychical. Twardowski did not consider (3b) and (3c), because it seems that they have no special importance for cognitive psychology – any analysis of APD just belongs to this sub-domain of general psychology, at least, when we deal not only with contents but also with acts (I remain this issue without a further discussion).

Yet (3a) and (3d) do not exhaust all cases, because:

We need to differentiate from among the physical actions and products a distinct species of PSYCHOPHYSICAL actions and products. A physical action is PSYCHOPHYSICAL if it accompanied by mental action that exerts some sort of influence on the course of the physical action and therewith on the resultant product; now, the product that originated in this way is also called PSYCHOPHYSICAL. To this category belong actions and products designated by the expressions “to scream/the scream”, “to sing/the song”, “to speak/the speech”, “to lie/the lie”, etc.”.

TWARDOWSKI 1912a: 109, 109

Twardowski points out instability of ordinary speech in naming actions and products, and a special attention ascribes to sentences. He maintains that the name “sentence” is used in a double role, once as denoting a mental product, for instance, judgment, but also as referring to sentences in the grammatical sense, that is, psychophysical item; a similar ambiguity occurs in the case of the word “assertion”, which can refer either to a psychic act or psychophysical.

The nature of actions is such that they persist a definite time, but the situation with products is different. Some, physical (including psychophysical) as well as psychical products, disappear when actions which create them come to the end. Jump or race persist as long as the creating action exists, thought or scream come to their end, when thinking and screaming finish (for stylistic reasons I uses nouns for expressing actions, to verbs). However, as Twardowski observes, we lost nothing, because predications on products are frequently different that that said on actions, for instance, we say that a proposition is not testable, and this attribution cannot be applied to the action of making proposition. In the case of pairs (i) <to draw, drawing>, (ii) to sculpt, sculpture> or (iii) <to write, writing>, to draw and drawing – are physical, to sculpt and to write – also physical, but sculptures and writings are psychophysical. Two last products are enduring as contrasted with jump, race or scream. Two important conclusions follow from these remarks. Firstly, there are no enduring psychic products (I neglect the possibility their coding by mechanical devices, for

instance phonographic), and, secondly, instable actions create enduring products. To sum up, we have the following matrix

- (4) (a) A – physical, P – physical and enduring;
 (b) A – physical, P – physical and unstable;
 (c) A psychophysical, P – psychophysical and enduring;
 (d) A psychophysical, P – psychophysical and unstable.

The diagram (4) modifies the figure (3) in such a way that (4c) and (4d) are now considered by Twardowski in such a way that related actions create mental products as well. Moreover, (4c) and (4d) are so conceived that they modify the related rubrics belonging to (3) in such a way that they also form mental products.

Twardowski considers cases falling under (4c) as particularly important. His general account is this:

A painting, a sculpture, etc. are psycho-physical products because they result from psychophysical activity, i.e. from that sort of physical activity which is accompanied by a mental function that affects the course of the physical activity, and thereby the products which results from it.

TWARDOWSKI 1912a: 117

In other words, enduring psychophysical products objectivise what is subjective, that is, the content of mental acts:

Enduring psychophysical products confer on non-enduring mental products, the semblance of endurance by being the enduring effects of the latter, and their enduring partial causes as well. Consequently, mental products are bearing the relation to enduring psychophysical products may be termed preserved products, and we can accordingly speak of the “preservation” of non-enduring products. This preservation is not restricted to mental products, but perhaps also applyt to non-enduring physical and psychophysical products. It will be always based on a relationship on an enduring product to a non enduring one, whereby the former, as an effect of the latter, becomes a partial cause which with conjunction of with other partial causes, will initiate the emergence of the same or a similar no-enduring products. [...] Enduring products do indeed exist independently of the actions that produce them insofar as they continue to exist even though those actions have ceased to exist.

TWARDOWSKI 1912a: 116, 127

Putting the last fragment otherwise (but it seems that in Twardowski's very spirit) and remembering the connection between Twardowski's considerations in his Habilitationwork as well as his later analyses performed in Twardowski 1912, we could say that enduring psychophysical products not only express something (this function perform all psychophysical products) but also preserve (objectivise) mental contents present in physical actions. As a result we have a generalization of the concept of act as well as its content, but on the other hand, it is not a generalization of the category of the object of an act. Anyway, it seems to be an interesting contribution to descriptive psychology, achieved by fairly elementary analytic tools.

The next Twardowski's analytic step consists in adopting the following view:

Psychophysical products that signify certain mental products are also called *SIGNS* of the latter, and the mental products themselves are termed the *MEANINGS* of the psychophysical products. Therefore, a meaning is any mental product whose relation to a psychophysical product is that being signified by the latter. Accordingly, we speak of the meaning of a scream, the meaning of a drawing, the meaning of a movement, the meaning of a blush, etc. And linguistic "expressions" are also psychophysical products in which certain mental products – thoughts, judgments, etc. – find their expression.

TWARDOWSKI 1912a: 122

According to Twardowski, just this significant connection or correlation between psychophysical product and a related action forms the base of the relation (mentioned above) holding between psychophysical product deciding that non-enduring mental product can become preserved in an enduring psychophysical item. Twardowski was fully aware that his theory of actions and products can be accused for psychologism. Some way out can be proposed, if we would maintain that meanings are non-enduring psychic items, that is, temporal subjective beings. Consequently, the idea of preservation as such is not sufficient for a refutation of psychologism. Twardowski argued that although particular mental states are individual, they there are similar and we can speak on the common (the only) meaning of signs. He used the concept of invariance introduced by Stumpf. On this occasion, he mentioned ideal meanings in the Husserl sense, but, as I already noted, Twardowski did not went this way of copying with psychologism. *Nota bene*, it seems that Kazimierz Ajdukiewicz developed Twardowski's ideas, when he employed the type of thought as meaning of sentences (see [Ajdukiewicz 1931]).

Logic provided a special problem for Twardowski from the point of view of psychologism. In order to solve it, he introduced the concept of an artefact:

Alongside “pseudo-products” which arise not owing to some action, but to some other fashion – there are products which do in fact come about as the result of some action, but in such a way that they simulate, or substitute for other products which originate in virtue of different actions. We can call them “artificial” or “surrogate” products. A footprint in clay may be made artificially, that is it can emerge not as a result of impressing the foot in clay, but in virtue of clay having been suitably molded by hand. [...] If not enduring products that have been preserved with the aid of enduring products may be termed as [...] petrefacts, then such a surrogate, artificial “products” may be given the name “artefact”.

TWARDOWSKI 1912a: 129

Logic has notoriously to do with artefacts. It does not investigate judgments as results of judging, but sentences (utterances) which have presented judgments (or presentations of judgments), independently whether they became actually performed or not. Formulas of a logical calculus (this is a contemporary language, not used by Twardowski) are artefacts substituting actual judgments. Even more – sentences expressing such presented judgments (the latter are meaning of the former) are also artefacts of real utterances. Twardowski concludes:

Preserved surrogate products of this sort present the moist extreme case of making mental products independent of the actions owing to which alone they can truly (actually) exist.

TWARDOWSKI 1912a: 131

This circumstance explains why logic is frequently seen as very remote from linguistic and mental practice.

It is still debatable (see opening quotation of [Ingarden 1938] and [Rechlewicz 2015; 393–408]) whether Twardowski overcame psychologism. Taking into account the contemporary stand of the controversy in question, any evaluation of Twardowski's view requires longer considerations, probably not finished by conclusive results. I allow myself for a three remarks. Firstly, a duality of a mental product and psychophysical product and accepting that the latter is expressed by the former introduces complications. Perhaps it would be simpler to maintain that psychic actions have contents, but not as their products but components (details depend on details of the theory

of minds). Secondly, Twardowski, although only indirectly, influenced Polish logicians, who argued that formalized languages are always rooted in natural (non-formal) ones (see 5.1 below). Thirdly, the return of empiricism or even psychologism in the contemporary philosophy of science, particularly, logic and mathematics, shows that Twardowski's ideas related to actions and products, can still have interesting cognitive inspirations.

5 Two Philosophical Applications of APD in the Lvov-Warsaw School

5.1 *The Status of the Humanities*

The fundamental controversy over the foundations of the humanities, influenced by Hegelianism and Neo-Kantianism in Germany became one of the most important problems in the philosophy of the 19th century. However, its various aspects go back, in particular to the Middle Ages (my remarks are very general and skip bibliographical data). Science, more precisely, so-called *artes liberales* (liberal arts, that is liberated from philosophy) were classified into two kinds, namely *trivium* (logic, grammar, rhetoric) and *quadrivium* (arithmetic, geometry, astronomy, music). The former group covered *humaniora*, but the latter – natural science. University studies started with the humanities and, then, students passed to science. This succession was associated with the conviction that *trivium* was easier than *quadrivium*. The term *ars* was Latin translation of Greek *techne* and referred to activities directed by rules. In particular, it has nothing to do with fine arts in the contemporary understanding – the situation changed in the 18th century, when more and more frequently the word “art” was directed to poetry, painting, dancing, etc.; at that time, special academies of fine arts were created in order to train artists. This terminological process resulted with the duality of understanding of the word *ars* and its counterparts in other languages. Accordingly, the term “science” was not used in a commonly accepted way. In the English circle, science is frequently reduced to natural (on nature plus mathematics) science, but “art” refers to *humaniora*, but German *Wissenschaft* denotes *humaniora* and *Naturwissenschaften* as belonging to the same integrity. Polish custom is similar to that occurring in German. Independently of linguistic practices, the view that the humanities and (natural science) have different properties considered from a methodological point of view, was commonly accepted. Additionally, this difference was associated with the evaluative view that the humanities are less developed than (natural) science, the results of former are more problematic than achievements of the latter, etc. Some authors derive from such observations radical conclusions that the humanities do not deserve to be called sciences (or sciences).

History was the first paradigm of the humanities. So-called *res gestae* (human actions) constituted (and still it is so) its subject-matter. It was history in a narrower sense. More generally, this field was understood as including also archaeology, linguistics, ethnography or the “science” of religion (*Religionwissenschaft*), that is, what excavations inform about as the traces of the past. In fact, linguistic was regarded as the history of language, ethnography – as the history of folk art, etc. Moreover, the history of art (in the aesthetic sense) was conceived as a general theoretical knowledge concerning fine arts – similarly, was regarded the relation between history and factual information accessible in other. With some simplification, one might say that the first methodological controversy (in the 19th century) was related to the difference between (natural) science and history. However, the postulate that history is basic for the humanities, became replaced by the requirement that the latter must realize the postulate of historicity – the historical parameter of phenomena investigated by the humanities has the fundamental significance for the successful research. This question was very intensively discussed in the Badenian Neo-Kantian school. Wilhelm Windelband divided sciences (as *Wissenschaften*) into *Naturwissenschaften* and *Kulturwissenschaften*. This classification was formed via depicting the subject-matter both fields. Heinrich Rickert supplemented Windelband's account by the distinction of ideographical (idiographische) and nomothetical (nomothetische) sciences (*Wissenschaften*). Whereas the former describe individual facts, the latter formulate general laws. This idea immediately led to the question whether idiographic disciplines can achieve general principles.

Wilhelm Dilthey used their name *Geisteswissenschaften* (literally, sciences on the ghost), but this term referred to cultural products – the ghost manifests itself via culture. The next methodological problem was identified as the question whether it is possible to assert general laws on the world of culture. According to Dilthey, influenced by Hegel, investigations in *humaniora* require the operation of understanding (*Verstehen*) consisting in feeling (*Einführung*) into the apprehended subject. This account resulted with the question whether the understanding attitude can be deprived of valuation. August Comte, motivated by positivism, initiated another important tradition, namely projected sociology, the general theory of society and its structure. Comte thought about sociology as a social general science (note that, the meaning term *science* in French combines German meaning of *Wissenschaft* and English meaning of science; I skip the methodological discussions on the humanities) in Great Britain, although views of John Stuart Mill should not be ignored) being the foundation of particular social fields, for instance, history and related disciplines, but, and this point was of the a particular importance, respecting typical

methodological requirements (explanatory power, predictive force) attributed to natural (science). The confrontation of Comte's ideas with discussions present in German philosophy resulted not only to the question concerning traditional *humaniora* to (natural) science but also to the former to sociology and the latter to fields directed to nature. A special problem consisted a possibility of value-free sociological investigations.

Brentano and his students also considered the problem in question. It is not surprising that, due to the role fundamental significance of psychology for philosophy, particularly, in its descriptive version, the issue of psychologism was absolutely central for the philosophy of the humanities in Brentano's school. Twardowski immediately observed (see [Twardowski 1912a], [Twardowski 1912c], [Twardowski 1912d]) that APD can be effectively employed in the analysis of the humanities – this application was almost immediately suggested by Dilthey's idea of the *Geisteswissenschaften*. Twardowski was aware of several methodological issues suggested (or even forced) by discussion in Germany and France. He maintained that neither the characterization of the humanities as something idiographic nor as investigating human products does not suffice for a full methodological analysis of this kind of science. However, he considered the latter problem as more important and argued that if the humanities investigate human (mental) products, Dilthey's view is not proper and requires a modification. He proposed the following account:

Some of the objects of the humanities are to be found among the products of the human mind. But we also find them among those products which may be termed PSYCHOPHYSICAL products, to distinguish them from products of the human mind, that is from MENTAL products.

TWARDOWSKI 1912C: 135

Briefly speaking and returning to former terminology, the humanities (I skip the qualification “also”) investigate endurable psychophysical products. This feature equips objects being the subject of the *humaniora* with the status of being enduring items and makes them at least partially independent of psychology. Moreover, psychophysical products can be viewed as objectivised mental contents – this was always considered as essential for the humanities. Twardowski in his analysis of the humanities entered neither the question of their historicity nor the issue of valuation. His main task was to outline the border (even quite vague) between psychology and the humanities.

Ajdukiewicz (see [Ajdukiewicz 1938]) applied APD to general classification of sciences (as *Wissenschaften*). The related criterion is related to the ultimate

character of premises in a given scientific field. Ajdukiewicz distinguished formal sciences (logic, mathematics) – *a priori* propositions serve as the ultimate premises; empirical sciences – observation assertions are ultimate premises, and the humanities – propositions based on understanding of utterances are ultimate premises. In the domain of the humanities, we have nomothetic sciences, for instance, psychology, idiographic fields, for instance, history, and axiology, that is, involved into valuation. Ajdukiewicz preserved Twardowski's account of the humanities, although he did not, at least directly, appeal to the concept of psychophysical product. On the other hand, Ajdukiewicz explicitly applied Rickert's distinction of nomothetic and idiographic sciences, but, contrary to the latter, admitted the possibility of law-making humanities. In Twardowski's this question is not quite transparent, probably due to the status of descriptive psychology. Whereas the Brentanists considered (or at least could do so) genetic psychology as nomothetic, the methodological status of descriptive one rather fits nomothetic standards. Nota bene, the Neo-Kantians also had no common approach to psychology as a science, although most of them accepted the paradigm of empirical psychological research as proposed by Wilhelm Wundt. Returning to Ajdukiewicz's scheme, it is perhaps interesting that empirical sciences are not the same as he humanities – the former are not identical with the latter, because, for instance, sociology is for instance empirical and nomothetic.

In Ajdukiewicz, methodological problems of the humanities appear very explicitly. The criterion of dividing sciences into empirical and the humanities according to the character of ultimate premises, immediately leads to the issue of the scope of the adjective "empirical". It seems that Ajdukiewicz, probably influenced by logical empiricism, considered empiricism in a narrow sense and did not regard utterances based on understanding as empirical. However, this view provokes the question concerning the status of the operation *Verstehen*. Should it be conceived in a Diltheyan manner or somehow otherwise? It seems that Twardowski himself would opt for a wider understanding of the property of being empirical. In his case, the issue is associated with axiology as well. Twardowski considered ethics and aesthetics (he did not devoted wider remarks about the latter) as sciences (see Twardowski 1994), if they satisfy some additional methodological constraints, in particular, are correctly justified. One can assume that Ajdukiewicz distinguished axiological sciences under Twardowski's influence in order to do not consider it as irrational. Returning to the place of psychology in Ajdukiewicz's scheme, it can be surprising that it belongs to nomothetic humanities contrary to sociology which is empirical and formulates genuine laws concerning various social phenomena.

Tadeusz Czeżowski was particularly close to Twardowski's ideas and thereby to Brentanism. He devoted a special contribution (see [Czeżowski 1946]) to the humanities. He based his solution entirely on APD; in particular, he considered mental content as products of psychical acts, that is, followed Twardowski 1894. Czeżowski explicitly asserted that research in the humanities requires taking values into account. They are not properties, but modes of being (*modi entis*). The humanities investigates (pace Twardowski) enduring psychophysical products occurring together with values as ideal meanings. The variety of such products can be identified with the world of culture. The humanities are idiographic and apply genetic explanation. For this reason, they deserve to be called empirical, but Czeżowski understood experience more widely than Ajdukiewicz – in particular, the former considered ethics as fairly empirical (see [Czeżowski 1949]; see [Łukasiewicz 2007] for a detailed analysis of Czeżowski's philosophical views).

One should note that APD was not accepted as the foundation of the humanities by all Twardowski's students. It particularly concerns Tadeusz Kotarbiński (see [Kotarbiński 1929: chapter IV]). Kotarbiński's reism is not inconsistent with APD. Kotarbiński applied the language of products in his analysis of various problems, for instance preferred the context "X truly thinks that A" over the phrase "A is true", because the latter contains the apparent name "truth". For this reason, the latter formulation is abbreviative-replacing. A psychical action is simply that what is doing a definite human (or other) being. If products of such actions are spatio-temporal corporeal things, the reist has no reason in order to complain them from his (her) ontological (reistic) point of view, expressed by the view that everything is a thing. On the other hand, the category of psycho-physical products appears as ontologically dubious, because saying that a mental content is objectivised in a thing, even endured, does not belong to reistic semantics. It is even more obvious in the case of Czeżowski's assertion that the humanities investigate psycho-physical products together with values as ideal meanings. Kotarbiński did even not try to reify (that is convert to a perfect reistic form) such utterances – he represented another approach to the humanities. In general, these *humaniora* contain assertions on things. They have usually historical character – Kotarbiński considered the problem of theoreticity of *humaniora* as open.

5.2 *Knowledge, Science and Language*

Twardowski (see [Twardowski 1924–1925]) distinguished knowledge (understood as a product; entering into the state of knowing something). This distinction is apparently trivial, but it possesses a deeper sense. According to Ajdukiewicz:

The theory of knowledge, which is also called epistemology (from the Greek *episteme*, synonymous with the English 'knowledge') or gnoseology (from the Greek *gnosis*, synonymous with the English word 'cognition') is – as the name shows – the science of cognition. But – what is cognition? By cognition we mean both cognitive acts and cognitive results. Cognitive acts are certain mental activities such as perception, remembering, judging, and, further, such reasoning, reflecting, inferring and so on. Scientific assertions can serve as an example of cognitive results. are not mental activities, so they are not to be included among cognitive acts. The law of gravity or the Pythagorean theorem are not mental phenomena of any kind but are the meaning of the statements in which these laws are formulated. [...]. Does the theory of knowledge, which we said was the science of cognition, concern itself with cognitive acts or cognitive results? If we answer this question by examining what has actually taken place in the history of the theory of knowledge, we have to reply that both cognitive acts and cognitive results have been the subject of investigations. [...]. If the theory of knowledge occupies itself with cognitive acts, that is, with certain mental phenomena, it is then concerned with the same things as psychology in one of its parts.

AJDUKIEWICZ 1949: 7

The above fragment points out the problem of the mutual relation between psychology and epistemology. Ajdukiewicz solves this question in such a way, that whereas psychology limits itself to a description of cognitive acts as factual individual occurrences, the theory of knowledge evaluates them and cognitive products (results) from the point of view of correctness, truth, falsity, etc. Thus, we encounter here a similar issue as in the case of the relation of logic to psychology – the remarks made at the end of the first part of the present paper on psychologism.

It is customary in Poland to distinct pragmatic and apragmatic methodology, patterned on the distinction between methodology and metascience (see Ajdukiewicz 1948). The former deals with science as an activity, but scientific products are the subject of the latter – metamathematics is its paradigmatic example. Ajdukiewicz fascinated by successes of metamathematical investigation, believed that metascience will become the general formal methodology of science as such. According to this idea, methodology is oriented to analyse scientific activities by using standards of justification or credibility of experiments. One could say that the distinction of methodology and metascience is similar, at least to some extent, to that of cognitive activity and cognitive products. Yet science provides a very concrete illustration of what are cognitive

results and how they can be analysed. Later, Ajdukiewicz resigned from the view that metascience (in his earlier understanding) hypothetical-deductive systems (axioms are asserted conditionally – other theorems relatively to axioms) and could be a model for the entire methodology. The distinction of (see [Ajdukiewicz 1960a]) and assertive-deductive (axioms are asserted unconditionally – other theorems relatively to this cognitive situation) is a manifestation of the change in question and illustrates Ajdukiewicz's new approach. Although the book *Pragmatic Logic* [Ajdukiewicz 1974] was not finished by the author, it formulated a general program of how logic should be executed (the adjective “pragmatic” is a counterpart of the word “methodological” in the sense of [Ajdukiewicz 1948]).

Alfred Tarski observes:

In the course of our investigations we have repeatedly encountered [...] impossibility of grasping the simultaneous dependence between objects which belong to infinitely many semantical categories [...]. I do not believe that these phenomena can be viewed as a symptom of the formal incompleteness of the actually existing languages – their cause sought rather in the languages itself; language, which is a product of human activity, necessarily possesses a ‘finitistic’ character, and cannot serve as an adequate tool for the investigations of facts, or the construction of concepts, of an eminently ‘infinite’ character.

TARSKI 1933: 253, footnote 1

Although APD occurs in this fragment indirectly (or partially), but the issue is very serious for the philosophy of mathematics. If mathematics is a product dressed in a linguistic form, produced by cognitive actions of a mathematical subject, the question appears of how it is possible to statements about infinity with the finitary nature of languages. Polish logicians, particularly Stanisław Leśniewski, were aware this situation – he constructed his logical systems in such a way that finite syntactic bases could be extended without loss of syntactic character. Another Tarski's important remarks is this:

It remains perhaps to add that we are not interested here in ‘formal’ languages and sciences in one special sense of the word ‘formal’, namely sciences and to the signs and expressions of which no material sense is attached. For such sciences the problem here discussed [that is, the problem of truth – J. W.] has no relevance, it is not meaningful. We shall always ascribe quite concrete and for us, intelligible meaning to the signs which occur in the language we shall consider [...]; The sentences which

we call sentences still remain sentences after the things which occur in them have been translated into colloquial language.

TARSKI 1933: 166–167

APD does not appear in the last quotation even implicitly. On the other hand, it can be employed in a way. Correct definition semantic concepts, for instance, the notion of truth, can be formulated exclusively for formalized (not – formal!) languages. The meaning of the adjective “formalized” refers to a result of the process (action) of formalizing. According to Tarski, expression of ordinary language possess meanings, which is explicable in this language. One can say that formalization made via colloquial language, possibly enriched by adding technical, e. g. mathematical and logical, terms, for instance, guided by the task of avoiding antinomies, equips signs of a formalized language into meaning which can be communicated to other cognitive subjects. The process of formalization cannot change the state of affairs in question. To take a simple example, we can explain the sense of conjunction in propositional calculus using the appropriate truth-table or even axiomatically, but the ordinary connective “and” remains the point of reference. Even if we introduce a new term, for instance, “the dual consequence” by suitable axioms or definitions, we, explicitly or implicitly, invoke the usual consequence operation. The noted correction of language does not change the essence of issue. Using Twardowski’s terminology, ordinary language is a product, which objectivises meanings – due to this fact, we understand words and their combinations occurring in formalized languages.

6 Final Remarks

My former considerations tried to show the genesis, content and some philosophical applications of APD introduced by Twardowski. This construct was original and successful. Its importance in the history of Polish philosophy was multiple and fruitful. I would to point out three additional aspects. Firstly, philosophers working in English, have a problem with interpreting the noun “knowledge”. It can be applied to knowledge (*episteme*) or cognition (knowing) – this situation results with some conceptual troubles. Polish is more effective in this respect due to having two words (lexically different), namely *wiedza* (knowledge) and *poznanie* (cognition). In fact, Twardowski observed that we should also distinguish *poznanie* (something completed) and *poznawanie* (something initiated) – *wiedzieć* (to know) consists in entering into the mental state of *znania* (knowing). It seems that Polish is particularly

suitable as a natural linguistic environment for analysis of knowledge and cognition by employing APD. English terminology can eventually profit from employing “knowledge” and “cognition”, but etymology of both words does not suggest, contrary to Polish, at least as used by Twardowski, a similarity in their meanings. These terminological subtleties throw some light at the relation between epistemology and cognitive science, but this issue requires further remarks. Secondly, the discussion related to the quotations from Tarski (see above) shows an important point in the philosophy of logic. It is so that formalized languages (omitting even purely formal) are not self-sufficient – their limitations consist in the fact that they are embedded (it is a metaphor) in the ordinary (colloquial) language. Hence, we have tie priority of what is informal with respect to what is formal. Finally, APD throws an interesting light for the relation between the Lvov-Warsaw School to naturalism and anti-naturalism. Independently of controversial issue of the relation of this school to positivism (see [Woleński 1994]), both these philosophical groups were closes in many respect. However, this assessment does not concern naturalism, a very typical components of positivism. Kotarbiński, accepting naturalism, was an exception among Twardowski’s students, but the majority of them shared anti-naturalism in the humanities and axiology. APD was something crucial in this respect, because the reduction of psychophysical products with objectivised values to physical objects must appear as very dubious. It is an open question, whether APD is coherent with naturalism less radical than physicalism (see [Woleński 2016] for a discussion this issue).

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PART 2

Anti-Psychologism



The Influence of Twardowski's Distinction between Actions and Products on Ingarden's Act- Based Conception of Meaning

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Abstract

There are mainly two traditional conceptions of propositions in analytic philosophy: the theory of structured propositions, first elaborated by Russell, and more recently revived by Soames and Salmon, on the one hand, and the theory of propositions as sets of possible worlds, on the other hand. In these two conceptions, propositions are conceived as mind-independent entities that are the primary bearers of truth, the meanings of sentences and the objects of propositional attitudes. Their mind-independence is fundamental since it guarantees that they are intersubjectively sharable. Each of these views faces well-known problems that call for a new theory of propositions. Recently, several “act-based views” of propositions have been proposed that are purportedly immune to these problems. In this paper, I will first mention some of the problems faced by the act-based view developed by Moltmann and inspired by the work of Twardowski. Then, I will suggest a new act-based view of propositions that relies on Ingarden's theory of meaning.

Keywords

Act-based conception of meaning – intentionality – intersubjectivity – meaning – proposition – Roman Ingarden – Friederike Moltmann – Bertrand Russell – Kazimierz Twardowski

1 The Russellian Act-Based View of Propositions

How can we explain the unity that connects the elements of a proposition together, and therefore the fact that this proposition is true (or false) and that it represents the world in a certain way? In his early conception of propositions as structured entities, Russell maintained that if I assert that John is nice, the

propositional content of my assertion is the proposition that John is nice. This proposition contains John and niceness. Yet the proposition that John is nice is not just the mereological sum of John and the property of being nice. A proposition represents the world in a certain way and if it represents it accurately it is a true proposition. What connects John and niceness into a proposition that claims something about the world that is true (or false)? What makes it representational and a bearer of truth? Traditional theories of propositions have difficulties answering these questions.

Recently, as a result of this “problem of the unity of the proposition”,¹ several authors have proposed a new account of propositions based on cognitive acts (see [Soames 2010], [Hanks 2011], [Moltmann 2014]). Scott Soames, in particular, claimed that predication, as a cognitive act, is a relation between a cognitive agent, properties and objects (see [Soames 2010], but also [Jubien 2001], [Moltmann 2013] and [Hanks 2015]). This view is a revival of Russell’s later view of propositions, known as the “multiple relation theory of the proposition” (see chapter 12 of [Russell 1912]). In this theory, it is the acts of belief, assertion, and so on, performed by cognitive agents that unite the elements of the proposition together and give it its “representational import”. According to Soames, the key insight of the Russellian theory is that “the intentionality of all truth bearers is explained in terms of the intentionality of cognitive activities of agents, rather than the other way around” [Soames: 189]. It is this intention that grounds the representational force of propositions and it is because propositions represent the world as being one way or another that they are bearers of truth. In other words, when an agent predicates a property of an object, his act of predication is what connects the property and the object into a propositional content and ensures its truth-directedness as well as is representational character.

As is well known, Russell introduced his multiple relation theory to dispense with propositions. Precisely for this reason, this theory faces several difficulties (see [Soames 2014b: 444–450]). In order to solve them, Soames suggests keeping proposition and to assimilate them to “types of actions that we perform in thought and speech” [Hanks 2017: 236]. This identification of propositions to types of cognitive acts, and not to their token, preserves the objectivity of propositions.

Conceiving propositional contents as types of cognitive acts has an advantage over the traditional view of propositions as abstract entities: being

¹ The conception of propositions as sets of possible worlds suffers from the same problems. See [Soames 2014a].

mind-dependent entities, they do not give rise to the well-known problem, faced by the Fregean conception of propositions as platonic entities belonging to the so-called third realm, of how these abstract propositions could be grasped.

If Soames' act-based view of propositions has its merits, it does not seem to be correct: cognitive acts are not suited to play the role of propositional contents. First of all, they do not seem to have the representational properties needed to play the role of propositions. As Soames, Peter Hanks thinks nevertheless that mental acts must be the primary bearers of truth. He suggests that the fact that truth and falsity are properties of acts can be shown by the following examples [Hanks 2017: 240]:

- (1) She truly judged that *a* is *F*.
- (2) She falsely stated that *b* is *G*.

The adverbs "truly" and "falsely" are here "verbs modifiers that express properties of actions". However, contrary to propositions, cognitive acts do not seem to have truth-conditions [Moltmann 2017: 259]. They can be successful or unsuccessful, but neither true nor false. Hanks unconvincingly answers that, for instance, "to say that she *rightly* or *correctly* or *accurately* judged that *a* is *F* is just to evaluate her act of judging as true". Furthermore, as noted by Moltmann [2017: 259], German, French and Italian have adverbial counterparts of *wahr*, *vrai* or *vero*, but these do not function as the English *truly* functions in the above example.

2 The Twardowskian Act-Based View of Propositions

A second variety of the act-based conception of propositional content is defended by Friederike Moltmann herself. Her conception of propositions is directly borrowed from Twardowski's paper "On Actions and Products" [Twardowski 1911]. In this paper, the founder of the Lvov-Warsaw School developed an interesting distinction between what he called "actions" (*czynności*) and "products" (*wytwory*). This is, for instance, the difference between the action of jumping and the jump or between the act of judging and the judgement as a product of this action. Twardowski was not the first to make this distinction, but he is certainly the one who investigated it more deeply and who applied it more fruitfully to philosophical problems.

Twardowski distinguished what he called "physical" actions and products, such as the walking and the walk, from "psychological" actions and products, such as the thinking and the thought. There is also an intermediary category of "psychophysical" actions and products, such as the speaking and the speech.

Psychophysical actions and products must be accompanied by a mental action that influences the course of the physical action, and thus the product that is created by this action [Twardowski 1924: 84]. According to Twardowski, linguistic expressions are psychophysical products expressing mental products that are their meanings. For instance, a statement is the psychophysical product of an act of stating and its meaning is the judgement produced by the act of judging accompanying the act of stating. As Moltmann stresses it, according to this Twardowskian view, propositions seem to be products of cognitive acts, and not acts. They are cognitive entities that depend for their existence on cognitive agents. But propositions cannot just be judgements, i.e. products of cognitive acts of judging, because they would then be dependent on the mind of particular agents, and would consequently not be objective entities. Yet Twardowski developed his theory of actions and products, first of all, to answer the accusations of psychologism made against him by Husserl and Łukasiewicz (see [Miskiewicz 2017: 166–169]). He therefore introduced a second kind of propositional meaning, next to judgements as products. This second kind of meaning is the result of an act of abstraction performed on similar mental products. It is a type of product of mental acts. Meaning in this sense is thus what is “invariant”² in the similar products created by different psychophysical acts.

Moltmann explicitly adopts Twardowski’s conception [Moltman 2017: 255], because she thinks that it is devoid of the flaws that affect the conception of propositional contents as types of cognitive acts defended by Soames and his friends. In particular, in this conception, cognitive acts are not representational and bearers of truth, but are, we could say, what gives to their products the capacity to be representational and bearers of truth. But to correctly formulate this idea, it is first necessary to rightly identify the products of cognitive acts, what Twardowski did not do and that Moltmann does not seem to have noticed. She claims that the main difference between Twardowski’s view about propositional contents and Soames’ and Hanks’ view is that for Twardowski propositions are types of products of cognitive acts and for Soames and Hanks they are types of cognitive acts. Furthermore, she assimilates Soames’ and Hanks’ view to the Husserlian conception of propositions, such as found in the *Logical Investigations*. This is clearly wrong, because for Husserl propositions are not types of judging acts, but types of contents of such acts, what he calls the “matter” of these cognitive acts (see [Husserl 1900–1901b]; [Husserl 1900–1901a: v, §20]). This may seem a minor detail but, in fact, Moltmann neglected that this

² See [Stumpf 1906: 33, n.1].

position was also the position of Twardowski. It is clear that the 1911 distinction between actions and products was a clarification of the distinction between the “content” and the “object” of a mental act that Twardowski famously introduced in *On the Content and the Object of Presentation* [Twardowski 1894]. The notion of content that can be found in this text is ambiguous. On the one hand, content is conceived as that part of a mental act that directs it toward its objects and, on the other hand, content seems to be an ideal way of considering the object of the act, something akin to Frege's *Sinn*. In the first sense, content is something mental that exists really, i.e. in the same way as the act whose it is a part of. In the second sense, content is something existing ideally. Husserl separated these two kinds of content: the real content which is a part of the mental act is an instantiation of an ideal species, which Husserl identified to a meaning. Meaning for him is an ideal unity which is instantiated in multiple singular “acts of meaning”. With respect to sentences, we could think that these “ideal species” have to be understood as propositions in the Fregean sense. However it must be stressed that Husserl clearly rejected the idea that ideal species exist in a separate world (see [Husserl 1900–1900b: I, §31, 230], [Husserl 1900–1900a: 101]) and the relation between cognitive agents and ideal meanings has nothing to do with what Frege called “grasping”. It is a relation of instantiation of the ideal meanings in the cognitive acts of agents, a relation between a type and a token.

In his 1911 paper, Twardowski introduced a similar distinction. The content of a judging act, conceived as something real, is the product of that act of judging, i.e. a judgement. This is clearly stated in a passage of §24 of the German version of “Actions and Products”, which was not present in the original Polish version of the text. The content as something ideal is then what is obtained through abstraction on similar contents. The relation between the two contents, and thus the two meanings, is then a relation type-token.

Contrary to what Moltmann thinks, the main difference between Twardowski and Husserl does not lie in their conceptions of the instances of propositions (acts or products), but in their theories of abstraction. Husserl considered that we can intend ideal meanings as such in an act of “ideating abstraction” (*Wesensschau*), which is a kind of “categorical intuition”. We have to intend meanings because they are independent of thought and language. For Husserl, ideal meanings come before the acts that instantiate them in the order of explanation. Twardowski's conception of abstraction is more traditional. For him, two contents produced at different instants by the same agent relatively to the same linguistic expression are numerically distinct but can be qualitatively similar. We can therefore abstract away from what makes these contents differ and consider only the constituents that they share in order to

produce the objective meaning of the linguistic expression. Moltmann agrees with this view and claims that two products are instances of the same meaning if they are “exactly similar” [Moltmann 2017: 261]. Neither Twardowski nor Moltmann further elaborates on this similarity relation between products, but it is not clear how two products can be exactly similar. The main problem of their view, as it stands, is that the abstraction of similar features of products is a kind of selective attention (see [Twardowski 1924: 84–85] and [Schaar 2016: 108]). Husserl rejected such a view (see the third chapter of the first *Logical Investigation* ([1901–1901a], [1900–1991b]), because the result of an act of abstraction conceived as a selective attention is another product of a mental act, a mind-dependent entity that cannot play the role of an objective meaning.

Twardowski did not really explain the ontological status or mode of being of meanings. Moltmann claims, for her part, that propositions as mental products belong to “a distinct ontological category” [Moltmann 2014: 2]. On the one hand, meanings share with (ideal) propositions the fact that they are bearers of truth and, on the other hand, “they are as concrete as the corresponding mental or illocutionary event, with which they may share their spatio-temporal location” [Moltmann 2014: 2]. But this explanation is not totally convincing. Moltmann further claims [2014: 3] that the action-product distinction is “the general distinction that obtains between certain types of actions and the abstract or physically realized *artifacts* that the actions create”. I do agree with her on this point. She refers to Thomasson’s work on artifacts [1999] but I think that she should also have examined Roman Ingarden’s work, because this student of Twardowski is probably the philosopher who analysed artifacts the most profoundly and Thomasson’s work relies heavily on Ingarden’s analyses.

The second reason to study Ingarden’s work is that it offers us a criticism of Twardowski’s, and thus of Moltmann’s, view concerning propositions. She considers that the advantage of the Twardowskian conception of propositions is that it does not give rise to the problem of how propositions have truth-conditions, because truth and presentations are “tied to the intentionality of agents, and thus to their cognitive products” [Moltmann 2017: 259]. There is truth in this claim, but it must be made more precise. If propositional meanings are identified, as Twardowski did, to the mental contents of judging acts I do not think that propositional contents can have truth-conditions, because, as stressed by Ingarden ([Ingarden 1931a: 107–108, n. 2], [Ingarden 1931b: 106, n. 61]), mental contents are not themselves intentional. They are what gives mental acts their directedness toward something – as Husserl says, it is the feature of a mental act that determines the object it grasps and as what it grasps it ([Husserl 1900–1901a: v, 415], [Husserl 1900–1901b: 121]), they are not

themselves directed toward something. Husserl's own conception of propositional meaning seems to be immune to this criticism: for him, the contents of judging acts are not strictly speaking propositions, they are what instantiate (ideal) propositions and it is because a judgemental content instantiates a certain proposition that it is directed toward something.

The third reason to study Ingarden's work is that it offers us a third interesting way in the act-based conceptions of propositional content, a way that is different from the one elaborated, on the one hand, by Soames and company and, on the other hand, by Moltmann and Twardowski. According to this third act-based conception of propositional content, it is not the content of an act which is representational and a bearer of truth, but what is produced by an act through this content, a product that is distinct from this act and its content. Ingarden's conception of propositional content is only a part of his theory of meaning. In what follows I will explain the main aspects of his general theory of meaning,³ in order to suggest an original act-based view of propositional meaning.

3 The Ingardenian Act-Based View of Propositions

Ingarden claims that he tries "to work out a conception of meaning analogous to Husserl's" [Ingarden 1937: 25], but in another place he explicitly connects his theory of meaning with the one developed by Twardowski ([Ingarden 1931a: 107–108, n. 2], [Ingarden 1931b: 106, n. 61]). In a nutshell, his conception of meaning is Husserlian because he considers that meaning is "something objective which [...] remains identical in its core, however it is used, and is thus transcendent to all mental experiences" [Ingarden 1937: 25], and it is Twardowskian⁴ because Ingarden considers meaning as something that is "creatively constituted" or "reconstituted" in a mental act", i.e. a "product [*Gebilde*] of subjective operations" ([Ingarden 1931a: 107–108, n. 2], [Ingarden 1931b, 106, n. 61]). Ingarden tries to navigate here between Scylla and Charybdis: between a psychologistic position that conceives meaning as the content of a mental act, that is as something purely real, and an "idealistic" ([Ingarden 1931a: 96], [Ingarden 1931b: 95]) position that conceives meaning as something ideal completely independent from our mental life.

³ I explain Ingarden's theory of meaning more in detail in [Richard 2021].

⁴ The influence of Twardowski on Ingarden is explained in [Miskiewicz 2017].

I will first explain why meaning cannot be something purely ideal nor purely real. First Ingarden raises doubts against the Husserlian claim that meanings are some sorts of “ideal species”. This view is problematic, according to Ingarden, because it implies the “timelessness” of meaning, and thus its “changelessness” (*Unzeitlichkeit*) ([Ingarden 1931a: 96], [Ingarden 1931b: 96]). This makes it impossible to understand some fundamental characteristics of meaning, and first of all the fact that the meaning of a word can change depending on its function in the sentence of which it is a part of. Let me consider the following example:

- 1) The consul is an influential person in the Roman Republic.
- 2) The consul, who was murdered, had crossed the Rubicon before.

Ingarden thinks that the meaning of every word contains a “directional factor” (*intentionaler Richtungsfaktor*) (a) and that this factor changes in the occurrences of the word “consul” in the sentences (1) and (2). In fact Ingarden thinks that we must distinguish in the meaning of every word four supplementary aspects:

- b) the material content;
- c) the formal content;
- d) the existential characterisation;
- e) eventually its existential position.

I will illustrate these aspects of meaning with the word “table” considered in isolation. This word refers, through its directional factor, to an object, i.e. a table. The material content of the word determines this object with respect to its “qualitative” constitution, for instance the fact that it is a piece of furniture made out of a plane surface used to support objects. The formal content says that this object is a thing, and not a property or an event. The existential characterisation indicates the mode of being of the object, for instance the fact that it exists really, and not ideally nor purely intentionally. The existential position posits the object in a certain reality, for instance in the physical reality and not in the fictional one.

This being said, we can now return to our two sentences. For Ingarden, the orientating factor that is a part of the meaning of the word “consul” is not the same in both sentences. In the first one, this factor is undetermined and in the second one it is directed toward Julius Caesar. Facing such a change, Husserl would say that we moved between the two sentences from a meaning to another one. In each sentence, it is another ideal meaning that is instantiated in the content of our meaning acts. Ingarden cannot accept such an explanation. First, it makes it impossible to understand the idea that the author of a text “creates” the “expressions” that occurs in it,

an expression being here understood as the unity of a mental phenomenon and a meaning, and not simply as a concrete sequence of words (see [Ingarden 1931a: 100], [Ingarden 1931b: 99]). Second, the Husserlian conception of meaning as an ideal species implies a “monstrous proliferation” of meanings ([Ingarden 1931a: 99], [Ingarden 1931b: 98]). For Ingarden, a word has only one meaning, but this meaning can undergo changes. There is obviously some stability in the meaning of a word, since we can use the same expression to express an identical meaning in different situations. However meaning cannot be completely static, since it is not always the same – it can undergo a change “according to the context in which it appears” [Ingarden 1937: 32]. It is clearly what happens in the passage from the sentence (1) to the sentence (2) above. In order to underline this “contextual” dependency in the grasping of the meaning of a word, Ingarden speaks of a “quasi-static unity” [Ingarden 1937: 28]. Words rarely appears in isolation, if not in the dictionary, but they are then most of the time polysemous. Words are tied to other words that are pronounced by speakers at a certain time, in a certain place and in different sentences. It is the context that allows us to identify the correct meaning of a word [Ingarden 1937: 28]. It is thanks to the uttering context that the person who perceives a word can disambiguate its meaning, grasp its specific sense.

If Ingarden rejects the Husserlian conception of meanings as ideal species, he does not accept the psychologistic conception of meanings either. On this last point, he considers the Husserlian critic of psychologism as “devastating”. Husserl would have overcome once and for all the view according to which meanings are mental entities. In the psychologistic conception, meaning becomes something private, and thus incommunicable. This is particularly clear when meaning is assimilated, as did Twardowski in [1894], to a mental content. Mutual understanding is then a game of chance: if my interlocutor wants to understand what I mean when I use a word, he must guess the content of the mental act that accompanies my uttering of this word. If this was really the case, understanding would be a “miracle”. Ingarden rather thinks that an expression, i.e. a meaningful word or a sequence of meaningful words, is an “intersubjective entity”, an entity whose meaning is accessible to different individuals. It is not something “private” [Ingarden 1937: 29]. This implies in particular that meaning cannot be a “real part” of a mental act [Ingarden 1937: 26].

Meaning being neither an ideal object, nor a mental phenomenon [Ingarden 1937: 24–25], what can it be? Ingarden's own conception of meaning is a kind of synthesis between Husserl's and Twardowski's conceptions. It is Husserlian

because, for Ingarden, we are the ones who “confer” (*verliehen*) meanings “on” words [Ingarden 1937: 25] through meaning acts, and because to mean something that can be understood by different people the instantiation of some idealities must take place.

From Twardowski, Ingarden takes up the idea that meaning is “produced” by subjective operations. Meaning is thus a mind-dependent entity. From an ontological point of view, it is what Ingarden calls a “purely intentional object” (see [Ingarden 1931a: 101–102], [Ingarden 1931b: 101], and [Ingarden 1931a: 375], [Ingarden 1931b: 361]). Its being and origin are in this sense “relative”. More precisely, meaning exists “heteronomously”, i.e. it does not have its “existential foundation” (*Seinsfundament*) within itself [Ingarden 1947b: 79], [Ingarden 1947a: 109]. So Ingarden specifies the mode of being of mental artifact, that was left unexplained by Twardowski. If Ingarden accepts the Twardowskian idea that the meaning of an expression is something created, it must be said that he also modifies it to a considerable extent. According to him, Twardowski’s theory of meaning reduces meaning to a pure product of subjective meanings ([Ingarden 1931a: 107–108, n. 2], [Ingarden 1931b: 106, n. 61]. But Ingarden claims that if it is true that meanings are partly grounded in subjective operations, they are also grounded in some idealities.

According to Twardowski, mental products are “non-enduring” products [Twardowski 1911: 119], “products that exist only as long as the activity that yields them”. Such products cannot therefore exist in time by themselves. Contrary to real and ideal objects, they cannot resist going out of being by themselves, they lack what Ingarden calls “existential inertia” (*Trägheit des Seins*) ([Ingarden 1947b: 113], [Ingarden 1947a: 145]). Meaning being a mental product, it must be non-enduring and thus needs some other entity to sustain it in its being. Ingarden claims that a meaning exists only as long as the act that created it. Twardowski has, however, stressed in his 1911 paper the possibility to somewhat fix non-enduring mental products (see Twardowski [1911: §34, 124–125] in other enduring products, to confer them “the semblance of endurance”. For instance, a drawing is an enduring psychophysical product that partially causes the emergence of a certain non-enduring mental product in the person who watches this painting, and it will cause such an emergence each time someone watches the painting. A non-enduring mental image can endure in this way thanks to the painting expressing it. In the same way, these mental products that are meanings can be made enduring thanks to written words and sentences that express them. Therefore the meaning of a word only “exists potentially” in that word [Twardowski 1911: §34, 125]. Ingarden clearly borrows this idea from Twardowski, without, to my knowledge, mentioning

it.⁵ We must intend a word as an expression for it to “actualise” its meaning and to refer to some entity. When an author writes down a word, he confers a meaning on it, which meaning refers to an object. When the word is read, this original meaning intention is reactivated. In this situation the meaning intention is not direct, but “derived” (*abgeleitet*) [Ingarden 1937: 25]. It is only when we carry out this actualisation of the derived intentionality of the meaning associated with a word that we understand what it means.

The phenomenon of derived intentionality makes it clear that meaning is not a part of a mental act but a “unitary whole”, a “self-enclosed unit of meaning” (*abgeschlossene Sinneinheit*) ([Ingarden 1931a: 102], [Ingarden 1931b: 101]) that is facing us. Indeed, the fact that meaning can exist potentially in a word or a sequence of words and can be actualised by different persons implies that this meaning can exist “self-sufficiently”⁶ from speakers. Meaning cannot exist without a person that actualises it, but, for this reason, it cannot be exclusively a part of its mental life, because how could it then be actualised by other people. In one word, meaning “transcends” mental acts.

As said earlier, the meanings contained in expressions are not ideal. The reason for this is that if it was the case, each time the same word was used with a different meaning, it should instantiate a different meaning and this would produce an intolerable inflation of ideal meanings. However Ingarden does not think that meanings are completely devoid of ideal elements. The creation of meaning is not a creation *ex nihilo* ([Ingarden 1931a: 375], [Ingarden 1931b: 360–361]). This creation is carried out from an ideal material that is structured into an expression by cognitive agents. According to Ingarden, when someone produces an expression, on the one hand, he actualises in its material parts some “pure qualities” and, on the other hand, he organises these “meaning elements” (*Sinneselemente*) into a “unified whole” (*einheitliches Ganzes*) ([Ingarden 1931a: 375], [Ingarden 1931b: 361]). In other words, an expression does not instantiate an ideal species in its totality but contains material parts that instantiate pure qualities that are structured (formed) by “subjective forming operations” ([Ingarden 1931a: 102], [Ingarden 1931b: 102]).

There are here two types of ideal entities that must not be confused: pure qualities and ideas. We could think that ideas are ideal species in the sense of

5 Miśkiewicz gives convincing evidence that Ingarden certainly knew Twardowski's distinction (see [Miśkiewicz 2017]).

6 Self-sufficiency is a kind of ontological dependency, distinct from heteronomy. An entity exists self-sufficiently with respect to another one when it does not need to exist within a more encompassing whole with this second entity (see [Ingarden 1947b: §14]).

Husserl. But Ingarden does not conceive ideas as being instantiated in mental contents. They are rather ideal concepts of objects, ideas that subsume objects to which our words refer [Chrudzinski 1999: 308]. As for the pure qualities, they are some kinds of “bare universals”, that can be instantiated in ideas, but also in real objects or in meanings. It is for instance the ideal red that is instantiated in a particular red object. Meaning intentions do not actualise ideas but the “meaning elements” of the corresponding ideas and give a form to the material elements that instantiate them by organising them into a unitary whole. The meaning content of an expression is then something new, a product that is distinct from the ideal concept on which it was modelled, i.e. the concept that was intended by the creator of this expression when he carried out a meaning act. It is the actualisation of the meaning elements of the ideal concepts in a meaning that ensures its stability, its “intersubjective identity” [Ingarden 1931a: 378], [Ingarden 1931b: 364]).

As we can see, Ingarden’s theory of meaning is quite complex. It takes elements from Husserl’s and Twardowski’s theories of meaning and rejects the identification of meaning to mental contents and to ideal species. Meaning is neither real, nor ideal, but purely intentional. It is the product of subjective forming operations operating on instantiated ideal elements. This implies in particular that the meaning content of an expression can actualise different pure qualities. Consequently, and contrary to Husserl’s ideal meaning, it can undergo changes according to the context in which it occurs, while containing an ideal core that transcends individual consciousness experiences.

A new kind of act-based view of propositions can be suggested from this general theory of meaning. According to it, propositions are products of cognitive acts – for instance, judgements – which create them through their intentional content. By creating propositions through subjective forming operations, cognitive agents confer on them a derived intentionality that enables them to project states of affairs.⁷ These propositions do not exist really – they are neither mental contents nor mental acts. They are not abstract entities either, but purely intentional ones whose parts instantiate ideal qualities. They are, furthermore, the meanings of the sentences in which they exist potentially. In other words, when cognitive agents read these sentences, they actualise (produce anew) the propositions that the sentences express.

⁷ For Ingarden, a sentence is true when the (purely intentional) states of affairs projected by it corresponds to a state of affairs that exists independently.

This new account of propositions is only a sketch, but it is a promising one. In order to see if this promise can be fulfilled, this view should be confronted with the traditional problems faced by propositions, what cannot be done here.

4 Conclusion

To conclude I would like to repeat the two main aspects of Ingarden's conception of meaning that were directly borrowed from Twardowski:

- (1) The conception of meaning itself as an act-based conception: meaning is a product of cognitive acts.
- (2) The idea that non-enduring meanings can be made enduring thanks to written words.

But, apart from these similarities, there are several differences between Twardowski's and Ingarden's approach of propositional content that are worth mentioning:

- (1) For Ingarden, word meanings have a "derived intentionality". They can project purely intentional objects by themselves. Ingarden thinks that this is something Twardowski would not have accepted, because for him meaning is a part of an intentional act (its content). A content cannot be intentional because it is what gives to a mental act is directedness: as Husserl says, it is the aspect of a mental act that determines the object it grasps and as what it grasps it.
- (2) For Ingarden, the meaning of a sentence is not the content of an act of judgement or the ideal species instantiated in such content, but is an object distinct from the act and the content that instantiates several idealities.
- (3) Ingarden does not conceive judging as a *sui generis* act (see [Schaar 2016: 115–116])
- (4) Ingarden thinks that meaning is a purely intentional object, i.e. an object that exists heteronomously. Twardowski would not have accepted that, since it seems that for him meaning is real (it is a mental content), even if he never gave any precision about the mode of being of meanings.

While Ingarden borrowed elements from Husserl and Twardowski in his theory of propositional meaning, he also developed an original view, a view that offers us a third way in the so-called act-based view propositional content. According to this view, the meaning of a sentence is a purely intentional object produced by an intentional being, an entity that instantiates ideal elements without being itself something ideal.

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Twardowski's Psychologism and the Ontology of Truth

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Abstract

This paper addresses the problem of the relation between Twardowski's psychologism and the ontology of truth. It shows that psychologism may have been the main reason why Twardowski rejected the Platonistic ontology of truth. The paper has four parts. The first one briefly presents the concepts of the ontology of truth and psychologism. The second part outlines the history and the roots of psychologism in modern philosophy, and in Twardowski's philosophy in particular. The third discusses some problems resulting from a purely psychologistic ontology of truth, and in the last part, it is suggested that these problems are less troubling than they might initially appear, and it may even be a good thing that Twardowski never turned to the Platonistic ontology of truth.

Keywords

Judgment – psychologism – state of affairs – Kazimierz Twardowski

1 The Ontology of Truth and Two Types of Psychologism¹

The ontology of truth in Twardowski's philosophy is a theory built upon the classical definition of truth, according to which, a belief is true if its object exists. The ontology of truth comprises the following questions:

- (a) What is the ontological status of that to which one can ascribe the property of being true? This is a question about the nature of the TRUTH-BEARER.

¹ The text was prepared as part of the project 2016/23/B/HS1/00684 "Kazimierz Twardowski's place in Polish culture and European philosophy", financed by the National Science Centre (Poland).

- (b) What is the ontological status of that which MAKES the truth-bearer true?
- (c) What is the ontological status of the ALETHIC RELATION, that is the relation of truth-making? Is this relation changing in time, or is it an unchanging and timeless relation?

When it comes to psychologism, I suggest making a distinction between methodological psychologism and ontological psychologism. The former is a view that psychology plays or should play an important role in every science, because every science presupposes mental actions, and they are the subject matter of psychology [Kleszcz 2013: 111]. Ontological psychologism, in turn, claims that mathematical and logical objects are of mental nature. This provides an explanation of their existence; our answer to the question of how the laws of logic, numbers, or other scientific objects exist is that they are products of mental actions. Let us remember that, in his habilitation work from 1891, Husserl claims that numbers are products of counting, and judgments are products of judging [Husserl 1891].

2 The Genesis of Psychologism

The emergence of psychologism is connected with the philosophy of René Descartes and John Locke. When it comes to Descartes, (methodological) psychologism was a consequence of his rejection of “classical logic”, namely the scholastic “theory of consequence”, which included both Aristotle’s syllogistic and propositional logic developed by the Stoics and mediaeval logicians. Certainly, Descartes’ rejection of the classical logic was not meant as its replacement by some non-classical logic in the contemporary sense; rather, it was an attempt to RE-FOUND classical logic and the whole system of human knowledge. The Cartesian project of re-establishing the foundations of all knowledge was probably motivated by the possibility of a global illusion and the “evil demon problem”, i.e. the problem that the demon can deceive us even when it comes to the laws of logic and mathematics. To avoid the threat of such deception in the field of logic, Descartes turned to the sphere of psychology (*ego cogito*). According to that project, the truth which I can see clearly by “the mind’s eye” is well justified. Thus, for Descartes, being evident and clear constitutes a necessary and sufficient condition for the acceptance of axioms and logical validity of proofs. A proof (an argument) is logically valid if its every premise is evident and obvious. However, it is the truth of axioms only which is an epistemological problem, that is, it depends on our intuitions; while the proving of theorems belongs to logic. By reducing both the truth of axioms and

the validity of proofs to their being evident, that is to a psychological property, Descartes created a basis for the psychological understanding of logic and science in general.

Tadeusz Czeżowski, one of Twardowski's disciples, mentions another possible motive for the development of that psychological approach to science in early modern philosophy, and in Descartes' and Locke's writings in particular. That motive was the emergence of a new, modern mindset which questioned the hitherto well-established truths and stressed the need for search and discovery of what was novel and unknown yet. And that search for what was new and hitherto unformulated in science and other domains of human cognition was conceived of as a psychological process; thus, if one had a full access to that process, to every step thereof, one could gain epistemological and logical justification for the resulting new knowledge [Czeżowski 1949: 223].

In the nineteenth century, psychological logic developed in England, and its eminent representative was John Stuart Mill. In short, according to Mill, logic is a science concerning mental activities in which we go from the known to the unknown; thus, it is a science about reasonings regarded as mental processes. In Germany, psychologism was propounded in Jacob Friedrich Fries' work entitled *System der Logik* (1811), and also in Friedrich Eduard Beneke's *Lehrbuch der Logik als Kunstlehre des Denkens* (first published in 1832). Beneke claims that psychology is a basic philosophical science, and logic, along with other philosophical sciences, is nothing more than APPLIED PSYCHOLOGY. Beneke's views were later developed by Christoph Sigwart, the author of *Logik*, published in two volumes in the years 1873–1878. Franz Brentano, Edmund Husserl, and Kazimierz Twardowski referred many times in their own works both to Mill and Sigwart.

In order to understand the Brentanian psychologism better, it is worthwhile to look at some modern ANTI-PSYCHOLOGISTIC responses to the Cartesian and empiricist projects of logic and science. There were at least two such anti-psychologistic responses. The first was given by Immanuel Kant within his TRANSCENDENTAL LOGIC in the *Critique of Pure Reason* (1781). Kant's main thesis was that justification of knowledge should not consist in psychological studies of the cognitive acts but in the analysis of the CONTENT of those acts.

The second response to psychologism was elaborated in Bernard Bolzano's work *Wissenschaftslehre* from 1837. Bolzano clearly separates logic and psychology by distinguishing presentations-as-such and propositions-as-such, that is the famous *Vorstellungen an sich* and *Sätze an sich*, from the mental acts of presenting and thinking, and also by separating the truth-as-such (*Wahrheit an sich*) from a mere belief [Bolzano 1837]. All these distinctions became a starting point for distinguishing between mental acts and their content, that is,

firstly, between presentation (as an act) and its content, and, secondly, between JUDGING as an act and PROPOSITION as its content. The most important point to be stressed in this historical context is that Twardowski, who studied under Franz Brentano, was also a student of Robert Zimmermann, Bolzano's disciple [Betti 2010].

The philosophical program of Brentano consisted, in great simplification, of two fundamental claims. The first was the rejection of Kant's anti-psychologism and German idealistic philosophy. The second was a return to Aristotle's philosophy and its mediaeval continuation. The most important component of the scholastic philosophy which Brentano adopted was the intentionality of the human mind. Therefore, the main task of Brentano's descriptive psychology was to describe the different ways of how mental acts are directed toward, or refer to their objects. And because every scientific activity assumes the occurrence of mental phenomena, it also assumes an act of referring to or INTENDING SOMETHING, in other words, "mind's aboutness". Therefore, psychology which describes the way in which mental phenomena refer to their objects, must be the ground of any other science, including philosophy and logic.

Brentano's rejection of Kant's anti-psychologism and German idealistic philosophy was also motivated by his reluctance to the speculative, unscientific character of Kantian and post-Kantian philosophy. According to Brentano and his students, the only protection against "speculativism" or "metaphysicism" was offered by the focus on the data of experience, among which the most certain and reliable (because the most accessible) were the data of the inner experience. In that way, Brentano returned to the roots of modern psychologism, that is, to the philosophy of Descartes.

3 Psychologistic Ontology of Truth

The key point for our further consideration is that in 1894 Twardowski rejected ontological psychologism with regard to the object of presentation ([Twardowski 1894a], [Twardowski 1894b]). The object of presentation is never a part of consciousness, neither as a mental image, nor as a content of consciousness, nor as the so-called "immanent object". The intentional relation exists always between a certain mental event, that is between an act, which has some content, and an object of presentation, which is different from that content, and which is non-mental and external to the mind.

Twardowski's doctrine of the difference between the content and object of presentation broke with Brentano's ontological psychologism as to the objects of presentations and paved the way to a new ontology, that is Alexius Meinong's

theory of objects known as *allgemeine Gegenstandstheorie* [Chrudzimski 2007]. Meinong's theory of objects treated OBJECTS OF PRESENTATIONS as entities – regardless whether they exist and how they exist. But the roots of Meinong's ontology are probably to be found in Twardowski's concept of being as *ens*. This concept, in turn, had already been used by Aristotle and Scholastics. In his lectures on *Logic*, which he held (in Polish) in Lvov in the winter semesters in 1895 and 1896, Twardowski clearly referred to the concept of being as *ens*, and ascribed this notion to the Scholastics, who by *ens* meant ANYTHING that can be conceived of. Let us quote a passage from Twardowski's (yet unpublished) lectures on *Logic*:

What we today call an OBJECT OF PRESENTATION, in the most general sense of this word, in the ancient Greece was called τὸ ὄν. When we find τὸ ὄν in Aristotle's writings, we do not translate this word as EXISTING THING OR SOMETHING THAT EXISTS, but as an OBJECT in general. Aristotle himself noticed that the word ὄν can have different meanings. Thus, the Latin philosophers translated ὄν by the word *ens*. Therefore, the word *ens* does not mean SOMETHING THAT EXISTS, but it means an object in general, that is an object of presentation.

TWARDOWSKI 1895a²

The most important conclusion to be drawn from these words is that not every object of presentation must exist. Non-existent objects, including logically impossible objects (for instance, a round square), are thus epistemically possible. Logically impossible objects are epistemically possible in the sense that they can be objects of presentations, and as such they can be objects of metaphysical studies.

Thus, in 1894, just before coming to Lvov, Twardowski upheld the positions of methodological psychologism and ontological psychologism which amounts to the view that mental events such as presentations along with their contents (but not objects) exist in time, and, therefore, they come into being and cease to exist. He also shared, as noted above, the Scholastic ontology of objects of presentations, which was not psychologistic, but which was not Platonistic either, because non-existent objects, according to Twardowski, do not have any other mode of being, for example, there is no timeless and eternal idea of a unicorn.³

² My small caps, D.Ł.

³ Twardowski, contrary to Husserl, accepted the position that non-existent objects may have properties [Willard 1984: 183].

It is important to stress that Twardowski's work *On the Content and Object of Presentations* [Twardowski 1894a] was not dedicated to judgments, but according to Twardowski, it is exactly TRUE JUDGMENT that is the subject matter of logic. Thus, when starting his lectures on logic in Lvov, Twardowski needed a theory of judgment. He could not resort to the "algebraic" theory of judgment invented by an English logician and economist, William Jevons. According to Jevons' theory, every judgment can be reduced to the affirmation of identity between the concepts of which it is composed. Twardowski could not accept the scholastic theory of judgement either, according to which judging consists in the assertion of the SUBORDINATION BETWEEN CONCEPTS. He gave some counter-examples falsifying both these theories.⁴ Neither could Twardowski fully adopt Brentano's existential or idiogenic theory of judgment, which claims that every judgment comes to affirmation of the existence of an object given in presentation founding it, or is reducible to an existential judgment.

The reason why Twardowski, in his lectures on *Logic* from 1895, revised Brentano's theory of judgment was the problem of relational judgments. To illustrate it, let us consider the following judgment:

There is an intentional relation between a presentation of a unicorn and a unicorn which is an object of this presentation.

According to Brentano's theory of judgment, the object of that judgment is a COMPLEX and MEREOLOGICAL entity which consists of the presentation of a unicorn and a unicorn itself. The presentation of a unicorn and a unicorn would be PARTS of that intentional relation, and the intentional relation itself would be a mereological object understood as a whole consisting of its parts existing in time, because all mental phenomena exist in time. Thus, a judgment about the intentional relation between the act of presentation of a unicorn and a unicorn as an object of this presentation would imply accepting of the EXISTENCE of the unicorn.

However, according to Twardowski's doctrine of the content and object of presentation, no unicorn exists, because the object of an act is not identical with its content, which exists as a mental event at the time when the act

4 "The attempts, therefore, which tried to reduce all judgments, including the judgments of existence, into certain judgments about the occurrence of relations, have not led us to their goal. Thus, judgments of existence cannot be reduced to judgments of the existence of relations in the same way as judgments of the occurrence of relations cannot – as Brentano wishes – be reduced entirely to judgments of existence. We must therefore remain of the opinion that the content of our judgments is either the existence of the matter of judgment or the occurrence of a relation which is the object of our judgment. In the next chapter, we shall have the opportunity to see that there are indeed no judgments with a third content" [Twardowski 1895b].

happens. Therefore, Twardowski came to the conclusion that the object of a relational judgment is not a mereological object, and that judging does not always consist in affirmation of the existence of certain simple (God) or complex objects.⁵

The results of Twardowski's criticism regarding Brentano's existential theory of judgment are contained in his lectures on logic and in his well-known letter to Meinong from July 1897 [Twardowski 1897].⁶ In these two texts, Twardowski proposes an additional form of judgment, which is distinct from existential judgments and not reducible to them, namely RELATIONAL JUDGMENTS or RELATIONAL BELIEFS (*przekonania*) including categorical and temporal judgments (judgments about the past and the future).

Twardowski, in his lectures on logic, states:

If I say $2 \times 2 = 4$, my belief refers to the equality between the operation 2×2 and the number 4. This equality is therefore the object of judgment. I say about this equality that it OBTAINS; the content of my judgment is therefore the OBTAINING of this equality.

TWARDOWSKI 1895a⁷

The crucial point of this solution is the thesis that relation is not a mereological object meaning that it is not a whole consisting of parts, but it belongs to a different ontological category than its parts. That is why one can say that relations OBTAIN, but not that they EXIST. The obtaining or subsistence of a relation does not imply the existence of its elements, because they are not its mereological parts. Let us repeat: if relations OBTAIN, and the obtaining (or subsistence) is not identical with existence, relations are not mereological objects.

There arises an obvious question: what is the ontological status of the correlates of TRUE relational judgments? As to the ontological status of judgment itself, judgments (or beliefs (*przekonania*)), as Twardowski called them in his *Logic* lectures) are mental beings existing in time, that is beings coming into

5 A more detailed discussion on these issues can be found in Arianna Betti and Maria van der Schaar's paper "The Road from Vienna to Lvov. Twardowski's theory of Judgment between 1984 and 1897" [Betti & Schaar 2004].

6 Twardowski stresses in his letter to Meinong that it is possible to distinguish in relation to every judgement between the act of presentation, the content (the existing, being, present, subsisting), and the object (the judged state of affairs, either an absolute datum, relation, or both together [Twardowski 1897: 143]. It is worth noting that Meinong was particularly interested in the problem of relation [Grossmann 1974: 21].

7 My small caps, D.Ł.

existence and passing away. But does the object of every true belief also exist in time? But then what about its non-mereological nature? For Twardowski, this was a problem. Husserl, Meinong, and other phenomenologists agreed that it is the state of affairs (*Sachverhalte*), conceived of as an IDEAL AND TIMELESS correlate of a true judgment, which makes a judgment true [Smith 1988]. Let us note that Twardowski himself uses the word *Sachverhalt* in his letter to Meinong [Smith 1994]. The question arises whether Twardowski could have adopted Husserl's Platonistic ontology concerning the object of beliefs, that is whether he could have considered the relations as ideal objects. Indeed, there was a moment of Twardowski's hesitation about that (see, for example, his letter to Meinong) but finally he turned to another solution.

I suggest that the answer to the above question is that Twardowski could not have accepted the ideal, timeless Platonistic relations or states of affairs as correlates of any true beliefs. In my view, the reason for this was Twardowski's methodological psychologism. If philosophy is to be a science, it has to be based on scientific methods, and such methods can be provided only by descriptive psychology based on inner experience. The inner experience happens in the temporal world and, like this world, it is a temporal being. Therefore, no eternal, timeless and otherworldly entities can be given or grasped in this inner and temporal experience, even if they existed. Thus, methodological psychologism leads to ontological psychologism.

In 1902, after reading Husserl's *Logical Investigations* [1900], Twardowski recognized the error of ontological psychologism, and he realized that his concept of belief as a particular and temporal mental event is not compatible with the idea of alethic absolutism, which he strongly defended since 1900 [Twardowski 1900].⁸ Twardowski's idea of alethic absolutism is that the truth-value of any belief never changes: what is true is true and what is false is false independent of time, place or any other circumstances. As is well-known, the outcome of Twardowski's further investigations on the nature of truth was his work "Actions and Products" [Twardowski 1912], in which he claims that the truth-bearer is not a particular and individual belief, but an abstract content, common to many particular and individual beliefs, expressed in a sentence understood as a psychophysical product.⁹

8 A more detailed discussion on these issues can be found in [Betti & Schaar 2004] and [Schaar 2006].

9 See [Jadacki 1989].

4 Timelessness of Truth

At first sight, it may seem doubtful whether this new theory, let us call it “the Aristotelian theory of truth-bearer”, is sufficient for defending the absolutism of truth. According to the alethic absolutism, the truth-making relation itself should not change in time. However, according to ontological psychologism, which follows from methodological psychologism, a truth-making relation has its beginning in time, and truth has its beginning in time too, because BELIEFS or JUDGMENTS, regardless whether they are taken as particular or universal entities, depend on the human mind, which exists and acts in time. Thus, psychologism and alethic absolutism may seem incompatible, since all temporal beings are subject to changes.

However, I think that this incompatibility (or incoherence) in Twardowski’s views was, in a sense, innocent. Foremost, it did not stop the development of logic and semantics in the Lvov-Warsaw School [Woleński 1989]. Moreover, it is not clear enough that alethic absolutism presupposes timeless truth-bearers in the Platonistic sense. Timelessness of truth can simply mean that a true belief is UNCHANGEABLE AS TO ITS TRUTH-VALUE, and, therefore, it is possible that truth has its beginning in time and still it is timeless in this non-Platonistic sense [Simons 2009]. Timelessness of truth means simply that there are no changes of truth-value of a given true or false belief, provided that a belief is true at a particular instant of time. If there are no truth-bearers (beliefs), there is no possibility of any change of their truth-value; nothing can be true or false, and nothing is capable of being changed in its truth-value before a particular true (or false) belief starts to exist.

Let me add a final remark concerning the ontology of truth and the problem of the worldview. Twardowski’s stance regarding the ontology of truth is fully compatible with the theistic worldview – and with Twardowski’s own worldview, which was theistic in fact [Twardowski 1895b].¹⁰ But what is more important, his psychologistic ontology of truth from 1912 is also acceptable for a naturalist who rejects God’s existence and who rejects the Platonistic “propositions in themselves” as well. In conclusion, Twardowski’s mature psychologistic ontology of truth, given his alethic absolutism, is probably the only ontology of truth which can be accepted by both theists and atheists.¹¹

10 See [Brożek 2014], [Twardowski 1926].

11 Twardowski never endorsed materialism, similarly his master Franz Brentano, who sharply distinguished mental and physical phenomena. Naturally, Twardowski’s account of mental contents would be unacceptable for such contemporary naturalists as Paul Churchland, Patricia Churchland or Daniel Dennett. But it is worth noting that

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Twardowski's views on abstract propositional contents are compatible with those forms of theism which reject Platonic truths in themselves; see [McCann 2012].

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PART 3

Intentionality and Persistence



Idiogenetic Theory of Emotions

Arkadiusz Chrudzimski

Abstract

According to Brentano judgment cannot be explained in terms of a composition of presentations but consists instead in a *sui generis* mental mode of acceptance or rejection targeting the presented object. A similar analysis has been proposed by Brentano for emotional mental states. According to it also in this case we have an irreducible (but this time emotional) attitude towards the presented object.

In Brentano's official works these IDIOGENETIC views have been consistently held and supplemented by the epistemic theories of truth and emotional correctness, i.e. approaches defining this correctness in terms of epistemic justification. In this combination they allow for a parsimonious and elegant ontology including only objects of the nominal form. But on the other hand there are strong philosophical intuitions speaking for the classical (broadly Aristotelian) theory of truth and (to a lesser degree) also for the adequational construal of emotional correctness. This leads eventually to a much more liberal ontology of intentionality including such entities as STATES OF VALUES in the role of truth-makers for emotional attitudes.

In this paper I am going to focus on emotional attitudes and compare these two approaches: the ontologically temperate epistemic view and ontologically permissive adequational picture. I will describe the similarities and differences between them and show their main advantages and disadvantages.

Keywords

Emotion – judgment – supervenience – truth – value – Franz Brentano – Anton Marty

1 Aristotelian Theory of Judgment

A distinctive feature of a broad variety of sentences expressing judgments is the presence of an inconspicuous word “is” sometimes called “*copula*”. In the sentence of the form “*a is b*” this word connects grammatical subject and object and according to the Aristotelian theory of judgment it constitutes the

crucial element of its deep grammar. The very essence of judging consists, according to Aristotle, in conjoining a plurality of presentations. To be precise, Aristotle speaks of connecting and disconnecting [Aristotle 1924: 1051 b 1–9], and this means that beside the positive copula “is” we have the (exactly as primitive) negative connecting phrase “is not”. And to be even more precise, Aristotle distinguishes several kinds of copula, the most important ones being: general connecting, particular connecting, general disconnecting and particular disconnecting. These four forms of copula can be employed to combine general presentations, giving us four basic syllogistic forms of general statements: every A is B, some As are B, no A is B, and some As aren’t B. In the Middle Ages these forms have been referred to as *a*, *i*, *e* and *o*-forms.¹ In a symbolic notation they become: *AaB*, *AiB*, *AeB*, and *AoB*, and their transformation into the contemporary quantificational idiom gives us the following comparison:

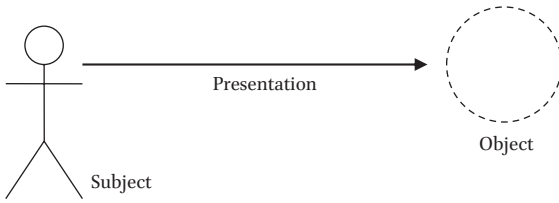
Ordinary speech form	Aristotelian form	Quantificational form
every A is B	<i>AaB</i>	$\forall x (x \text{ is } A \supset x \text{ is } B)$
some As are B	<i>AiB</i>	$\exists x (x \text{ is } A \wedge x \text{ is } B)$
no A is B	<i>AeB</i>	$\forall x [x \text{ is } A \supset \sim(x \text{ is } B)]$
some As aren’t B	<i>AoB</i>	$\exists x [x \text{ is } A \wedge \sim(x \text{ is } B)]$

For the sake of comparison with the Aristotelian analysis operating with the general terms instead of predicates, I retain here the copulative form “is A”/“is B”. A contemporary logician would use in its place an unanalysable predicate.²

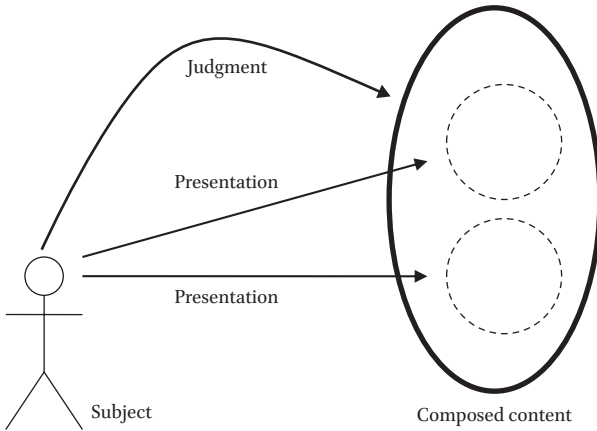
According to the Aristotelian picture psychological reality of judging would consist thus in connecting or disconnecting presentations. If we picture a presentation as:

1 The letters *a* and *i* have been taken from the Latin word *affirmo* and *e* and *o* from the word *nego*.

2 Another point of difference is that the Aristotelian universal forms seem to involve existential presuppositions. The form *AaB* is thus to be read rather as “All As are B, *and there is an A*” and the form *AeB* as “No A is B, *and there is an A*”.



then the general structure of a judgment may be symbolized in the following way:



These two pictures illustrate the idea that the very essence of judgment consists in connecting (or disconnecting) presentations. The main difference between presentation and judgment is therefore the difference in content. Each time we encounter a mental phenomenon with a complex content, we can be sure that this phenomenon must involve judging. With a pure presentation we have to do if and only if its content is simple.

In the famous passages Aristotle writes that such a simple presentation cannot be called true or false in a standard sense of the word [Aristotle 1924: 1051b 17–1052a 2]. Truth and falsity pertain only to judgments. A judgment is true if and only if it connects what is connected in reality or disconnects what is divided in reality; otherwise it is false [Aristotle 1924: 1051 b 1–9].

In this paper I have no room to go into details of Aristotle’s theory of intentionality. Let me only mention that the basic form of intentionality – corresponding to what I call here “presentation” – consists according to Aristotle in taking a form of an object. In his treatise *On the Soul* (better known under the latinized title: *De Anima*) Aristotle writes that a soul which is intentionally directed at something *red* takes the “form” of a red thing, leaving behind its “matter”, and thus becomes – as Aristotle tells us – “in a sense” *red*. Cf. [Aristotle

1931: 424a 11–17] The ontological nature of this “taking” is rather unclear and probably has to be construed as a kind of a non-standard exemplification. Cf. [Chrudzimski 2013]. Assuming this interpretation an aristotelian judgment must consist in combining such non-standardly exemplified forms.

2 Idiogenetic Theory of Judgment

Brentano changes this picture dramatically. First of all he argues that the complexity of content cannot be regarded as a sufficient condition for a judgment. According to Brentano it is perfectly possible to present complex objects [Brentano 1874: 228]. If I contemplate Frank Sinatra singing “Strangers in the night” I contemplate a complex object. Nonetheless the mental act by means of which this object appears before my mind is still a presentation. A clear sign of that is the fact that for such a pure contemplation the question of its truth and falsity does not even arise. Any arising of this question means that my mental act isn’t a mere contemplation but involves a kind of “claim” like “Frank Sinatra REALLY sang “Strangers in the night” this way” or “He REALLY looked this way while singing “Strangers in the night””.

This observation brings us to the next point of Brentano’s analysis. In a judgment there must be something more than a mere complexity of the presented content. A judgment must contain something like a mentioned “claim”, “statement” or “commitment”. In judgment we must, as it were, explicitly “state” that the presented content really takes place in the world [Brentano 1874: 223]. Otherwise we have to do with a pure presentation for which, as said above, the question of truth does not even arise.

And if we are already so far, we can also see that the complexity of content isn’t even a necessary condition for a judgment [Brentano 1874: 230]. For it seems that we can perfectly “state” that something that in our presentation appears as simple, constitutes a part of reality.

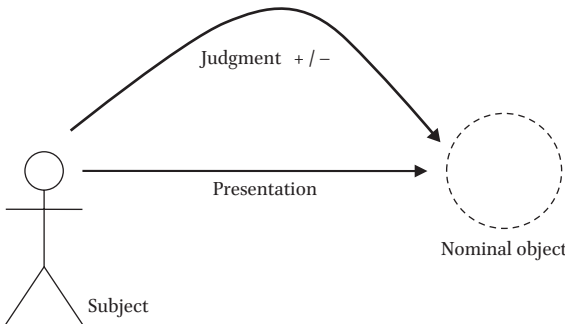
And so it turns out that the complexity of content is neither sufficient nor necessary condition for a judgment. What is sufficient and necessary is the mentioned “claim”, “statement” or “acknowledgment”, which now appears in our philosophical psychology as an irreducible mode of mental attitude beside the mode of presenting.

Brentano described the judgment mode as mental acceptance or rejecting of an object. Sometimes he wrote that judging amounts to accepting something as existent or rejecting it as non-existent, and the best linguistic form, by which we can express Brentanian judgments is indeed the “existential” form: “A exists”/“A does not exist”. Now, at the same time Brentano warns us

against interpreting this existential form as ascribing to or denying of an object a peculiar property of existence (resp. as ascribing to it an even more peculiar property of nonexistence). In such an interpretation judging were – exactly like in the criticized Aristotelian picture – connecting and disconnecting presentations. The only difference consisted in the fact that within the framework of the Brentanian model we had to include in the judgment complex also the rather esoteric properties of existence or nonexistence.³ Brentano’s idea is not like this [Brentano 1874: 230/231]. According to him the judgment mode is not a predication of some weird properties. It is a new mental attitude directed at the presented object. A judgment adds no special content but only a special mental mode.

Twardowski in his paper ON IDIO- AND ALLOGENETIC THEORIES OF JUDGMENT explicitly subscribes to the Brentanian view concerning the sui generis nature of judgment. [Twardowski 1907: 99] The only difference is that Twardowski makes the distinction between content and object of presentation and *a fortiori* judgment. The distinction in question has been elaborated in his ON THE CONTENT AND OBJECT OF PRESENTATION [Twardowski 1894].

Here is the Brentanian picture of a judgment:



As we see in the diagram we have a single object that is apprehended by two different mental attitudes. First of all we have a presentation like in our presentation diagram. This is the simplest mental state consisting merely in having an object before ones mind. As said above, this object can be simple or complex, but according to Brentano it always has the nominal form. Formally it resembles things and not “propositional entities” like states of affairs or situations.

3 One of Brentano’s arguments against interpreting existential judgment as predication of existence consists in observation that it is extremely implausible to assume that small children, who are clearly able to judge, should be able to grasp such highly esoteric concepts like “existence”. Cf. [Łukasiewicz 2006: 191].

Presentation is in fact the only way in which an object can be brought to one's consciousness. In this sense any other mental state that is intentional (i.e. is directed at an object) depends on a presentation. Now according to Brentano intentionality is the defining feature of the mental, and so presentation becomes an ontological foundation of any mental state, including of course any judgment. An important point, that I want to repeat once more, is that judgments do not add any additional content to the contents that are brought to one's consciousness by presentations. A judgment has exactly the same object as the underlying presentation. What is different, is only the mental mode through which the object is apprehended. In our diagram the judgmental mode of acceptance or rejection has been symbolized by the signs "+" and "-".

Brentano takes great pains to demonstrate that all judgment forms, and in particular all four Aristotelian forms *a, i, e, o*, can be transformed into his "existential" idiom (cf. [Brentano 1874: 236]). For the predicative singular forms like "Earth orbits around the Sun" or "The Sun doesn't orbit around the Earth" the analysis is relatively simple. They become accordingly "There is Earth orbiting around the Sun" and "There is no Sun orbiting around Earth" (possibly with the addition: "There is the Sun"). In the case of four Aristotelian forms of general statements the analysis is less straightforward, but according to Brentano nonetheless possible. If we symbolise the existential accepting/rejecting as "+ / -", use a negation operator "*", allowing us to build a negative counterpart of any given term, so that "*A" means "non-A", and symbolise the connection "which is" between properties simply by the concatenation of terms, then the four Aristotelian forms will look like that:

Ordinary speech form	Aristotelian form	Brentanian form
every A is B	AaB	$- A^*B$
some As are B	AiB	$+ AB$
no A is B	AeB	$- AB$
some As aren't B	AoB	$+ A^*B$

We assume here that the operator "*" has always the minimal scope, so that "*AB" means "a non-A which is B" and not "a non-A which is non-B".

Brentano's existential reduction is philosophically attractive at least for two reasons. First of all it generates a nicely ordered hierarchy of mental states which gives us a solid foundation for a philosophical psychology. Second, as it

promises to free us from the propositional entities like states of affairs or situations, it offers an elegant ontology operating only with the category of nominal object, perhaps only with the category of things. Such an ontology would clearly please those “who have a taste for desert landscapes” [Quine 1948: 4].

But of course we know that there are fundamental problems with this analysis. They have been pointed out already by Meinong in his review of Hillebrand's *Die neuen Theorien der kategorischen Schlüsse* ([Hillebrand 1891], [Meinong 1892: 205f]). The first problem is the *connection of properties* (symbolised above simply by the concatenation of terms). Second, we have also *negative properties* that many philosophers find quite problematic (cf. [Chrudzimski 2010], [Chrudzimski 2012]). The concatenation of terms may look ontologically innocent but the picture changes if we turn our attention at corresponding entities and their combinations. A presentation of a red square has as its object an entity involving at least two moments (being a square and being red) and these moments must be somehow connected, because a presentation of a red square is clearly different from a presentation of a red apple and a blue square (in which case we have unconnected moments of being red and being square). Now how is this puzzling nexus to be described from an ontological point of view? Doesn't it make compound objects into structures closely resembling states of affairs? And what about negative properties? Should we assume that they are ontologically as primitive and cognitively accessible as their positive counterparts? Or are they rather to be regarded as products of certain operations performed on the basis of positive entities? Eventually Meinong came to the conclusion that every composed object is a state of affairs and negation is indeed something that can appear only within a propositional structure. This led him to a quite complicated theory of propositional entities that he called “objectives” [Meinong 1902] and of course also to the conclusion that Brentano's existential reduction fails and his “nominal” objects are in fact just states of affairs in disguise.

Now I happen to believe that Meinong was right and Brentano's existential analysis at the end of the day fails. But happily this point will have no impact on the remainder of this paper. In the following sections I will concentrate on the idiogenetic analysis of emotional phenomena and the question whether the entities that Brentano described as complex objects of presentations have at the end of the day nominal or propositional form won't be relevant here.

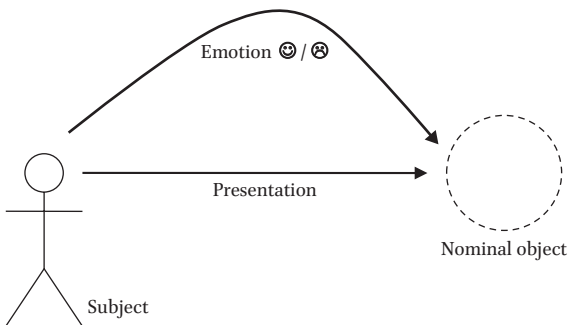
Before closing this section let me stress that the target objects that appear in the above diagrams shouldn't be interpreted as mind-independent external entities. It is a common place that even in cases in which we think of non-existing objects like Santa Claus or Pegasus, we are able to describe our mental attitudes in terms of having some objects “before our minds”. This is one of the

main reasons why Brentano and other philosophers introduced special entities mediating the intentional reference or even replacing the common-sense reference objects. I mean here such entities as Cartesian ideas, Fregean senses, Brentano's immanent objects, Carnap's intensions, Husserl's species of mental contents and later noemata. Happily in this paper we need not to disentangle the puzzling ontology of these entities. Just remember that the objects of presentation that appear in our diagrams belong to this family.

3 Idiogenetic Theory of Emotion

Brentano's picture of emotional phenomena – or phenomena of love and hate, as he called them – is very similar to his idiogenetic model of judgment. Like judgment also emotion has presentation as its ontological foundation. Emotional state consists in subject's referring to the presented object by means of a new (and similarly irreducible) mental mode, that we can imagine as an (emotional) acceptance or rejection [Brentano 1874: 271]. According to this picture presentations and judgments do not differ with respect to their objects. In fact only a presentation is able to constitute a mental reference to an object. Judgments or emotions can only “take” a presented object and accept or reject it (alethically or emotionally). In this sense Brentanian judgments and emotions involve presentations as their ontological foundations, but generate no special objects different from the objects of underlying presentations.

Here is the picture proposed by the idiogenetic theory of emotion:



We see that according to this construal the structure of emotion is isomorphic to the structure of judgment. The only difference lies in the character of the additional mental attitude. In the case of emotion the accepting or rejecting attitude has emotional character. It is “love” and “hate” in the broadest possible meaning of these words, in which we “hate” both crowded places and the

Armenian Genocide. In our diagram this mental mode of emotional acceptance and rejection has been symbolized by the pictures of happy and sad face. An interesting point is that according to Brentano volitions are also included in the class of phenomena of love and hate. He tries to justify this controversial claim in the 8th chapter of his *PSYCHOLOGY* [Brentano 1874: 255ff].

4 Correct Emotions

As we see emotions and judgments have very similar structure, but not only this. An important claim of Brentano was that emotions, exactly like judgments, can be CORRECT OR INCORRECT and are also in a sense JUSTIFIABLE. The reason, why this claim was so important for Brentano's whole philosophy, consists in the fact that the theory of correct emotion has been by him designed to work as the ultimate foundation of ethics. Brentano's moral philosophy is thus in a sense a variety of EMOTIVISM. Like Hume Brentano believes that it is impossible to deduce a normative statement from a collection of purely descriptive ones [Hume 1992: 469] and that the source of moral assessment is to be sought in our emotional attitudes. But in contrast to Hume Brentano insists on the intuition that our emotional preferences are sometimes right and wrong and that, at least for some special cases, the question of their correctness or incorrectness can be even conclusively settled. In this respect Brentanian emotions are like judgments.⁴

To explain Brentano's theory of correct emotion we must go back to judgments and address the question of their truth. Brentano supplemented his theory of judgment by an epistemic theory of truth, i.e. a theory to the effect that the truth of a judgment doesn't consist in any relation to a truth-maker, but instead is to be defined in terms of epistemic justification. There are many formulations of this idea. We can find them not only in Brentano and Husserl,⁵

4 However we shouldn't forget, that there are, according to Brentano, also important differences concerning correctness of judgments and emotions. First of all every judgment is either true or false while there are clearly many emotions that are neither. My positive emotion directed at Gruyère cheese is neither correct nor incorrect. Thus in the case of emotions *tertium datur*. Second there are no grades of truth and falsity whereas there are obviously justified emotional preferences correlated with the grades of correct love and hate. Our emotional rejection of killing people is (and should be) much stronger than the rejection of verbal abuse, even though both kinds of deeds are to be rejected.

5 Cf. the following statements from Husserl's *Ideas I*: "Prinzipiell stehen in der logischen Sphäre, in derjenigen der Aussage, "wahrhaft-" oder "wirklich-sein" und "vernünftig ausweisbar-sein" in Korrelation; [...] Selbstverständlich ist die hier in Rede stehende Möglichkeit vernünftiger Ausweisung nicht als empirische, sondern als "ideale", als Wesensmöglichkeit verstanden"

but also in some important contemporary philosophers, in particular in pragmatists and anti-realists like Putnam⁶ or Dummett.⁷ The formulations differ, but at the end of the day truth always becomes an idealized justifiability. As Hillary Putnam puts this:

Truth is an IDEALIZATION of rational acceptability. We speak as if there were such things as epistemically ideal conditions, and we call a statement “true” if it would be justified under such conditions.

PUTNAM 1981, 55

This view appears very clearly in Brentano’s writings. The maximal grade of epistemic justification Brentano calls evidence; and a true judgement has been defined as a judgement that would be also judged by someone who judges with evidence.⁸

Now what about emotional phenomena? It is easy to see that a similar technique can be directly applied to them. All we have to do is to introduce a correlative notion of emotional evidence. If we do that, we will be able to speak of a *correct* emotion without postulating any special truth- or correct-makers in the world.

This was indeed the way proposed by Brentano in his *On the Origin of our Knowledge of Right and Wrong* [Brentano 1889]. In this important lecture he claims that the notion of a correct emotion is not to be defined by any relation to objective values magically attached to the objects in the external world. We have to proceed exactly the other way round: an object is valuable if and only

[Husserl 1913: 314]. “Prinzipiell entspricht [...] jedem “wahrhaft seiendem” Gegenstand die Idee eines möglichen Bewußtseins, in welchem der Gegenstand selbst *originär* und dabei *vollkommen adäquat* erfaßbar ist. Umgekehrt, wenn diese Möglichkeit gewährleistet ist, ist *eo ipso* der Gegenstand wahrhaft seiend” [Husserl 1913: 296].

6 “To say that truth is “correspondence to reality” is not false but EMPTY, as long as nothing is said about what the “correspondence” is. If the “correspondence” is supposed to be utterly independent of the ways in which we confirm the assertions we make (so that it is conceived to be possible that what is true is utterly DIFFERENT from what we are warranted in TAKING TO BE TRUE, not just in some cases but in all cases), then the “correspondence” is an occult one, and our supposed grasp of it is also occult” [Putnam 1995: 10].

7 Michael Dummett argues that: “the notion of truth, when it is introduced, must be explained, in some manner, in terms of our capacity to recognize statements as true, and not in terms of a condition which transcends human capacities” [Dummett 1976: 116].

8 Cf. “Es läuft dies alles eigentlich auf nichts anders hinaus als darauf, dass die Wahrheit dem Urteile des richtig Urteilenden zukommt, d.h. dem Urteile dessen, der urteilt, wie derjenige darüber urteilen würde, der mit Evidenz sein Urteil fällt; also der das behauptet, was auch der evident Urteilende behaupten würde” [Brentano 1930: 139].

if it is a possible target of a correct love (cf. [Brentano 1889: 19]) and as we have an emotional analogue of evidence (let's call it "evidence*") applicable to our emotions, we can define a correct emotion as an emotion that could be had with evidence*.

What we eventually get, is a kind of anti-realist approach. The answer to the question what is right and wrong depends not on any objective structures in the external, mind independent world, but rather on the *justifiability* of our value claims. The truth of our normative claims is grounded not in mind independent truth-makers, but in the inner logic of our normative discourse.⁹

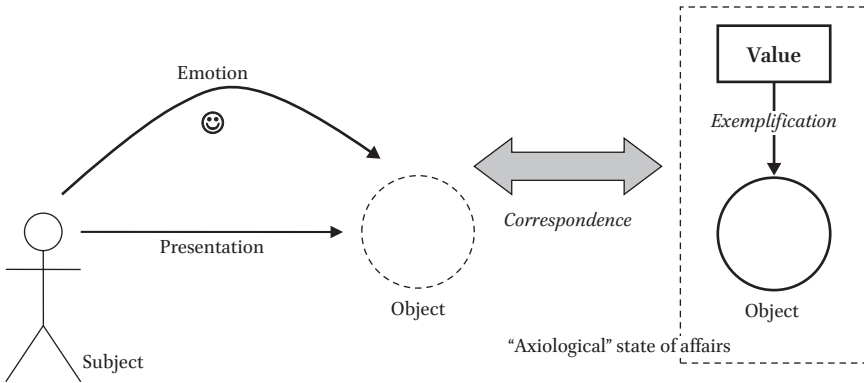
It must be stressed that neither the concept of judgmental evidence nor that of emotional evidence* can be defined or described in more primitive terms. According to Brentano they are primitive concepts that can be grasped only by experience. As an example of an evident judgment we can take a "Cartesian" belief that I am thinking now. If we compare this with a "blind" belief, say that I have exactly 88021 hairs, we can grasp the difference, but it is utterly impossible to explain evidence to someone who never experienced it.

As it often happens, in the last decades many analytic philosophers independently discovered the deep truth in the Brentanian picture of emotion. Nowadays emotional phenomena are no longer regarded as irrational movements of the soul. Most philosophers agree that it makes a perfectly good sense to ask whether a given emotion is appropriate or not and whether it is rational or irrational (cf. [DeSousa 1987]) However a typical attitude in explaining emotional correctness among the contemporary philosophers is to look for their truth-makers. The idea is that if the emotional attitude of being scared is appropriate in relation to a lion and inappropriate in relation to a mouse, then there must be a certain characteristics of being "scary" or "dangerous" that belongs to lions but not to mice.

It turns out that also for this approach we can find similar thoughts in some unpublished lectures of Brentano as well as in the works of his students, like e.g. Anton Marty, who developed a sophisticated theory of normative states of affairs.¹⁰ If we decided to go this way, our scheme of emotional intentionality would complicate to the following form:

9 Cf. [Marty 1908: 370]. Four last paragraphs have been taken from [Chrudzimski 2009].

10 Brentano presented such an ontology of truth-making in his unpublished *Logic Lectures* (Manuscript EL 80). Marty, who developed it in detail, acknowledges his debts to Brentano. Cf. "So habe ich selbst [...] den Terminus "Urteilsinhalt" verwendet und vor mir Brentano in seiner Würzburger und Wiener Vorlesungen" [Marty 1908: 292].



The left part of the diagram is quite similar to our previous picture. We have there a conscious subject that directs an emotional attitude at a presented object. This part involves certain simplifications and shouldn't be treated as correctly depicting Marty's theory.¹¹ The only thing that is interesting for us now is the truth-making entity that appears at the right side. This entity is complex. It involves not only an (external) object, corresponding to the (immanent) object of presentation, but also a value, that is designed to make true (or rather correct) the emotional attitude appearing on the left side. In short, if my attitude of being scared directed at a lion is to be correct, then the lion in question has to exemplify a rather peculiar, normative property of being scary or dangerous. Normative properties of this kind have been often called "values".

5 Supervenience of Values

Now the value-properties that entered our picture in the last section must appear as highly problematic not only for those "who have a taste for desert landscapes", but generally for everyone who have even a rudimentary respect for the principles of ontological parsimony. Should we seriously assume that lions, beside their "natural" properties like being mammals, predators, and felines, have also normative ones like being dangerous or scary? This proposal doesn't sound good and indeed a brief reflection shows that in many cases there is a clear relationships between the alleged "value properties" and the "natural" or "descriptive" ones. Consider the following dialog:

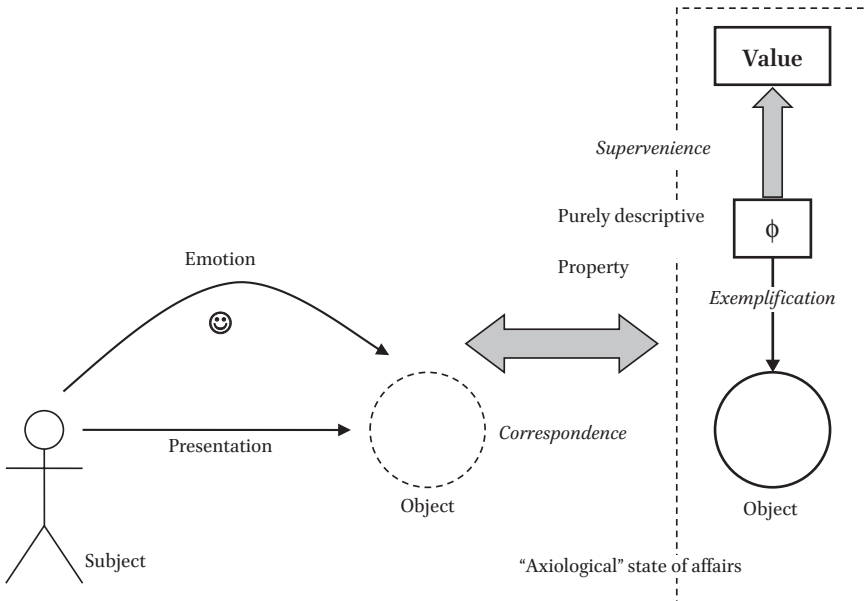
¹¹ For a more detailed presentation of Marty's views see [Chrudzimski 2009] and [Chrudzimski 2014].

MARY: Why are you afraid of vipers?
 JANE: Because they are dangerous.
 MARY: Why are they dangerous?
 JANE: Because they are poisonous.

According to this conversation pattern Jane first justifies her fear of vipers by attributing to them a certain normative property (of being dangerous), but then, being pressed further, plausibly explains this value property in terms of a natural, purely descriptive property (of being poisonous). It seems thus that at least in some cases value-properties clearly supervene on purely descriptive ones. The claim that such a supervenience relation obtains always, would be indeed a very attractive hypothesis.

It seems that this was the position of Anton Marty. According to him all states of affairs – and among them also all normative states-of-values – belong to the domain of the so-called NON-REAL ENTITIES. Now such non-real entities have, so to speak, no independent history. They come into being and pass away in the strict dependence of the changes in the real (nominal) objects. As Marty puts this, non-real entities have only a kind of co-becoming (German: *Mitwerden* [Marty 1908: 318]).

If we assume that normative states of affairs supervene on ordinary objects (and more precisely: on their ordinary properties), our diagram takes the following form:



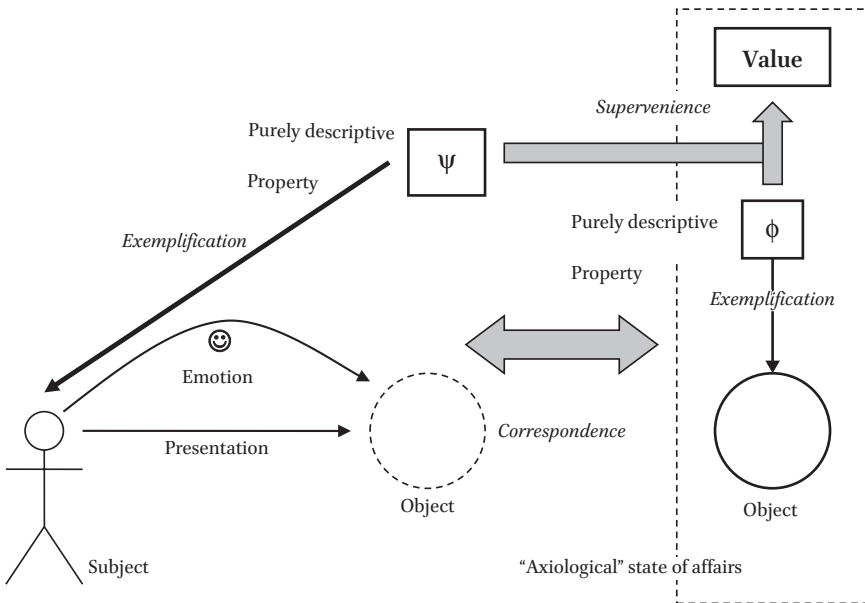
The only point of difference between our present diagram and the previous one is the explication of the way in which ordinary objects have their normative properties. We have now a purely descriptive property ϕ , which is exemplified by the object, and the value that previously was simply attained to the object, now is said to supervene on the property ϕ .

So far so good, but a brief reflection shows that our last diagram is way to simplified to work properly. To demonstrate this, let me go back to the dialog between Mary and Jane and continue it in the following way:

- MARY: But Jane, you have forgotten that you are a super-hero and therefore immune to the viper venom.
- JANE: Of course! Thanks! Lucky me! In this case vipers are not dangerous for me and I have absolutely no reason to be afraid of them.

The point of this dialog is to stress a perhaps obvious observation that the value-properties in general depend not only on the descriptive properties of the valuated object but also on the relevant characteristics of the valuating subject. True enough, lions are dangerous, but not for elephants.

To do the justice to this fact it will be necessary to expand the supervenience basis and include into it also some properties of the subject. After this operation our scheme will look like this:



The only amendment in this last picture consists in taking into consideration not only the properties of the object of valuation, but also some properties of its subject. It seems that the supervenience basis of values always must be “scattered” this way. In this sense VALUES can be said to be essentially SUBJECTIVE or RELATIVE. A lion is never dangerous “in itself” or “*per se*” it is always dangerous “for someone” and its being dangerous depends on the properties of this someone.

6 Realist and Anti-Realist Construal of Values

In section 4 I contrasted the Brentanian, epistemic construal of emotional correctness with its realist, adequational version. In section 5 I sketched the possible way of developing a realist position, assuming the supervenience of values on purely descriptive properties of objects and subjects of valuation. So perhaps it's time to ask, which approach is to be preferred. Should we be antirealist or rather realist with respect to values?

To give a provisional answer to this question, let me first compare it with the controversy over the epistemic and adequational construal of truth. Some philosophers held here “radical” views to the effect that the nature ALL truths is either epistemic or adequational. But it is also possible to take a temperate position according to which SOME truths turn out to supervene on adequacy relations between truth-bearers and truth-makers, SOME OTHER however consist in an epistemic character of being justifiable under appropriate conditions. With other words: it is possible to be a realist with respect to some kinds of truths (like e.g. truths concerning the physical world) and an anti-realist with respect to some other (like e.g. mathematical truths).

It seems that such a temperate position would be preferable in the domain of valuation. As we have seen, for some kinds of values it isn't hard to find an appropriate supervenience basis including only “purely descriptive” properties. An adequational theory of emotional correctness for those cases seems to be relatively plausible and ontologically unproblematic. But if we turn our attention to moral values, the situation seems to be quite different. Hume's observation that normative statements do not follow from descriptive ones shows that in this case it will be extremely difficult to specify a plausible supervenience basis. True enough there are some (in)famous attempts to transform normative statements into descriptive ones, but none of them is as unproblematic as our simple explanation of being dangerous. My provisional conclusion is therefore that, while it is perfectly possible to be a realist with respect

to some kinds of values, for moral values an anti-realist approach will be probably more appropriate.

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Czeżowski *et al.* on Persistence

Mariusz Grygianiec

Abstract

In 1951, Tadeusz Czeżowski's paper *Identyczność a indywidualium i jego trwanie* [Identity and the Individual in its Persistence] appeared in *Sprawozdania Towarzystwa Naukowego w Toruniu*. The text documents the views of the representatives of the Lvov-Warsaw School on the issues of persistence and identity of objects through time. The paper is a useful signpost in finding, identifying, and analyzing these positions in the available historical material. Czeżowski's text provides very interesting interpretative details regarding the discussed positions, which are absent in contemporary discussions of persistence through time.

This paper aims, firstly, at analyzing Czeżowski's text, secondly, at identifying and describing the positions of selected representatives of the School in relation to the issues under discussion, and thirdly, at capturing interpretative threads in the reconstructed positions, which, on the one hand, are absent from contemporary discussions, and which, on the other hand, can prove valuable even today. The general message of the text is the belief that although there were no systematic analyses of the issue of persistence through time conducted within the Lvov-Warsaw School, its representatives were aware of the issue and offered a number of solutions, which from today's perspective are surprising in their boldness and novelty.

Keywords

Change – identity – individual – object – persistence – set – substance – temporal time – time – Lvov-Warsaw School

1 Introduction¹

In 1951, Tadeusz Czeżowski's paper *Identyczność a indywiduum i jego trwanie* appeared in *Sprawozdania Towarzystwa Naukowego w Toruniu* [Czeżowski 1951]. This text is crucial for the titular issue for several reasons. First of all, it documents the views of the representatives of the Lvov-Warsaw School (further in short: LWS) on the issues of persistence and identity of objects through time. However, it is not an exhaustive report, but rather a description and summary of the prevailing positions in the School. Nonetheless, Czeżowski's work is a useful signpost in finding, identifying, and analyzing these positions in the available historical material. Secondly, Czeżowski's text provides very interesting interpretative details regarding the discussed positions, which are absent in contemporary discussions of persistence through time. These details can undoubtedly enrich contemporary discussions; nevertheless, they remain completely unappreciated. Thirdly, Czeżowski's analysis describes several vital consequences of accepting this or that position in relation to persistence through time, consequences that – although not used for counter argumentation by the author himself – may serve as such.

Contemporary discussions of the persistence and identity of objects through time have resulted in two fundamental groups of positions. On the one hand, we have conceptions referring to four-dimensional ontology that favors the theory of temporal parts. These conceptions occur in two variations: perdurance and exdurance. On the other hand, we have endurantist positions, which essentially reject the theory of temporal parts. All of these positions are reactions to the problem of internal change (whether qualitative or mereological) in the face of an alleged collision with Leibniz's law.² Contemporary philosophical discussion of persistence through time in analytical philosophy began at the turn of the 1970s and 1980s with texts by Chisholm [1976] and Lewis [1986]. It might seem that this issue was not addressed by the LWS. However, Czeżowski's text as well as earlier works of the representatives of the LWS indicate that this issue was discussed by these Polish philosophers and, in some cases, as it turns out, was of considerable importance for the philosophical solutions they adopted.

This paper aims, firstly, at analyzing Czeżowski's text, secondly, at identifying and describing the positions of selected representatives of the School in relation to the issues under discussion, and thirdly, at capturing interpretative

1 This is an extended and corrected version of my paper published earlier in [Grygianiec 2017].

2 On the subject of contemporary discussions, see e.g. [Effingham 2012] and [Haslanger & Kurtz 2006].

threads in the reconstructed positions, which, on the one hand, are absent from contemporary discussions, and which, on the other hand, can prove valuable even today.

The general message of the text is the belief that although there were no systematic analyses of the issue of persistence through time within the LWS, its representatives were aware of the issue and offered a number of solutions, which from today's perspective are surprising in their boldness and novelty.

2 Three Interpretations of Persistence through Time

The issue of the identity of objects through time arises at the crossroads between Leibniz's Law and ascertaining that objects change. In the case of objects persisting through time, according to Czeżowski, the logical concept of identity is extended to the domain of material objects. However, as the author notes, the application of Leibniz's Law to various fields does not proceed unconditionally – with each application, the scope of the variation of the predicate variable included in that law becomes narrower. This means that Leibniz's Law is not applied to the letter, but with a narrowing of the domain of properties that are taken into account when considering a group of objects. Hence, considering identity in the domain of numbers, geometrical figures, or propositional functions, we usually omit predicates referring to, for instance, weight, color, or atomic number. Limiting the scope of the predicate variable on the basis of the theory under consideration by relativizing to some of its statements is one of the ways of narrowing the domain of the properties that interest us.

The second method of narrowing the domain of properties is by distinguishing logical types or, more precisely, by distinguishing first order properties and higher order properties (for example, properties of individuals and properties of the mentioned properties). By analogy, there is also a distinction between essential and accidental properties, suggesting that in Leibniz's Law the predicate variable encompasses the former but not the latter.

It is significant, as I have already mentioned, that Czeżowski clearly talks about **EXTENDING** the concept of identity to objects persisting through time. It follows that, first of all, the concept of identity as such is in fact a purely logical one (i.e., a constitutive concept in the field of logic) and, secondly, that the concept of identity applied in a non-formal field is not necessarily a primitive notion. This second observation is crucial as it suggests that if the applicability of this concept is extended to non-formal fields, it needs to be taken into

account that the concept in question will function in them with a modified meaning (and as non-primitive, it will be susceptible to further analysis).

Thus, Czeżowski suggests further three different methods of extending the applicability of the concept of identity to objects persisting and changing through time. According to the first one, a primitive concept of identity is preserved while the concept of an individual object is modified; namely, it is reconstructed so that Leibniz's Law does not collide with possible changes in individuals. The second method – *vice versa* – preserves the common sense concept of an individual and modifies the concept of identity (according to Czeżowski, the concept of identity is “generalized”). The modification constitutes a creative extension of the primitive notion of identity to objects persisting through time. Although Czeżowski prefers modification through narrowing the scope of the variability of the predicate variable in Leibniz's Law, one can imagine more radical solutions, for instance, the introduction of relative identity [Geach 1967], temporal identity [Gallois 1998], or even genidentity ([Augustynek 1981], [Augustynek 1995], [Augustynek 1997b], [Simons 2000a]; [Simons 2000b]; [Simons 2008]).³ The third method outlined by Czeżowski is based on an appropriate interpretation of the features applicable to objects through their temporal relativization. He suggests that this type of semantic modification takes place on the grounds of a mereological approach, but in contemporary discussions this interpretation is not represented solely within the theory of temporal parts (*vide – copula-tensing, adverbialism, SOF-ism*).⁴

As a representation of the first method, Czeżowski indicates an attempt to define an object persisting through time by using the notions of a set, a momentary object, and characterizing features. In this case, a momentary object is an object limited to the period of time in which it did not undergo any change (neither qualitative nor mereological). An object persisting through time is a temporally ordered set of all of its momentary objects. Each momentary object is identical to itself and not identical to any other momentary object. The set of all of the momentary objects is also identical to itself. However, an object persisting through time is of a different logical type than any momentary object, and therefore the notion of identity used to describe the relations between the mentioned objects has a somewhat different meaning. This may be illustrated; certain sentences that are true about each momentary object do not have to be true about the object persisting through time and *vice versa*. The crucial element of this method is identifying a characteristic feature or features of

3 On the systematization of Augustynek's efforts, see [Grygianiec 2011a] and [Grygianiec 2005].

4 More on the subject of these approaches can be found in [Haslanger 2003].

momentary objects that would determine their belonging to a set, that is, to an object persisting through time. This type of requirement takes on the form of a criterion; however, its exact specification goes beyond schematic linguistic considerations and depends on one's preferred choice of metaphysics. From Czeżowski's comments, we can infer that he himself had an evidential interpretation in mind concerning the criterion, rather than a strictly metaphysical one.

The second method is represented by an attempt, inspired by Aristotle, to narrow the scope of predicate variables in Leibniz's Law to essential properties. This attempt requires prior differentiation between essential and accidental properties. An object persisting through time, in order to maintain its identity, needs to maintain its essential properties, while the loss or acquisition of accidental properties has no impact on its identity through time. It follows that an object persisting through time turns out to be – much as in the previous interpretation – an object of a different logical type than any concrete object. Czeżowski explicitly claims that, on the grounds of this interpretation, an object persisting through time is a general object, and that this object can be called – following Aristotle – a form, as forms are defined precisely by essential properties. In other parts of the text, he calls this method simply “designation through essence” (and the previous interpretation is called “designation through set”). As in the case of the first method, where finding characteristic features of momentary objects constituted its greatest difficulty, in the case of the second strategy, the identification of essential features is its most serious challenge. Czeżowski notes that both tactics lead, in fact, to the same result: in both cases, an object persisting through time is neither a concrete nor an empirical object – it is either a set of momentary objects or a certain abstract object defined by the essential features of these momentary objects.

His illustration of the third method takes the form of an attempt to define an object persisting through time as a conglomerate of temporal parts, where temporal parts correspond to momentary objects and the conglomerate of all of the temporal parts (from the beginning to the end of the object's persistence) corresponds to the set or the essence. The main difference between this and the previous methods is the fact that in this case the temporal parts and their conglomerate are of the same logical type. Another peculiarity of this approach is, according to Czeżowski, a unique interpretation of time and temporally variable properties. For instance, on the grounds of this mereological approach, the temporal designations of the object somehow become its defining features, which might better be interpreted as the view that temporal qualifications are intrinsic features of temporal parts. According to Czeżowski, this way of putting it situates the mereological interpretation in the Aristotelian

tradition, since time ceases to be an abstract and absolute structure and rather becomes a form of things persisting, somehow being an ontic derivative of them. Czeżowski looks for the realization of this conception in Leśniewski's mereology and in Kotarbiński's reism.

3 Illustrations

As mentioned above, Czeżowski's reconstructions did not come out of the blue; they were based on views expressed in the LWS. Each of the three methods can be illustrated with greater or lesser clarity through specific examples.

Let us start from the first method, which is relatively easy to identify. The understanding of an object persisting through time as a temporally ordered set of momentary objects was characteristic of Kazimierz Ajdukiewicz's position, at least around the time of his "Relative and Absolute Time" [Ajdukiewicz 1920]. Later, Ajdukiewicz repeated this in his presentation "On the Concept of Substance" [Ajdukiewicz 1930], though in different words.

In the first text, Ajdukiewicz proposes a bold approach using an analogy to the notion of mathematical function to interpret an object persisting through time as a type of variable. According to Ajdukiewicz, this object, as a variable, is a kind of abstract (in this case, a set) which is undefined in some aspects. Hence, in the terminology of the LWS, it is an incomplete object. In turn, the values of the variable are constituted by each empirical object taken at particular moments in time. Ajdukiewicz calls these individuals temporal phases, which are fully defined – unlike the variable. The object persisting through time, and therefore the variable, adopts certain values, that is, fully defined empirical objects, in subsequent moments of time. It goes without saying that these empirical objects cannot be identical with one another, and that none of them, on pain of contradiction, can be identical with the variable itself.

The theoretical details that this concept entails are particularly interesting. First of all, according to Ajdukiewicz, sentences regarding objects persisting through time, unless they are equipped with strict temporal qualifications, ought to be treated not as ordinary sentences but as predicates, that is to say, as expressions that are neither true nor false (*vide* Ajdukiewicz's example, "Caesar is a mature man"). Secondly, various relations may obtain between empirical variables (for example, relations of difference, relations of identity, etc.), just as is the case with mathematical variables. Thirdly, according to Ajdukiewicz, none of the temporal phases adopted by an object persisting through time logically result from the essential features of that object. In other words, from the point of view of the empirical variable itself, individual temporal phases, as

values of this variable, are merely possible. Fourthly, the individual temporal phases of the persisting object may result from the essential features of that object, but only taking into account, *primo*, temporal phases of other objects and, *secundo*, specific relations between empirical variables in the form of laws of nature (*vide* Ajdukiewicz's example regarding the relation between water volume and temperature).

It is not difficult to notice that Ajdukiewicz's view closely reflects the first procedure put forward by Czeżowski. Objects persisting through time are empirical variables here, that is, ultimately, certain sets of momentary objects, hence they are of a higher logical type than the momentary objects themselves. In turn, momentary objects, termed temporal phases by Ajdukiewicz, constitute the values of these variables. In Ajdukiewicz's view, just as in Czeżowski's description, the variables' values are certain essential (characteristic) features, the determination of which goes beyond purely philosophical analysis. These essential features along with the relevant laws of nature, which are brought up by Ajdukiewicz in order to explain both the regularities between variables and the range of possible values of variables, are determined on the grounds of natural science. The very values of empirical variables, that is, the temporal phases of objects, are used to reconstruct the relations of temporal succession and simultaneity. What we do not find in Ajdukiewicz's views is an adequate paraphrase of colloquial sentences about the identity of temporal phases of objects (which according to Ajdukiewicz's reconstruction are simply false), for instance, "Ajdukiewicz at the age of 25 is identical to Ajdukiewicz at the age of 45". One can only infer that such a paraphrase should be available as part of the proposed position, unless we treat all colloquial sentences of this type as meaningless (or, according to the formal reconstruction, as false).

Ajdukiewicz referred loosely to the above position in his "On the Concept of Substance". Therein he indicates one of the possible interpretations of the notion of substance as a set of temporal sections of an object (which, as part of a different approach, is treated as a spatial and temporal solid). The set of temporal sections (that is, an object persisting through time) is treated as a certain *universale* by Ajdukiewicz, and thus, as a secondary substance in Aristotle's sense. Treating an object persisting through time as a secondary substance is rather peculiar since in Aristotle's metaphysics this position is usually occupied by genus and species, not by objects themselves. In my opinion, such an interpretation requires providing a paraphrase of the respective colloquial statements about identity mentioned above, otherwise all such statements would have to be treated as meaningless or, at best, false.

The second method identified by Czeżowski has little affirmation in the works of philosophers from the LWS. Apart from Ajdukiewicz's reading

mentioned above, this tactic is supported by short fragments of *Gnosiology* by Tadeusz Kotarbiński [1929] as well as by the final sentences of Jan Łukasiewicz's "The Principle of Individuation".⁵

When it comes to Kotarbiński, it is difficult to clearly state, based on his text *Gnosiology*, whether at that time he supported this particular interpretation. However, the fact of the matter is that he considered issues related to persistence through time from the standpoint of this approach. In the third chapter of the fifth part of *Gnosiology*, entitled "Natural Sciences", Kotarbiński analyses the traditional notion of substance, detailing three main ways of understanding it [Kotarbiński 1929: 326–331]:

- (a) as something that is inhered in, but which does not inhere in anything else;
- (b) as something that persists through time while maintaining its identity and changing;
- (c) as something that remains after subtracting all features.

Kotarbiński believes that understandings (a) and (b), although different in terms of meaning, overlap in terms of scope. Understanding (c), on the other hand, sets a different scope than the other two. In further analyses, he focuses on the first two, especially on understanding (b). There is no need to summarize all of Kotarbiński's analyses; they mainly concern the interpretative difficulties arising from understanding (b), above all, the difficulties related to an adequate criterion of identity through time, the sharing of common features by momentary objects, and momentary objects having *prima facie* incompatible properties. Generally speaking, these critical remarks lead to a methodological incentive to abandon the use of the notion of substance altogether. However, Kotarbiński's analyses contain at least two interesting observations. The first one is the observation that understanding (b), in order to avoid sounding tautological, has to refer to a different understanding of identity than the one used in logic. Oddly enough, that is not a trivial observation; it suggests that the identity of objects persisting through time is not, according to Kotarbiński, standard identity. This would in fact have to be the case since it is believed that, on the one hand, an object persisting through time is the same object throughout its persistence and, on the other hand, that it is not exactly the same object given that its properties change. Unfortunately, Kotarbiński

5 This text constitutes, among others, a record of a lecture entitled "The Principle of Individuation", presented by Łukasiewicz on July 11th, 1953, as part of the *Berkeley and Modern Problems* symposium organized by the *Aristotelian Society and Mind Association* in Dublin. The text features a polemic with both Karl R. Popper and Elizabeth Anscombe. See also [Łukasiewicz *et al.* 1953: 147].

did not elaborate on his intuitions in this regard. Perhaps he meant some kind of genetic identity, which contains most features of identity but is not – in contrast to identity *simpliciter* – the smallest equivalence relation. The second important observation reveals that plausible reductive criteria of identity through time for material substances that refer to their constitutive parts are unsatisfactory, in that they have to assume either an unanalyzable identity of fundamental parts for these substances or an infinite regress. For Kotarbiński, the above observation motivates abandoning the applicability of the notion of substance, nevertheless this result may also be interpreted differently, namely as a motive for accepting the thesis that the identity of some objects through time is primitive or simply as establishing the limits of conceptual analysis.

A reference to the interpretation of persistence through time we are analyzing here is also found in Ajdukiewicz's short remarks presented in his lecture "On the Concept of Substance", where he distinguishes five understandings of the term "substance". However, Ajdukiewicz believed that all alternative understandings of the notion of substance can ultimately be reduced to the notions of primary and secondary substance in Aristotle's sense. I have already mentioned an approach according to which an object persisting through time constitutes a class of temporal sections (momentary objects) of some temporal and spatial solid, and thus a secondary substance (*universale*). This approach includes the concept of "an unchangeable core of a changing object", specified by Ajdukiewicz [1930: 80]. Nevertheless, Ajdukiewicz allows for the understanding of an object persisting through time as an individual – as a primary substance in Aristotle's sense, hence as a temporal and spatial solid. Interestingly, Ajdukiewicz also allows for an interpretation where the object persisting through time is a temporal part of the substance as a material, "from which the object is made" [Ajdukiewicz 1930: 81]. This approach, which uses the notion of a temporal part, was developed in later texts of representatives of the LWS as a stand-alone interpretation.

As part of the method being discussed, one should perhaps also include Łukasiewicz's short remarks,⁶ although their tone may incline one to treat

6 As Łukasiewicz puts it: "We cannot say that matter is the principle of [Socrates's] individuality; this would only account for his numerical oneness, but does not explain his unity from his birth till his death. The matter of Socrates, his flesh and his bones, are changeable, and drinking the hemlock he was not materially the same when born by Phaenarete. But he always was [*sic*] the same Socrates, son of Sophroniscus and Phaenarete. The principle of his unity and oneness cannot be a materialistic one. The unity of any composite thing requires, in my opinion, a non-materialistic principle, a form or a functor. The number 2 is a unity not because of its matter, but of its form. The number-forming functor 'plus' is the source of its unity. The syllogistic mood *Barbara* is a unity not because of its matter, the terms *a*, *b* and

them as an exemplification of the first strategy. From the passage cited in the footnote, it appears that Łukasiewicz was interested in identifying the *principium individuationis* for objects persisting through time. Hence, the principle of individuation had for him not only synchronic but also diachronic value. Łukasiewicz was not suggesting that objects persisting through time are some second order object, universals, or classes of other objects – they are primary substances in Aristotle's sense. What is significant for Łukasiewicz's approach is that the factor grounding the identity of the object through time cannot be material; it must be a formal element, a relational component of the object's formal, ontic structure that determines its identity through time. Although Łukasiewicz does not develop his ideas further in the text, he stresses that this factor cannot be – for explanatory reasons, among others – any material element, and certainly not any material part of the persisting object, as it notoriously undergoes qualitative and mereological changes.⁷

The third method indicated by Czeżowski, the one referring to the concept of temporal parts, initially appeared in texts by Leśniewski and Ajdukiewicz; it was then at least *implicite* accepted on the grounds of reism. Leśniewski played a particularly important role here; in the text *On the Foundations of Mathematics* [Leśniewski 1931], he introduced the notion of a temporal part in order to explain some possible overinterpretations in relation to the semantics of the formal system of his Ontology. Since the matter is of particular importance, let me fully quote the relevant fragment of Leśniewski's text. He clarifies therein a certain possible interpretative difficulty that may arise in connection

c, but because (of the principal functor 'if-then' which being a proposition-forming functor gives together with the other functors to this mood its unity in form of an implication. The human body consists of an innumerable quantity of small material particles, whether of atoms, electrons or something else, this must be left to the physicists, but man is a unity and it is impossible to explain his unity by material things. Any individual man has an inner structure, like any number or syllogistic mood, and this structure is built up by means of relations denoted by functors. Among these relations there must be a principal one which accounts for the unity and oneness of an individual man and remains the same through-out his whole life" [Łukasiewicz *et al.* 1953: 81–82].

7 One of the suggestions, given by Popper, is to interpret the said element of the structure as a relation of genetic identity (genidentity). Popper, however, rejects this suggestion, among others, due to the fact that the exact definition of the field of the relation of genidentity requires the prior assumption of the identity of an object persisting through time, an object the temporal parts of which remain (as it were *ex post*) connected by the relation of genidentity. What is more, equivalence classes from relations of genidentity (certain *continua*) cannot be identified with objects persisting through time for certain fundamental reasons. Cf. [Łukasiewicz *et al.* 1953: 114–115].

with the possibility of entwining relevant temporal qualifications in subject-predicate propositions. The passage reads as follows:

In connection with the passages of Kotarbiński's work dealing with propositions in which "with the assistance of the present, the past or the grammatical future" of the indicative forms of the words "to be" one wishes to lay stress in ordinary language on the present, the past or the future of whatever is talked about, and in discussing a "treatment" of these propositions in which "the time mark would be transferred from the copula to the subject or predicate", there comes to my mind a certain typical difficulty which will come as a surprise to anyone who wishes to use propositions of the type "*A is b*" in his colloquial language in a way which harmonizes with the use of propositions of the type '*Aε b*' in my ontology. This difficulty would appear e.g., if he were to assert successively, as may happen, that

- (a) Warsaw is older than the Saski Garden,
- (b) Warsaw of 1830 is smaller than Warsaw of 1930,
- (c) Warsaw of 1930 is Warsaw, and
- (d) Warsaw of 1830 is Warsaw;

from theses (a)-(d) and the aforesaid thesis (13),⁸ whose 'symbolic' equivalent I began to use, as noted, in 1920 as the sole axiom of ontology, such a person could easily reach the following consequences:

- (e) if *A is a*, and *B is A*, then *B is a* (results from (13)).
- (f) if *A is a*, *B is A*, and *C is A*, then *B is C* (from (13));
- (g) Warsaw of 1930 is Warsaw of 1830 (from (f), (a), (c) and (d));
- (h) Warsaw of 1930 is smaller than Warsaw of 1930 (from (e), (b) and (g)).

Thesis (h) is, of course, an ordinary absurdity. Analysing the premises which lead to this absurdity, I should mention here the following: anyone who uses the expression "Warsaw" and wishes to do so consistently, has to decide what he will denote by the use of that expression and in particular he must not vacillate in his linguistic usage between two "intruding" interpretations: the first, in which there is just one object possessing a definite time dimension yet unknown to us, i.e., concerning "Warsaw from the beginning to end of its existence" one could rightly say that it is Warsaw, but it is not possible to call Warsaw any time-slice or any "section" of the time of the one Warsaw mentioned, and consequently in

8 The version of the axiom given by Leśniewski in the discussed text reads as follows: *A is a* when and only when $\{(\text{for some } B, B \text{ is } A), (\text{for any } B \text{ and } C, \text{ if } B \text{ is } A \text{ and } C \text{ is } A \text{ then } B \text{ is } C) \text{ and } (\text{for any } B, \text{ if } B \text{ is } A \text{ then } B \text{ is } a) \}$. See [Leśniewski 1931: 369].

this interpretation neither the so-called Warsaw of 1930 nor the so-called Warsaw of 1830 have any right to the name “Warsaw”, being time-slices of “Warsaw from the beginning to the end of its existence”, although the name “time-slice of Warsaw” could be applied to them; the second – in which there are many different objects, in particular “Warsaw from the beginning to the end of its existence”, “Warsaw of 1930” and “Warsaw of 1830”, of which one can rightly say that they are Warsaws, and in which one can assert quite generally, that if some object is Warsaw, and another object is a time-slice of the first object, then the second object is Warsaw also.

LEŚNIEWSKI 1931: 379–381

Leśniewski then shows that if the name “Warsaw” meant Warsaw from the beginning to the end of its persistence, and thus a certain spatial and temporal conglomerate of temporal parts, propositions (c) and (d) from the above reasoning could not be true. On the other hand, if the denotation of the expression “Warsaw” were a set of Warsaw’s temporal parts, then thesis (a) – which, on the basis of Ontology, implies the claim that at most one object is Warsaw – would not make sense.⁹

From the point of view of this paper, the above reasoning is not relevant in and of itself; the fact that it introduces the terminology of temporal parts is important. This terminology is essential, at least *prima facie*, for preserving the coherence of the semantic intuitions hiding behind the formalism of Ontology.

It seems that these intuitions were also entertained by Kotarbiński, who, in the text “The Fundamental Ideas of Pansomatism” [Kotarbiński 1935], *explicitly* used the notion of a temporal part of an object in the sense of a thing in itself. This fact is noted by both Dariusz Łukasiewicz [2009: 23–25] and Barry Smith [(1990: 161–163] in their analyses. Interestingly, Ajdukiewicz [1948], who previously clearly preferred the first method presented by Czeżowski, also declared his openness to the currently discussed theory of temporal parts:

Every object in time, hence also every object undergoing changes, has not only spatial but also temporal dimensions. There are many predicates which we can predicate of some of its temporal parts only but not of others, just as there are predicates which we can truthfully predicate of some but not all of its spatial parts. [...] The same applies to the ageing Socrates. We can say of him that in his early years he is young and that

9 For further comments see e.g. [Sinisi 1983: 57–58].

he is not young in his later years; or that in his old age he is bald and that he is not bald when young. These sentences attribute a property to some temporal segments of an object known as Socrates and deny it to some other temporal segments of the same object. But they do not refer to the same object, since each refers to a different temporal segment of Socrates.

AJDUKIEWICZ 1948: 207–208

The historical illustrations presented above correspond directly to the methods provided by Czeżowski. However, these are not, as I have mentioned, complete illustrations. In his work, Czeżowski mentions that he learned of each method primarily through direct contact with other representatives of the LWS. In retrospect, it should be noted that many of the Polish thinkers' views in this area have never materialized in the form of more systematic analyses and texts. Czeżowski's retrospective work makes up for this deficiency only in part.

4 Instead of Conclusions: Idiosyncrasies

The views of the representatives of the LWS on persistence through time coincide, to a large degree, with positions present in the contemporary debate in analytic philosophy. However, I do not intend to identify and describe these similarities. Instead I would like to focus on certain differences between contemporary approaches and the proposals of LWS philosophers; namely, those that, first of all, speak to the specificity of Polish analyses and which, second, deserve to be included in today's disputes around persistence.

The first idiosyncrasy of this type is allowing – within the framework of the first and the second method specified by Czeżowski – for an object persisting through time to be an object of a higher logical type relative to momentary objects. Treating this object as a set, and in particular, as is the case in Ajdukiewicz's work, as an empirical variable, suggests some sort of transcendence of objects persisting through time relative to time itself. Similarly, in the case of the second strategy, an object persisting through time is *de facto* an essence embodied in every one of its corresponding momentary objects. Such a solution is not found in contemporary interpretations of endurantism. Although in perdurance theories, there is talk about an object persisting through time being a set of relevant temporal parts, this set is always interpreted in terms of mereology, not in terms of set theory. The possibility of a transcendental and formal understanding of the notion of an object persisting

through time (e.g., as an empirical variable) is a peculiar element that could certainly enrich contemporary disputes.

In connection with the above idiosyncrasy, another one arises. Namely, according to Czeżowski, the first two interpretations of an object persisting through time are entangled in the dispute between universal realism and nominalism. In the nominalist interpretation, only momentary objects are treated as real, while their set is at most a useful fiction. Meanwhile, the realist interpretation suggests the reality, if not the ontic primitiveness, of this set. This controversy manifests itself, for instance, in legal practice, when someone faces justice to answer for once committed acts. A nominalist will suggest that the person being tried is in fact somehow related by heritage to the perpetrator from many years ago, but they are not identical, hence the defendant cannot bear full responsibility for past actions. A realist, on the other hand, will point out that both the perpetrator from many years ago and the present defendant belong to the same set: the set of an object persisting through time. And it's precisely this object, through these momentary objects, that is both the perpetrator and the possible recipient of the sanctions. It is clear that the resolution of this dispute is relevant to the question of who, strictly speaking, is the addressee of past actions and subsequent sanctions.

The third idiosyncrasy that should be noted concerns the mereological conception of persistence through time. This peculiarity can only be ascertained based on Czeżowski's text itself; unfortunately, it is difficult to find its affirmation in either Leśniewski's or Kotarbiński's texts. Nevertheless, as Czeżowski himself admits, he reconstructed the third method not only on the basis of published works, but also based on information obtained directly from said authors. Recall that on the third interpretative strategy, an object persisting through time constitutes a mereological sum of momentary objects, with the sum being of the same logical type as these momentary objects. Although no momentary object as a temporal part of a sum can be identical to any other temporal part of this sum, all such parts are parts of the same sum that remains identical at all times. On the basis of this conception, there is no need to relativize properties to time (properties that have temporal parts and their sum do not require temporal indexing); there is also no need to employ the notions of essential property, essence, or set. This is a standard perdurantist interpretation. What seems to be peculiar within the framework presented by Czeżowski concerns the interpretation of human action. Namely, supporters of the mereological approach, wanting to consistently maintain the analogy between spatial and temporal parts of objects, have to recognize that when one of my temporal parts acts, *de facto*, the whole of me acts, from the beginning to the end of my existence, employing, as it were, my temporal part as a tool (just

like when I employ my spatial parts, e.g., my hands).¹⁰ This interpretation is important insofar as it supports the intuition that temporal parts are not “full-blooded” subjects of action – only relevant sums of temporal parts can be these subjects, namely, in this case, a person from the beginning to the end of their persistence. This interpretation also supports the idea that the sums of temporal parts are characterized, at least *prima facie*, by a certain ontic primitiveness with respect to their components. It should be mentioned that the idiosyncrasy indicated here does not occur – at least not *explicite* – in contemporary perdurantist positions.

The fact that some ideas of the LWS philosophers have not completely lost their relevance has been confirmed by Zdzisław Augustynek’s subsequent research on the concepts of persistence and genidentity. It is not difficult to discover in them the ideas contained in the first method reconstructed by Czeżowski, for Augustynek was inclined to claim that objects persisting through time are certain sets, namely, that they are equivalence classes under the relation of genidentity in a set of all point events.¹¹ Peter Simons, an outstanding expert on LWS history, espouses a similar idea today.

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10 Cf. [Czeżowski 1951: 223].

11 Cf. [Grygianiec 2011b: 56]. As I have already mentioned, it remains debatable as to whether these objects can be in fact seamlessly identified with equivalence classes. A less contentious solution is treating these equivalence classes as representations of objects at the level of formal description without claiming ontological identification.

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PART 4

Truth and Usefulness



Absoluteness of Truth and the Lvov-Warsaw School

Twardowski, Kotarbiński, Leśniewski, Łukasiewicz, Tarski, Kokoszyńska

Jan Woleński

Abstract

According to Twardowski, truth is if it is independent of temporal coordinates. This understanding was one of the main arguments against truth-relativism. Kotarbiński rejected this view as far the issue concerns sentences about the future, but he did not elaborate this idea from a logical point of view. Leśniewski offered an argument that truth is eternal if and only if it is sempiternal; Twardowski shared this opinion. Łukasiewicz rejected sempiternality but retained eternity. His main novelty consisted in applying three-valued logic to explain how it is possible that truth is not sempiternal. Łukasiewicz also pointed out that bivalence together with the principle of causality implies radical determinism. Kotarbiński accepted Leśniewski's criticism and he defended Twardowski's view in *Elementy*. Tarski did not explicitly address the problem of absoluteness or temporality of truth. On the other hand, Kokoszyńska proposed an interpretation of the semantic theory of truth as absolute. It is possible to justify absoluteness of truth in semantics *cum* the principle of bivalence and show that bivalence does not imply determinism.

Keywords

Absoluteness – eternity – sempiternality – temporality – truth – truth-bearers

The concept of truth was one of the most important philosophical topics investigated in the Lvov-Warsaw School (LWS for brevity).¹ Most philosophers

1 The text was prepared as part of the project 2016/23/B/HS1/00684 "Kazimierz Twardowski's place in Polish culture and European philosophy", financed by the National Science Centre (Poland).

belonging to this group defended the absoluteness of truth.² I selected Kazimierz Twardowski, Tadeusz Kotarbiński, Stanisław Leśniewski, Jan Łukasiewicz, Alfred Tarski and Maria Kokoszyńska as the most significant authors offering interesting logical argument for alethic, that is, pertaining to truth, absolutism and against truth-theoretic relativism.³ In most cases, I will not review truth-definitions proposed by the mentioned philosophers (a comprehensive account of related definitions can be found in [Woleński & Simons 1989]).⁴ In general, Twardowski and his most students accepted the classical truth-definition. Perhaps the following scheme captures the basic intuition:

(*) A truth-bearer (sentence, proposition, statement, judgment, etc.) is true if and only if *A* says that it is so and so and it is so and so.⁵

The scheme (*) was in LWS concretized in various ways, for instance, by the formula “the sentence of the form ‘*a* is *b*’ is true if and only if the object denoted by the term *a* possesses a property expressed by the predicate *b*”. Note that LWS generally avoided the label ‘the correspondence theory of truth’ as misleading.

Twardowski, influenced by Bolzano and Brentano, offered classical arguments against relativism (see [Twardowski 1900]). He did not define the concept of truth (at least in [Twardowski 1900]) and simply identified truth with true proposition. His main problem concerns the question whether truth is absolute or relative. According to Twardowski an utterance *A* is absolutely true if and only if *A* is true at all times, all places and all conditions, but *A* is relatively true if and only if *A* is true at some times, some place or certain conditions. Twardowski mentioned the following examples of relatively true utterances:

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- 2 But not all. Edward Poznański and Aleksander Wundheiler were the most notable exceptions. They proposed in 1934 a variant of the consensus theory of truth as more accurate for the philosophy of science.
 - 3 One should also mention Kazimierz Ajdukiewicz, Tadeusz Czeżowski and Zygmunt Zawirski who also belonged to the logical wing of LWS. However, they did not developed new separate argument for alethic absolutism. Władysław Tatarkiewicz or Izydora Dąmbska opted for the absoluteness of truth from the point of view of axiological or/and epistemological absolutism.
 - 4 I will also not compare views about the (alethic) absolutism/relativism controversy advanced in LWS with ideas proposed in other philosophical circle.
 - 5 In what follows, I will use the unified terminology; in particular, the nouns “proposition” and “sentences” are employed, even if original terminology employed the verb “judgment” or “statement”; I sometimes use the noun “utterance” in order to be terminologically neutral.

- (1) It is raining in Lvov today.
- (2) This flower has a pleasant smell.
- (3) Cold baths are healthy.
- (4) It is morally wrong to conceal truth.

According to standard arguments of alethic relativism, (1) can be false tomorrow, even if it is true today and, moreover, can be true in Lvov, but false in Cracow; (2) is (or can be) true for some persons and flowers, but false for other persons or flowers; the truth-value of (3) depends on who uses cold baths; and, finally, (4) is a derivative of moral views. Consequently, sentences, according to relativists, can change logical values dependently on times, places or circumstances.

Twardowski did not agree with the above account. First of all, he distinguished propositions and sentences. The former, but not the latter are proper bearers of truth. On the other hand, sentences frequently have not fixed meaning, because indexicals, temporal and spatial coordinates, occur in them. An appeal to special changing circumstances constitutes another reason for having inexact meaning by sentences. If we eliminate elements generating having inexact meanings by sentences, we obtain complete sentences expressing fixed propositions. Thus, (1)-(4) become:

- (1') It is raining in Lvov at the time t .
- (2') This flower smells pleasantly for the person P .
- (3') Cold bath is healthy for the person P .
- (4') According to the moral view M , it is morally wrong to conceal truth respectively.

Converting incomplete sentences into propositions, complete by definition, result in possessing definite logical values by the latter. One can eventually speak about truth or falsehood of sentences, if it is known which propositions are expressed by them. Twardowski offered two other arguments against alethic relativism. Firstly, relativism confuses truth of A and the knowledge that A is true. Secondly, this view violates the principle of the excluded middle and the principle of non-contradiction, which are the fundamental laws of logic. However, this principles should be applied not to sentences, but to propositions. If A is a proposition, not- A is as well. Now, A and not- A cannot be both true and exactly one from this pair is true, but the second is false. Twardowski did not mention any representative of relativism in 1900. In [Twardowski 1924–1925], he exemplifies alethic relativism by the account of truth proposed by pragmatism.

It is convenient to introduce some terminology related to Twardowski's considerations with respect to temporal aspects of having logical values by propositions being their bearers. We say that truth and falsity are omnitemporal,

that is, if A is true (false), then A is true (false) at every time (and reversely, of course). A is sempiternally true (false) if and only if provided that A is true (false) at time t , it is also true (false) at every time earlier than t .⁶ Finally, A is eternally true if and only if, provided that it is true at time t , it is also true at every time later than t . A very interesting question consists in the relation of absoluteness of truth to its omnitemporality, sempiternality and eternity.

In 1913 took place a very hot debate between Kotarbiński and Leśniewski. The former (see [Kotarbiński 1913]) defended eternity of truth, but rejected its sempiternality. His concerns was the possibility of creative human action. According to Kotarbiński, the existence of a such action is inconsistent with sempiternality of truth. Consequently, he admits eternal truths which are not sempiternal. Consider an object O created by a human action in time t . Clearly, O does not exist before t . Kotarbiński, following Brentano, defines truth by the following formula:

(5) A proposition A affirming an object O is true if and only if O exists; A is false otherwise.

Now, if O does not exist, A is neither true nor false. Consequently, A cannot be true or false and it is indefinite. By contraposition, A is definite if and only if A is true or false. Consider the following statements:

(6) For any A , either A or not- A is true.

(7) For any A , A is true or false.

(8) For any A , if A is true, not- A is false.

as possible forms of the principle of the excluded middle. If we adopt that A is true is equivalent with A is not-false, (4) and (5) express the classical excluded middle. However, the admission of indefinite sentences is at odds with the equivalence of 'true' and 'not false'. Consequently, (6) and (7) have a restricted validity, contrary to (8) which is universal. These considerations lead to

(9) For any A , A is definite or A is indefinite.

as a generalized (or modified) the principle of the excluded middle. Clearly, is fully consistent with qualifying some propositions as neither true not false, but just indefinite.⁷

6 We can also say that truth (falsity) is predetermined if it is sempiternal (I will omit the reference to falsity in most further remarks). It immediately suggests a connection of properties of truth with the perennial problem of determinism and indeterminism. However, this question was not touched in Polish discussions about alethic absolutism and relativism. I will omit the reference to falsity in most further remarks.

7 Kotarbiński is sometimes regarded as a forerunner of many-valued logic. See [Woleński 1990] for further remarks. Perhaps one remark is in order. Kotarbiński suggest nothing about the nature of indefinite propositions. In particular, he does not explains whether the indefiniteness should be considered as an additional logical value of a truth-value gap.

Leśniewski very strongly criticized Kotarbiński's account of truth tolerating indefinite propositions. He sarcastically remarked (see LEŚNIEWSKI [1913], p. 104, page reference to English translation):

No truth can be created! The need to stress and energetically instill this view in others is growing now that, at the present stage of development of Polish "philosophy", voices claiming that truths are created are clamoring even more loudly. It is not only the protagonists of all sorts of "Pragmatism", "Humanism", "Conventionalism", "Instrumentalism", "previdionism", etc. that speak of the "creation" of truths, i.e. not only the representatives of these "philosophical" trends according to whom a judgment "becomes" true: if it is useful for the preservation of the species; if it is an effective instrument of thought; if it assists in predicting reality, etc. That is not only those for whom, like for the Greek sophist Protagoras and the Polish sophist Florian Znaniecki, "man is the measure of all things" and thus a "measure of truth". Slowly, truth begin to become "created" even by the representatives of the camp which has gathered at the Lvov University around Professor Kazimierz Twardowski; that is the camp, whose members have for such a long time believed that a judgment is ALWAYS absolutely truth, i.e. that is true independently of whether it is useful or damaging; whether it helps to forecast the future or not; whether a scholar felt like "creating" the given truth and he did, or refrained from such "creation", etc. NO TRUTH CAN BE CREATED!

LEŚNIEWSKI 1912: 104

Although Kotarbiński is not mentioned in the above quotation, Leśniewski alludes to him as a person going against one of the most characteristic doctrines of Twardowski's school.

Leśniewski presented in his essay a very detailed criticism of Kotarbiński's view that some truths are eternal but not sempiternal. According to Leśniewski, a sentence (he used the nominalistic language in his works) of the type '*a* is *b*' is true if and only if the object signified by the term *a* has a property signified by the predicate *b*. It is just the case that the sentence possesses the function of symbolizing. Two conditions must be satisfied for possessing this function. Firstly, the term *a* cannot be empty, and secondly, the predicate *b* must connote a property of the object denoted by the subject term. If these conditions are satisfied, if *A* is true, not-*A* is false. This suffices for grounding the law of the excluded middle for sentences possessing the function of symbolizing; this principle is violated by sentences with empty terms, because if *a* is empty, '*a* is *b*' as well as its negation are false. Thus, although Leśniewski does not

consider the excluded middle as a universally valid principle, he also rejects indefinite sentences. Assume that if a sentence A is not false it is also not true. According to Leśniewski's semiotic claims, this sentence fails to possess a function of symbolizing and it simultaneously does not possess such a function. Leśniewski argues that these assumptions produce a contradiction. I will not reproduce Leśniewski's proof (by *reductio ad absurdum*) that a contradiction actually follows from premises adopted by Leśniewski (see [Woleński & Simons 1898: 401–402]); this paper shows that Leśniewski argument is incorrect and must be supplemented by additional premises, where one can find which additional premises are to be add). The most important Leśniewski's result is following one:

(10) A is eternal if and only if it is sempiternal.

Due to (10) every truth is omnitemporal. It is important to note that Leśniewski used only classical logic. I will return to this problem at the end of the present paper.

Although it was 1913 and no non-classical logic was suggested to copy with the problem of sempiternality and eternity of truth, Leśniewski-type arguments can be used by everybody who maintains that classical logical rules are sufficient to argue for the absoluteness of truth (see also below). Kotarbiński accepted Leśniewski's criticism and resigned from indefinite propositions and the view that truth can be eternal, but not sempiternal. In [Kotarbiński 1929] he repeated Twardowski's arguments against relativism and considered truth as an absolute property of sentences (he also became a nominalism). Twardowski himself (see [Twardowski 1923–1924]; this paper was written about 1913)) joined Leśniewski in his criticism of Kotarbiński. Leśniewski did not return to the problem of temporality of truth in his later writings. However, he proposed (see [Leśniewski 1931]) certain interpretation of the phrase

(11) ' a is b ' is true at time t .

Leśniewski proposed to read (11) as

(12) ' a is b at time t ' is true.

This allows a simple interpretation of tensed sentences as absolutely true or false, because the letter t is a parameter, not functions as a variable. It also seems that constant Leśniewski's opposition against many-valued logic was motivated by his strong feeling that truth is omintemporal.

Łukasiewicz's standpoint toward alethic absolutism and relativism is connected with many-valued logic ([Łukasiewicz 1922], [Łukasiewicz 1930]). His discovery of this kind of logic was strongly motivated by the question of determinism and indeterminism. Łukasiewicz argued that two-valued (bivalent)

logic supplemented by the principle of causality implies strong determinism.⁸ Consider the simplest case, namely three-valued logic. Future contingencies, that is sentences about future events exemplify those sentences which are neither true nor false in the moment of their issuing. Let A be such a sentence. We have (the symbol $v(A)$ means “the value of a sentence A) = $v(\text{not-}A) = \frac{1}{2}$ ”). This sentence became true or false in the future. Otherwise speaking, sentences with the third value, denoted by the fraction $\frac{1}{2}$ become true or false.

Now the question arises whether Łukasiewiczian semantics implies alethic relativism. Clearly, truth is not sempiternal on Łukasiewicz’s views, because if A is a future contingency and $v(A) = 1$ at time t , it can have another logical value in moments earlier than t . On the hand, if A becomes true (or false) at time t , it remains true (or false) for ever. Consequently, truth is eternal, although not sempiternal. According to Łukasiewicz, this consequence is coherent with alethic absolutism, because (I use another language than Łukasiewicz’s did) this view concerns changing truth of A into falsity but not becoming A true. The property of eternity makes truth stable and it suffices for alethic absolutism.

Two remarks are in order here. Firstly, we should distinguish strong absolutism and weak absolutism. The former considers truth as omnitemporal (sempiternal and eternal), but the latter attributes to truth eternity only. Leśniewski was a strong absolutist but Łukasiewicz accepted the weak form of alethic absolutism. Secondly, we can state a generalized version of the discussed problem. Typically, absolutism and relativism are discussed with respect to truth. Adding falsity does not create any specific problem. The situation changes, when we take into account other logical values, for instance, the third value in Łukasiewicz’s semantics. Examples suggest that it is not eternal. On the other hand, if we accept that not possibilities will be realized in the future, at least some neither-truth-nor-falsehoods can be eternal with respect to their logical values. Similar considerations concern sempiternality of the third value. It seems that various ontological circumstances can influence specific semantic properties of sentences having other logical values that truth or falsity.

Tarski did not explicitly address himself to the philosophical problem of alethic absolutism.⁹ However, he mentioned the (see [Tarski 1933: 199]) that the concept of correct (or true) sentence in an individual domain, used in the Hilbert school, is of a relative character. Hence, he indirectly suggested that

8 Logical determinism is the view that (strong) determinism follows from the principle of bivalence. According to Łukasiewicz logic does not suffice for justify determinism from.

9 Jan Tarski, Alfred’s son, told me once that his (Jan’s) father considered absoluteness as a very important property of truth. However, it could be that (Alfred) Tarski was thinking about an ethical problem, not epistemological one.

the semantic definition of truth as formulated in [Tarski 1933] is absolute. However, it only means that the absolutist semantic truth-definition is formulated for the entire domain D of individuals. Speaking more philosophically, this domain can be identified with the world in its integrity.¹⁰ Now, if someone selects a sub-domain $D' \subset D$, a relativized concept of truth is obtained. At least three reasons justify an analysis of the semantic concept of truth as related to the alethic absolutism/relativism problem. Firstly, Tarski explicitly considered his truth-definition as an answer to an epistemological issue. Hence, we can try to address typical epistemological problems to the definition in question, even if Tarski was silent about them. Secondly, Tarski relativized truth to a language. Thirdly, Tarski implicitly in TARSKI [1933] and explicitly in his later works, relativized truth to a model M .

Summing up the second and third point, Tarski's analysis concerned the phrase

(13) a sentence A of a language L is true in a model M .

And now we encounter the question whether (13) implies that truth is relative.

It was Kokoszyńska (see [Kokoszyńska 1935a], [Kokoszyńska 1935b], [Kokoszyńska 1948] and [Kokoszyńska 1951]) who offered an absolute interpretation of the semantic definition of truth.

According to Kokoszyńska the predicate 'is true' is incomplete and can be qualified in various ways, for examples, by reference to circumstances C . A sentence A is relatively true if and only if there exist circumstances C and C' such that A is true with reference to C and not- A is true with reference to C' . This relativism is proper. It can be radical, provided that for every sentence A , A is true with reference to circumstances C and its negation is true with reference to circumstances C' , or moderate, provided that we have to do with truth-relativity of some sentences only. Moreover, we have improper relativism consisting in relativisation to models (possible worlds). More specifically, if A is true in one model, let say M and not- A is true in another model, let say M' , this situation leads to improper relativism. Although proper relativism tolerates the change of logical values of all or some sentences, dependently of circumstances, improper relativism entails the stability of truth and falsity in models.

Kokoszyńska's views require some comments and supplements. First of all, she précised Twardowski's criticism of alethic relativism. In fact, she repeated Twardowski's arguments in setting them as using the concept of circumstance as a general relativiser. Secondly, Kokoszyńska assumed classical logic. Her

10 However, it is very likely that Tarski was thinking about mathematical domains and their subdomains.

definition would qualify so-called dialetheias, that is, pairs of sentences of the type “ A and not- A ” which can be true, as true. Paraconsistent logic (more precisely, one of its versions) admits dialetheias. Hence, we have a problem how paraconsistent logic is related to the absolutism/relativism distinction. If d is a dialetheia with A and not- A as its members, both components of d can be true in the same circumstances. This means that paraconsistent logic (with dialetheias) does not imply even moderate dialethic relativism. I note this problem without entering into its more detailed analysis. Thirdly, many-valued logic proper moderate relativism, because if $v(A) = \frac{1}{2}$, it becomes true or false dependently of some circumstances. It suggests that improper relativism considers truth (falsity) as omnitemporal and should be qualified as absolutism.

Kokoszyńska understood sentences as equipped with fixed meanings. Consequently, she could resign from the distinction (maintained by Twardowski) of sentences as incomplete utterances and thereby not prop[er truth-bearings) and propositions as items with complete meaning and being proper truth-bearers. This observation indirectly leads to a Twardowski-like reading of Tarski. The latter defined the concept of truth via the notion of satisfaction. Usually we speak about satisfaction of open formulas (formulas with free variables). For example, the formula “ x is a logician” is satisfied by Tarski, but not by Heidegger. Sentences are formulas without free variables, for instance, “Tarski is a logician” or “There is such x , that x is not a logician”. Tarski’s ingenious observation was that if sentences (closed formulas) are can prove that for any sentence (a closed formula) A is satisfied by all infinite sequences for a model M or is satisfied by no such sequence, it is natural to define truth of A as its satisfaction by all sentences and its falsity as satisfaction by no sequences.¹¹ Now we can interpret sentences in Twardowski’s sense as open formulas. In fact, the utterances ‘it is raining today’ and ‘it is raining here’ mean ‘it is raining in time x considered as today’ and ‘it is raining in the place x considered as here’.¹² Consequently, we open formulas are relatively true (false) depending on circumstances (interpretations of free variables), but sentences are absolutely true, because (see note 10) their logical values

11 A warning. Sequences of objects are not to be understood as facts. The former are a technical device used in the semantic truth-definition. The basic intuition behind defining truth via satisfaction is that if A is a sentence, its logical value does not depend on valuation of bound variable (other not occur in sentences). Philosophically speaking, truth and falsity depends of how things are in a model M assuming that sentences having logical values have fixed meanings. Tarski’s claim that his definition is applicable only to interpreted languages should be interpreted as an assumption that meaning are given in advance.

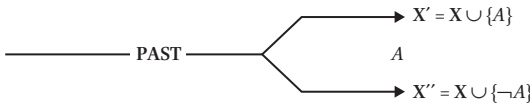
12 Of course, interpreting indexicals as hidden free variables is nothing new.

are conditioned by the structure of models (possible worlds, etc.). Now, one could eventually observe that models are circumstances.¹³ Thus, if we intend to interpret the semantic definition of truth as absolute, we need to justify that M in the phrase ‘a sentence A is true in a model M ’ is not a circumstance in Kokoszyńska’s sense.

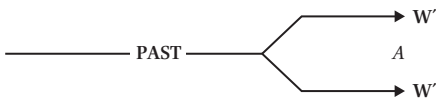
Here is an argument that relativisation of truth to models is consistent with absolutism understood as the thesis that truth is omnitemporal (I follow WOLEŃSKI [2015]). The argument concerns future contingencies, that is, sentences which can be true or false in the future. I will identify possible worlds with models of maximally consistent sets and use the concept of branchability (ASSER [1972], 168–169) as defined by (‘iff’ stands for ‘if and only if’):

- (14) (a) a set X of formulas branches at a formula A iff the sets $X \cup \{A\}$ and $X \cup \{\neg A\}$ are consistent;
- (b) a set X is branchable iff there is a formula A at which X branches;
- (c) a set X is branchable iff X is a consistent and incomplete set of sentences.

Let X be a consistent set of sentences and A be a sentence independent of X . Thus, due to the independence of A with respect to X , this set is incomplete and the sets $X' = X \cup \{A\}$ and $X'' = X \cup \{\neg A\}$ are consistent. Consequently, the conditions listed in (14) are fulfilled and X branches at A . Note that we do not need to assume that the sets X' and X'' are maximally consistent. The diagram (Δ) provides a scheme of this situation:



Let A be a sentence uttered at t fixed as present and refers to a contingent future event (this means that X is branchable, that is A is independent of X). Assuming that X consist of all truths about the past, it is consistent ($PAST$ is its model), and X' and X'' are consistent as well and they have models W' and W'' respectively. We change the diagram (Δ) into (Δ')



13 [Suszko 1957] and [Haack 1978] interpret Tarski’s original definition (that is, from [Tarski 1933]) as absolute, but the predicate ‘is true in M ’ as expressing a relative concept of truth.

PAST can be considered as the initial segment of both W' and W'' . Otherwise speaking, W' and W'' enlarge PAST; intuitively PAST comprises everything what happened until the moment t (including this moment itself). Moreover, W' and W'' are parts of different possible worlds, that is, models of consistent sets. They are different, because the world W' validates A , but the world W'' verifies $\neg A$. PAST can be identified with the initial segment of the real world W^R , which grows through time. Depending on what will actually happen in the future, PAST will enlarge to W' or W'' (for simplicity, I neglect further possible future cases of branching).

Truth-conditions for future contingencies can be easily stated by applying the standard possible world semantics associated with classical modal logic. In particular, sentences about future contingent facts are modals with the possibility operator \diamond . Suppose that $\diamond A$ is such a sentence. It is true in the real world W^R if and only if A is true at least in one possible world accessible from W^R (in fact, PAST generates the accessibility relation); denote this world by W' . Consequently, due to the contingency of the fact described by A , the sentence $\diamond A$ is true in W^R if there is a possible world W'' in which $\neg A$ is true is true. The world W' and W'' are just (different) worlds suitable for validating $\diamond A$ and $\diamond \neg A$ in the real world. Assume that A is true in the future. This means that A is true in W' . However, since PAST and W' are segments of W^R , A cannot be false in PAST. So if A is true, its truth is omnitemporal. Similar reasoning concerns the situation in which $\neg A$ is true.¹⁴ Now we can return to Leśniewski claim expressed by (10). Assume that A is true at a moment t . At first, we will prove that sempiternality entails eternity. If A is true sempiternally, it is true at every $t' \leq t$. Since the branching moment is critical, we assume that t is just this parameter. Consequently, A is true in W' or A is true in W'' . Furthermore, A is true in $M' = \text{PAST} + W'$ or A is true in $M'' = \text{PAST} + W''$. This implies that $\neg A$ is false in $M' = \text{PAST} + W'$ or $\neg A$ is false in $M'' = \text{PAST} + W''$. Clearly, A cannot change its logical value in a model belonging to $\{M', M''\}$ without producing inconsistency. Thus, if A is sempiternally true, it is eternally true as well. To prove the converse implication, suppose that A is eternally true, that is, if A is true at t , it is also true at any moment $t' \leq t$; of course, A is true in W' or W'' and *a fortiori*, in M' or M'' . Consider a moment $t'' \leq t$. Assume that A is false at t'' . This means that A is false in PAST. However, this implies that A is false in M' or M'' , contrary to our earlier assumption. Thus, if A is eternally true, it is sempiternally true as well. This closed the proof that A is sempiternally true if

14 This argument also refutes the view that classical logic entails strict determinism.

and only if A is eternally true. Thus, truth in a model is omnitemporal and the semantic definition of truth defined the absolute concept of truth.¹⁵

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15 This conclusion must meet the existence of non-standard models. Let T be an arbitrary consistent set of first-order sentences. Due to the Löwenheim-Skolem it has a non-standard model. The situation cannot be generally solved by going to higher-order logic. The only possibility to defend the view defended in this paper (and following the main tradition of the Lvov–Warsaw School) consists in saying that the problem consists of how to select the standard model, but not the absoluteness of truth. Putting this in another words: truth in every model is absolute, but the criteria of selecting standard models are pragmatic and conventional to some degree. If we select the standard model M as fixed, truth in M is absolute, but truth in non-standard models can be considered as relative but only relatively to our choice (see [Przełęcki 1969]).

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Pragmatism and Pragmatic Motives in the Lvov-Warsaw School

Anna Brożek

Abstract

The aim of this paper is to sketch the resonance of pragmatism in the Lvov-Warsaw School and to indicate some motives of pragmatic thought which were analyzed and developed by the members of the School independently of any other influences. Thus, in §2, I focus my attention on the question of whether the works of pragmatists were known and commented on by Polish philosophers. In §3, I demonstrate some interpretations of a crucial idea of pragmatism provided by members of the Lvov-Warsaw School. This paragraph also presents some concepts connected to pragmatism which were analyzed by Kazimierz Twardowski and his students independently of the pragmatists' influences. In "Appendix", I add some information on early Polish reception of pragmatism outside of the Lvov-Warsaw School.

Keywords

Criteria of truth – pragmatism – truth – Kazimierz Twardowski – Lvov-Warsaw School

1 Introduction¹

A detailed elaboration of all "pragmatic motives" in the Lvov-Warsaw School (hereinafter: the School or LWS) may not be presented in one paper, so I have to limit the scope of my analysis. The first limitation is made on the list of pragmatists discussed in Poland. By no means was William James the most frequently discussed and translated representative of the movement. However, ideas of Charles Sanders Peirce were also noted, frequently they were

¹ The text was prepared as part of the project 2015/18/E/HS1/00478 "Philosophy from the Methodological Point of View", financed by the National Science Centre (Poland).

presented as being in opposition to those of James.² Finally, the philosophy of Ferdinand Caning Scott Schiller was recognized in Poland as parallel to that of the American current.³

In the case of pragmatism as a philosophical conception, I will concentrate on one of the central ideas of it (at least in the eyes of the LWS's members), namely the idea which connects the truthfulness of convictions with the effectiveness of actions. Moreover, I will characterize some ordinary concepts involved in this idea: the definition, bearers and criteria of truthfulness, its properties, and finally the "pragmatization" of logic and methodology.

Some limits in the scope of the LWS should also be introduced.⁴ Usually, Kazimierz Twardowski as well as his direct and indirect students are counted among the members of the LWS. One may even propose a quasi-inductive definition of this formation:

- (1) Kazimierz Twardowski is a member of the LWS.
- (2) If A is a member of the LWS and B is a student of A , then B is also a member of the LWS.

Of course, the definition becomes useful only if we specify the criteria of being-a-student. Certainly, in order to be a student of X , one not only has to have contact with X but should also be (positively) influenced by X . In the case of the LWS, the most important elements of this influence were of a methodological nature. Students were taught, first of all, to respect the postulates of precision and justification. At first sight, these postulates seem like the basic postulate of any academic work. However, they were taken particularly seriously in the LWS. The tool applied for achieving precision and justification was more or less broadly understood logic.

The time borders of the School are a disputed question. It is easy to indicate the starting point, which was Twardowski's coming from Vienna to Lvov

2 Let us add that the logical works of Peirce were quite well known and appreciated by representatives of the logical branch of the LWS. For instance, Jan Łukasiewicz called him "an excellent American logician" and many times he emphasized Peirce's contribution to various areas of logic, namely to the theory of deduction, to the matrix method of checking the formulas of propositional calculus and to the theory of relations. Moreover, Łukasiewicz referred to Peirce's law of propositional calculus: $CCCpqqp$ [In bracket notation: $(p \rightarrow (q \rightarrow (p \rightarrow p)))$]. Peirce's influence on Polish logicians was elaborated on by Hiż [1997].

3 I omit here possible influences or parallelisms between the members of the LWS and other European manifestations of pragmatic thought, such as Mach's standpoint (see, for instance, [Stadler 2017]). However, let me note that Twardowski detected similarities between Perceian-like pragmatism and Avenarius' and Mach's conception of the economy of thinking [1925: 229].

4 This issue is discussed in more detail in "Closing Word" to this volume.

in 1895 to take a professorship in philosophy. The ending point is more difficult to indicate. If we take the LWS in its broad sense, there are still some living members of it, since there are still some grand-grandstudents of Twardowski which continue the tradition. However, even if we take the School in its narrow boundaries (that is, including only Twardowski, his students and students of his students until last of them died),⁵ it numbered over 120 years. That is why I will make one more limitation in the analysis of the pragmatic motives in the LWS. Namely, I will take into account, first of all, Twardowski and some of his early and close students: Władysław Witwicki, Jan Łukasiewicz, Tadeusz Kotarbiński and Kazimierz Ajdukiewicz. I will also concentrate only on those pragmatic motives which appeared in the first three decades of the 20th century. What happened later, I will take into account only when it is a reference to previously crystallized ideas.⁶

2 The General Attitude of the LWS's Representatives to Pragmatism

2.1 *Polish Translations of James's Works*

The ideas of the pragmatists appeared in Poland in the form popularized by James. One testimony of James's significance are early translations of his works into Polish. This is the list of these translations with the dates of the first original edition and the first Polish version:

- (1) The Dilemma of Determinism (1884; then included into the book *The Will to Believe*) – in Polish in 1911 as “Dylemat determinizmu” (transl. by Władysław Mieczysław Kozłowski).
- (2) The Will to Believe (1896) – in Polish in 1901 as “W obronie wiary” (transl. by Wincenty Kosiakiewicz).⁷

5 This date is marked by the death of Jerzy Pelc, the longest living philosopher who was a student of Kotarbiński. With this assumption, the duration of the School is 1895–2017.

6 Therefore, for example, I do not take into account the remarkably interesting opinions of Tadeusz Czeżowski (considered the most “Twardowskian” pupil of Twardowski) from 1948, viz., from his book *O metafizyce, jej kierunkach i zagadnieniach* [On Metaphysics, Its Trends and Problems]. There is in this book, among others, an important note that pragmatism (James) conceives of REALITY so widely that it includes “all beliefs which guide us in the scientific or practical field” [Czeżowski 1948: 52] – all of them are, therefore, also erroneous and unjustified.

7 The translation was published under the auspices of the journal *Przegląd Filozoficzny* [The Philosophical Review]; the editor of the journal was Władysław Weryho. This publication included only the first essay of James's book under this title. Other essays were to be published in Polish in the planned volume *Szkice popularno-filozoficzne* [Essays in Popular Philosophy], announced by the editors of *Przegląd Filozoficzny* on the cover of the volume

- (3) *The Varieties of Religious Experience* (1902) – in Polish in 1918 as *Doświadczenia religijne* (transl. by Jan Hempel).
- (4) *Pragmatism* (1907) – in Polish in 1911 as *Pragmatyzm* (transl. by W.M. Kozłowski).
- (5) *The Meaning of Truth* (1909) – in Polish in 1911 as *Probiez prawdy* (transl. by W. Kosiakiewicz).
- (6) *A Pluralistic Universe* (1909) – in Polish in 1911 as *Filozofia wszechświata* (transl. by Władysław Witwicki).

The last translation was prepared by Władysław Witwicki, a member of the LWS. However, positions (1)-(5) were not inspired by the activity of the School and also the earliest reception of pragmatism in Poland took place outside the LWS. This earliest reactions of Polish philosophers to pragmatism are sketched in the *Appendix*.⁸

2.2 *Twardowski's Impulse*

Generally speaking, Twardowski and his students were interested in the pragmatists' ideas but they expressed many reservations concerning the style of their writings. The last concerned, first of all, James's works.

Twardowski was a follower of Brentano who never ceased to be interested in psychology and was naturally interested in James's ideas. The Brentanian psychology followed by Twardowski was essentially different from James's conception of a string of consciousness in which one state passes into another: presentations, judgements, acts of will etc. The aim of Brentano and his followers was to establish what the elements of this string are and what the differences between them are. James was convinced that they cannot be strictly distinguished. However, Twardowski sympathized with James's broad understanding of psychology as the theory of psychic (or spiritual) life (see [Twardowski 1897]).

Many traces of Twardowski's interest in James's theory of truth may be found in some late Twardowski's lectures: *Theory of Knowledge* [Twardowski 1925]. In these lectures Twardowski proposed a detailed analysis of the pragmatic conception of truth. He states that such an approach to the problem of truth is common for American pragmatism together with other standpoints

Wobronie wiary; but they did not finally appear. At the same time, the publication of James's *Szkice psychologiczne* [Psychological Essays] was promised, which was supposed to be a translation of his *Talks to Teachers on Psychology* (1899); for some unexplained reasons this volume did not appear either.

8 The problem does not belong to the main subject of this paper but there are no many elaborations on the subject.

known under the labels “pragmatism”, “instrumentalism”, “humanism” and “voluntarism”, the main common feature of these ideas being that “they are closely connected to actions” [Twardowski 1925: 231]. Commenting on James’s work, Twardowski declared that “in the chaos of James’s statements” he tried to “find some sense” [Twardowski 1925: 243] but it was difficult since James’s thought was far from clarity.

It is interesting to note that in his lectures on James, Twardowski referred to James’s *Pragmatism* (in English) as well as to the German translation prepared by Jerusalem (in German) but not to the Polish translation by Kozłowski.⁹ The reason was Twardowski’s low evaluation of this translation or, on the other hand, his high esteem of Jerusalem’s interpretation of pragmatism.¹⁰ However, Twardowski had all the Polish translations of James’s works in his private library (currently located in the Library of the Faculty of Philosophy at the University of Warsaw).

Many years before preparing these lectures, Twardowski encouraged his students to study and translate James’s works. This concerned the second and the third of Twardowski’s students that prepared dissertations under his supervision, namely Witwicki, a future psychologist (PhD in 1901) and Łukasiewicz, a future formal logician (PhD in 1902).

2.3 *Witwicki as a Translator of The Pluralistic Universe*

As Teresa Rzepa states [1999: 121], Twardowski persuaded Witwicki, the co-founder of the Lvov School of Psychology, to translate and elaborate on James’s works in about 1910. In 1911, Witwicki’s translation of *The Pluralistic Universe* was ready [James 1909b]. The same year, Witwicki gave a few lectures on James

9 Twardowski did not have a good opinion about Kozłowski’s translation (and about Kozłowski himself as a philosopher). Twardowski’s opinion on Kosiakiewicz’s translation was similar. As has been noted by a close student of Twardowski, Dąmbska, Twardowski quoted this translation “while changing and correcting that translation in numerous places”. Cf. Dąmbska’s footnote to [Twardowski 1925], p. 226. Admittedly, the adequacy of translations is of particular importance in the case of pragmatism – and works on pragmatism. In the English translation of Twardowski’s *Theory of Knowledge*, the phrase “znaczenie myśli jakiejś” is translated in a key place as “significance of any thought” instead of “meaning of any thought”, which may lead to a misinterpretation of Peirce’s semiotic concepts. Cf. [Twardowski 1925], p. 225.

10 Since Jerusalem is considered a Viennese pragmatist, it is an interesting question to analyze his reception in Poland. Here, let me only note that his *Introduction to Philosophy* was translated into Polish and had three editions before World War II (the first edition in 1910; see [Jerusalem 1899]).

in Warsaw¹¹ and in 1913, his comprehensive study of James's thought [Witwicki 1913] was published in the journal *Przegląd Filozoficzny*.

By expressing his general opinion of James's works, Witwicki emphasized the methodological insufficiencies:

James himself confesses in *The Pluralistic Universe* that logical clarity is not his ideal, that his worldview is woolly and unclear [...]. [Such a standpoint] is difficult to accept for people who have learned or has had a natural tendency to accept only those convictions in their domain that they are able to justify. And to justify does not mean to live according to a given statement or to feel comfortable by considering this statement, as James wants, but to justify means to indicate the straight logical connection from given statements to axioms or to incisively stated facts.

WITWICKI 1913: 24

If James undermined the severity of Aristotle's logic without ambiguous expressions and with its strictness, by its own tools, he could really shake its grounds.

WITWICKI 1913: 33–34

Witwicki's interests in James left an imprint on the Polish philosopher's work both in the area of his studies and his style. Witwicki was moved (rather negatively) by James's investigations of religious experience. In the 1920s and 1930s, Witwicki himself started to examine the problem of religious beliefs, just as James had some years earlier. The bases of Witwicki's research were interviews with believing and at the same time educated people. His main thesis was that for educated people, faith is composed not of convictions but rather of weak suppositions. The results presented in the book *La foi des éclairés* were so controversial that Witwicki decided not to publish it in Poland. The book appeared first in France [Witwicki 1939] and a Polish version was published only after World War II.

James's influence on Witwicki's style was equally significant. Rzepa [1991] states that Witwicki's style of writing became a synthesis of the strict,

11 At that time, there was no university in Warsaw and philosophy was taught only in private courses. Witwicki's lectures took place at a "Philosophical week" organized by Weryho. The University of Warsaw, closed by Russian occupants, was reopened in 1915 by... German occupants.

substantial style of Twardowski and the loose, figurative style of James.¹² Not only *La foi des éclairés* but also, for instance, Witwicki's textbook *Psychologia* [Psychology] [Witwicki 1925–1927] represents this “syncretic” style.

2.4 *Łukasiewicz's Opinion of Pragmatism*

Jan Łukasiewicz, the third doctor of philosophy supervised by Twardowski and the future famous logician, also had a short period of interest in James's work. This was in the first, psychological stage of his philosophical development. In 1908, at a meeting of the Polish Philosophical Society in Lvov, Łukasiewicz presented a lecture on James's *Pragmatism* [Łukasiewicz 1908]. A summary of this lecture was published in the main Lvov philosophical journal *Ruch Filozoficzny* [Philosophical Movement]. In this publication, Łukasiewicz mentions Peirce's article [1897] as the initial point of American pragmatism and James and Dewey as living representatives of the movement. He notes the similarities of Schiller's humanism to the pragmatists' ideas. Finally, he discusses James's lectures published as *Pragmatism* (and the German translation) and concentrates on the pragmatic conception of truth.

Łukasiewicz comments on James's book went as follows:

The book brings many fresh, vivid ideas but it is not clear enough from the logical point of view. That is why it has to be read very critically.

ŁUKASIEWICZ 1908

2.5 *Recapitulation*

Generally, these early reactions to pragmatism in the LWS show that members of the LWS were interested in pragmatism but evaluated it rather critically. This was, first of all, because the pragmatists' works did not meet the requirements accepted in the LWS (the aforementioned postulates of clarity and justification).

However, this critical opinion was accompanied with an appreciation of some ideas which they considered worth of being elaborated on in detail. The reasons for this interest were not merely general popularity. The fact that the pragmatists were trying to undermine the classical definition of truth seemed more important. The problem of truth, its definition and criteria were one

12 In the aforementioned paper [Witwicki 1913] Witwicki devotes a lot of space to James's style. His comments are a mixture of irritation and esteem. On the one hand, Witwicki was trained by Twardowski in a substantial and strict style and generally agreed with the postulate of precision. On the other hand, he was aware that the style of writing was one of the main reasons for James's popularity.

of the main interests for the members of the LWS from the very beginning. Twardowski's main paper on truth "On So-Called Relative Truths" was published in 1900 and his views on the subject were so influential that almost all members of the LWS declared for the absoluteness of truth. (The only exception was Poznański-Wundheiler's conception presented in 1935, which is close to instrumentalism and pragmatism; however even these authors were not sure whether they should use the term "true" in reference to the concept they were identifying.)¹³ In the first years of the 20th century, the majority of works on truth, including Tarski's famous paper [1933], had yet to appear but anything that concerned the problem of truthfulness was welcomed with curiosity. It seems, however, that Twardowski and his students felt safe in their positions and did not find in the pragmatic conception any decisive arguments against their own view.

3 The Pragmatic Formula Concerning Truth from the Point of View of Twardowski and His Direct Students

I would now like to submit a little more detailed analysis of how the selected members of the LWS ascribed to a pragmatic formula concerning truth. (I use here the term "pragmatic formula concerning truth" (or "pragmatic formula" in short) instead of "pragmatic conception of truth" because I do not want to prejudge the methodological status of it.)

3.1 *Some Introductory Distinctions*

It is often stressed that pragmatists' intuitions are expressed loosely and vaguely. That is why, just as in the case of many other philosophical terms, the term "pragmatism" as well as the term "pragmatic" are ambiguous.

Władysław Tatarkiewicz, the Polish historian of philosophy working in the orbit of the LWS,¹⁴ commented on this fact as follows:

Pragmatism aimed at making the ideas clear and univocal, but the very idea of pragmatism was neither clear nor univocal.

TATARKIEWICZ 1950a: 198

¹³ Cf. [Poznański & Wundheiler 1935]; see also [Koterski & Uebel 2017].

¹⁴ Tatarkiewicz was not Twardowski's formal student. However, he expressed his esteem of the way philosophy is taught in Lvov and willingly counted himself among the members of the LWS. See below: "Closing Word" to this volume.

Sometimes, in order to make a given philosophical idea more clear, one comes down to the source of this idea, namely to its initiators. This method is however not very useful in the case of pragmatism. It is said that there are two founders of pragmatism: Peirce and James. The problem is that the philosophical views and attitudes of these two philosophers were essentially different.

The differences between their standpoints were characterized by Tatarkiewicz as follows:

Peirce aimed at strictness in philosophy, James at directness. Peirce considered the order that philosophy introduces as its greatest value, James emphasized its richness and individuality. Peirce was an enemy of relying on faith just like James was an enemy of skepticism. Peirce reacted with aversion to unexplainable matters while James was convinced that all matters in their essence are unexplainable. James popularized philosophy and Peirce wanted to introduce such sophisticated terminology that would discomfit incompetent people. Peirce wanted to introduce a kind of experiential method to philosophy, James wanted it to become close to life. [...] Peirce [was convinced] that pragmatism as presented by James was suicidal and in order to distinguish it from his own standpoint he called James's view "pragmaticism". [...] Peirce, introducing pragmatism, wanted to consider the usefulness of theses as a criterion of truthfulness but he had in mind their THEORETICAL usefulness. James, on the contrary, according to his activist attitude, understood it as usefulness in/for behavior.

TATARKIEWICZ 1950a: 196

Let us confront these two conceptions:

Peirce	James
enemy of faith	enemy of skepticism
aversion to what is unexplainable	conviction that everything is unexplainable
professionalism (special terminology)	popularization (metaphorical language)
theoretical usefulness	practical usefulness
approach to experimental disciplines	approach to life

The contrasts are so clear that it is surprising that Peirce and James are listed in one breath as representatives of the same philosophical movement.

However, in the most general approach, one may say that pragmatism connects two spheres: the sphere of knowledge and the sphere of action: theory and practice. Peirce's version of the so-called pragmatic formula seeks connections between the adequacy of concepts and their scientific usefulness. In the broadly understood pragmatic conception of truth, one joins the truthfulness of convictions with the effectiveness of actions based on these convictions. Besides these general statements, it is difficult to indicate any other theses that would be accepted by the two of them, Peirce and James, not to mention all pragmatists.

The main difficulty is the very loose manner of expressing thoughts and the plurality of acceptable interpretations in results. Let us look at some of these interpretations and take a few possible and simplified interpretations of the pragmatic conception of truth as examples.

In the strongest form (from logical point of view), the pragmatic intuitions may be expressed in the form:

- (1) "The conviction P is true" means the same as "the action based on the conviction P is effective".

In this form, the effectiveness of actions based on convictions is a definitional property of truthfulness or, in the essentialist approach: it is an essential property of truthfulness.

Formula (1) may be weakened in various ways, for instance in the following form:

- (2) Conviction P is true if and only if actions based on P are effective.

Formula (2) is somehow weakened with respect to (1) because the effectiveness is here a necessary and sufficient condition of truthfulness but not definitional feature of it. In some approaches, it is possible that effectiveness of actions accompanies all and only true sentence but still is not an essential property of these convictions.

Let us look at two other weakening formulas:

- (3) If the conviction P is true, then an action based on conviction P is effective.
 (4) If an action based on conviction P is effective, then the conviction P is true.

Formula (3) states that the effectiveness of actions is only a necessary condition and formula (4) states that it is just a sufficient condition. If we accept (3) but not (4), then we believe that some effective actions are (or may be) based on false convictions. On the other hand, if we accept (4) but not (3), then we have to agree that there are (or can be) some true convictions such that the actions based on these convictions are not effective.

Let us add, moreover, that the pragmatic conception of truth may be expressed also in the following, the weakest formula:

- (5) The fact that an action based on conviction P is effective usually coincides with the fact that conviction P is true.

Here, the effectiveness of actions is simply a favorable condition of truthfulness. All formulas (1)-(5) may be taken into consideration as admissible interpretations of pragmatists' intuitions. But they are at the same time essentially different. For instance, it seems that only interpretation (1) cannot be coordinated with the classical definition of truth.

This is however only the beginning of interpretation problems. The further issues concern what true convictions are, what it means that action is based on conviction, when it is effective etc.

Now, let us analyze the interpretations of the pragmatic formula by members of the LWS. The order of presenting these interpretations is approximately chronological. (I take into account the date of publication of analyzed works or – in the case of unpublished lectures – the date of their delivery.)

3.2 *Łukasiewicz (1908 and 1913)*

Let us start with the earliest published paper on our subject in the LWS, namely the short report by Łukasiewicz [1908]. His comments on Peirce's initial ideas are somehow full of sympathy:

Peirce starts with an assumption that convictions are the foundations of actions. In order to develop the meaning of a given conviction or an idea or a thought, one should indicate the mode of actions or procedures which follow from this thought. The most subtle distinction of thoughts has to be reflected in some "practical" difference, namely in difference in action and this difference is a tangible fact at the base of any real and not only apparent distinction of thoughts.

ŁUKASIEWICZ 1908: 389

Łukasiewicz stresses here that Peirce's transposition of thought to action serves the clearness of ideas. However, James and Schiller put emphasis on the concept of truth:

Contemporary pragmatists are concerned mostly with the concept of truth and they consider those convictions true which enable us to act smoothly, conveniently, without obstacles.

ŁUKASIEWICZ 1908: 389

In another paper [Łukasiewicz 1913], Łukasiewicz shortly explained why the pragmatic conception of truth is incorrect. According to him, pragmatism applies the concept of truthfulness to “scientific syntheses” (hypotheses that explain the data of experience) and mistakenly takes criteria of accepting these syntheses as criteria of truthfulness:

Scientific syntheses consist of two kinds of judgements: the first correspond to individual facts and in syntheses there are usually consequences; the second, general judgements, are reasons. Judgements of the first kind must be true; judgements of the second kind are the constructive elements and they fulfill certain practical functions: they frame many facts into one whole, organize them and explain them; they enable us to predict the future; they are used to control nature. These judgements belong to science, although usually we cannot justify their truth.

Pragmatism considers these very constructive judgements as scientific truths and hence, as a criterion of truth, it takes on a practical value. This view is wrong and pragmatism as a theory of truth has no scientific significance.

ŁUKASIEWICZ 1913

Let us note that the Łukasiewicz’s standpoint concerning the status of scientific hypotheses (that their truthfulness may not be established) was expressed earlier by Twardowski in “On the So-Called Relative Truths” [Twardowski: 1900].

3.3 *Witwicki (1913)*

In his paper on James’s pragmatism, Witwicki calls the pragmatic conception of truth “paradoxical”:

James’s name is famous. A dozen or so years ago, his physiological conception of feelings became popular, but it sounded like a paradox: it is not the case that a man cries because he is sad but he is sad because he cries. Recently, a lot is being said about his pragmatism. His theory is paradoxical again: it is not the case that some judgements lead us favorably through life because they are true and others draw unpleasant consequences because they are false but some judgements are true just because they lead to favorable practical consequences and others are false just because they draw practical failures.

WITWICKI 1913: 22

Further, Witwicki shows that strong interpretation of pragmatic formula, namely identification of the truthfulness of a conviction with efficiency or the favorable effects of an action based on this conviction is an evident misunderstanding. He writes:

For instance, the Ems Dispatch led Germans to great vital consequences; it was useful. It put them on the road to victorious war – but it was and it still is a downright falsehood. On the other hand, the most fatal consequences may result for a consumptive from his conviction that he suffers from consumption and despite this, such a judgement is true. So truthfulness is something different than life importance.

WITWICKI 1913: 28

Witwicki explains James's standpoint via the psychological roots of James's view. His hypothesis is that James thought of human cognition just like on any other human behavior and considered it from a biological and behavioral point of view:

Our cognition should be divided in the same way as we divide all reflexes from a biological point of view for there is no true or false cognition, but only useful and harmful cognition. What is useful is just true, what is harmful is just false. Hence, it is easy to tolerate contradictory theses. Believe in the devil or in God: if it serves you, it is your truth.

WITWICKI 1913: 30

Witwicki states that James accepts contradictions even in his own writings. Some examples of these more or less apparent contradictions from James's works are listed in Witwicki's article.

3.4 *Ajdukiewicz (1923, 1937, 1949)*

Kazimierz Ajdukiewicz, Twardowski's son-in-law and one of his favorite students, showed also interest in some pragmatic ideas. Ajdukiewicz, similarly to Twardowski and Łukasiewicz, emphasized that the mistake of pragmatists consists in confusion of the essence of truth with the criteria of truth. This is his explanation of what criteria of truth are:

The term "criterion of truth" is used to distinguish true cognitions from false ones. For instance, many find the obviousness which accompanies judgements a criterion of truthfulness. By saying that obviousness is a criterion of truth, one expresses the thought that judgements which are

obvious are also true: a criterion of truthfulness is a property of our cognitions whose presence we are able to state and which is a sufficient but not necessary condition of the truthfulness of this cognition.

AJDUKIEWICZ 1923: 92

So, the criteria of truth are sufficient and cognizable conditions of truth. In light of this, let us look at Ajdukiewicz's reconstruction of pragmatism:

PRAGMATISM [...] is not a homogeneous doctrine and its adherents define "truth" in various different ways. In its radical form pragmatism contends, as a point of departure, that the truth of a given assertion consists in its agreement with final criteria. However, these final criteria are considered by pragmatism, in its radical form, to be the utility of a given assertion for action. Hence the definition IDENTIFYING THE TRUTH OF A GIVEN ASSERTION WITH ITS UTILITY.

AJDUKIEWICZ 1949: 16

In short recapitulation of pragmatic tendencies, Ajdukiewicz proposed to interpret them as follows:

A cautious interpretation of pragmatism consists in attributing to its representatives the thesis that theories are not true in the same sense as sentences about facts, but that the "truth" of theories lies in compatibility of their consequences with facts. In any case, pragmatism emphasizes the biosociological role of cognition.

AJDUKIEWICZ 1937: 259

Let us also mention here two later "pragmatic" traits of Ajdukiewicz's thought. The first is his concept of a conceptual apparatus which may be connected to pragmatist ideas.¹⁵ The second is his project of pragmatic logic and methodology.

Ajdukiewicz used to say that for all of his life he tried to write a really good logic textbook. His posthumously published work was entitled *Pragmatic logic*. In the "Foreword" to this book, Klemens Szaniawski wrote:

The title of this book marks a strong connection to scientific practice and is an expression of the opinion that the task of a methodologist is, first of

15 See [Ajdukiewicz 1934]; see also [Grobler 2008], pp. 54–55.

all, a codification of methods which are really applied in the sciences and justification of these methods with respect to the goals that the sciences aim to.

SZANIAWSKI 1974: 10

Pragmatic logic is a logic close to human's thinking and acting, it is not only an empty construction but a tool applied both in science and everyday thinking. It is necessary to stress that pragmatic aspects of logic are complementary to the problems of formal logic and that Ajdukiewicz never minimized the importance of the latter.¹⁶ He also introduced the distinction between metascience (which concerns scientific disciplines as results, ready sets of sentences) and (pragmatic) methodology (concerning science as actions of scientists). Also in this case, he was convinced that the problems of methodology are of equal importance as the problems of metascience.

Ajdukiewicz's idea of the pragmatization of logic was not the only sign of pragmatic tendencies in the methodology of the LWS. In general, this approach may be expressed as follows: The value of a theory may be measured by its connections to practice. The closer this connection is, the better the theory is. A theory that has no connections to reality is worthless. The postulates of "pragmatization" were formulated in the LWS first of all in reference to logic. The sudden development of mathematical logic which led to the foundation of the Warsaw School of Logic, provoked Twardowski to criticize those logicians that take theory discipline away from its practical applications, that withdraw from taking logic as the theory of strict thinking and correct reasoning and that treat it simply as playing with symbols. Twardowski presented these theses the most strongly in his paper "Symbolomania and Pragmatophobia" [Twardowski 1921].

He characterized logicians overwhelmed by symbolomania as follows:

[They are those who] hold that should the result attained by applying the symbolism diverge from the convictions that are held independently of the symbolism, the latter must yield to the former. Indeed they seldom come to grips with that conflict, for they forget that the symbols symbolize something – occasionally, they even deny it outright. They therefore make no attempt at all to interpret the results shrouded in symbolic garb.

TWARDOWSKI 1921: 262

16 That is why Ajdukiewicz's ideas should not be ranked together with Schiller's criticism of logic. However, the relation between these two approaches requires further examination.

The pragmatic motive here is the emphasis on interpretation of symbols, or, as pragmatists would state, practical applications. This aversion to interpretation of symbolic formulas is called by Twardowski “pragmatophobia”. A given (logical) theory in pragmatophobes’ hands is only a “senseless, purely formal combination” [Twardowski 1921: 263].

3.5 *Twardowski (1925)*

In the aforementioned *Theory of Knowledge*, Twardowski repeats that the problem of pragmatists is that they do not distinguish the essence of truth from the criteria of truth and that they take criteria for the essence. He wrote:

A belief may be useful because it is helpful in our life for achieving ends. For example, someone believes himself capable of performing some sort of activity. He steps forth with self-confidence, takes on tasks that someone else is reluctant to undertake, and achieves in this fashion favourable results, etc.

TWARDOWSKI 1925: 229

In Twardowski’s opinion, such psychological facts are an argument only for the thesis that *A*’s conviction that *p* is sometimes useful for *A* independently of whether ‘*p*’ is true or not. But to call useful convictions “true convictions” is a misunderstanding. This is a modification of the sense of the term “truth”. Twardowski comments:

What does the entire meaning of humanism and pragmatism amount to? Is it merely just one great terminological confusion? No, it is, among other things, a confusion, but not an exclusively terminological one, and not exclusively a confusion. First of all, the confusion lies in the fact that it confuses the definition of the truth of judgements with the criterion of their truth. Everything that pragmatism regards as a definition is a criterion.

TWARDOWSKI 1925: 239

In Twardowski’s opinion, the differences between Peircean and Jamesian-Schillerian pragmatisms is significant. He characterizes Peirce’s standpoint as follows:

This is the fundamental thought expressed by Peirce in [1878]. According to him, the significance of any thought lies in the action to which it leads. In wishing to assess the difference between two views pertaining to the

same matter, we ought to analyze what differences will result from our conduct depending on whether we accept the one or the other.

TWARDOWSKI 1925: 225

While Schiller's and James's views were reconstructed by the Lvovian philosopher in such a way:

[According to Schiller] a thought is true which is CONDUCTIVE to our purposes and is false if it thwarts them [...]. Or, according to James [...] [the thought] is true insofar as faith in it proves USEFUL for our living. These two formulas are not of course one and the same thing. But they concur in emphasizing the practical consequences of the beliefs they agree in calling true: those judgements whose consequences are useful, propitious.

TWARDOWSKI 1925: 229

These differences should be marked by different terms: "moral pragmatism" and "theoretical pragmatism":

One does [...] speak of a moral pragmatism (i.e. one that is focused on usefulness in activity) and of a theoretical pragmatism (i.e. one focused on usefulness in thinking or research).

TWARDOWSKI 1925: 229

The differences between moral and theoretical pragmatisms lie, among other places, in the understanding of the truth-bearer and practical consequences. Twardowski wrote the following of James's approach:

In speaking of truths, James has in mind beliefs accepted as true. He has in mind truths in the sense of one saying, for example, that a believer accepts many truths which do not exist for the non-believer, or that some truth was short-lived. These so-called truths we accept and acknowledge, however, just as long as they are not challenged by reality. [...] If that is how we treat the matter, many of James's statements lose their paradoxical character. Then one can at once agree that truth is not anything that is independent of us, but that man creates it – that is, man creates beliefs and accepts them, regards them as true.

TWARDOWSKI 1925: 238

In Twardowski's opinion, James did not think of truthfulness as a logical value of sentences or judgements in a logical sense but (at least sometimes) he

thought about the psychological fact of accepting. According to Twardowski's action-product distinction, when we use the term "conviction" or "judgement" we may have in mind both some psychical action and the product of this action. The judgement-products (and sentences which express the content of them) are bearers of truthfulness/falsehood *sensu stricto*. Acts of judging are neither true nor false in this sense.

In order to make all the distinctions more clear, it is better to use metalanguage expressions. One should differentiate between a given sentence, for instance "I know a lot about pragmatism" and the fact that somebody accepts the sentence "I know a lot about pragmatism". The sentence "I know a lot about pragmatism" may be accepted even by a person that knows almost nothing about it and *vice versa*: such a sentence may not be accepted by a (modest) expert in pragmatism.

Now, the difference between the truthfulness of judgement-results and the quasi-truthfulness of judgement-actions may be seen even more clearly through the prism of their consequences. Generally speaking, it is the difference between the logical consequences of certain sentences (which express the contents of judgement-products) and the motivational effects of some psychological facts (for instance, judgement-acts). When we speak of the theoretical usefulness of true judgements, one has in mind, first of all, the logical consequences of judgement-products. When we speak of practical usefulness, we have in mind the motivational effects of having such-and-such beliefs.

What are the consequences of sentences or judgements? Firstly, there are logical and semantic consequences. For instance, a logical consequence of the sentences "If something does not support a body, then it falls on the ground" and "This book is a body" is the sentence "If this book is not supported, then it falls on the ground". From among many possible logical consequences of sentences, one may distinguish those which concern future and observable states of affairs. Such sentences are used to verify theses. (For instance: "If a body is not supported, it falls on the ground"; "This book will be not supported in a second" – "This book will fall on the ground in a second".) It is also known that some scientific statements are theoretical bases of technology – for instance, of construction of more or less complicated devices. The efficiency of such devices, just like the occurrence of the facts foreseen by a theory, is considered justification of this theory.

In one of its variants, pragmatism is a conception in which empirical verification and application in technology is considered a criterion of truthfulness. Philosophers of science are aware of the weak points of such an approach. For instance: the same set of facts may confirm many different theories. However, some pragmatists would say that as long as two sentences have the same observable consequences, they may be considered identical.

Practical consequences so understood, namely LOGICAL practical consequences (logical consequences that may be confronted with reality), should be distinguished from the motivational consequences of accepting some sentences as truths. From among different causes of our actions (psychical and psychophysical) there are causes that are mental actions and these causes are called “motives”. If speaking of the practical consequences of conviction-actions, one may just have in mind actions motivated by convictions. These are some examples of such consequences (similar to those given by James):

John believes that Mary loves him – John starts to love Mary.
 John believes that God exists – John respects ethical commandments.
 John believes that God exists – John sees the sense in his life.
 John believes that he can do the exercise correctly – John does the exercise correctly.

Twardowski shows that James, at least in some contexts, mistakenly identifies judgments and their practical consequences with such kinds of pairs.

3.6 *Digression on Ingarden (1926)*

Twardowski's lectures, quoted above, took place at the University of Lvov in the academic year 1924/1925. In the next academic year, at the same university, a series of lectures titled *The Most Outstanding Contemporary Trends of The Theory of Knowledge* was given by Roman Ingarden, a philosophical grandson of Brentano, one of the greatest Edmund Husserl's disciples, influenced to some degree by the LWS but not a “true” member of the School.

A good part of this lecture was devoted to James's pragmatism. This lecture became the basis of Ingarden's book *U podstaw teorii poznania* [Foundations of the Theory of Knowledge], the first (and only) part of which appeared only in 1971.

In his lectures, Ingarden presented only “the manner in which pragmatism solves the problem of the objectivity of cognition and [...] the most important objections to this solution” [Ingarden 1971: 144]. Ingarden included the pragmatist position in his so-called (by himself) psychophysiological epistemology, because the cognitive subject is treated in this position as a psychophysical individual living within the real world. The specificity of pragmatist epistemology is, according to Ingarden, based on the idea that when studying cognitive processes, one should take into account that “they remain at the service of the actual and possible action of the cognizing individual and are ADAPTED to its requirements” [Ingarden 1971: 145].

The process of cognition acquires a number of properties that it would not have had if it were to obtain a selfless cognition. In close relation to this, not only is there a different description of [...] cognitive processes, but there are also different definitions of the concept of truth, or rather, cognition. [...] The “classical” concept of understanding the truth (objectivity) [...] should be rejected, in the opinion of pragmatism, above all because it is completely unhealthy in the theory of cognition. By using it you can never decide whether in a particular case a certain cognitive outcome is true or not because in order to settle this, one must be able to compare the properties of the object of cognition that they actually have with the content of cognition, respecting what properties are attributed to it in the considered cognition. [...] Therefore, let us give up this notion of truth and replace it with others.

INGARDEN 1971: 145–146

[On the basis of pragmatism] *de facto* the notion of verifiability, or rather, the criterion of truth substitutes the place of the concept of truth.

INGARDEN 1971: 147

As the main mistake of pragmatism – and psychophysiological epistemology in general – Ingarden points the assumption that determining whether the content of cognition (or the sentence expressing it) is adequate to reality, is possible only by comparing these things. According to Ingarden, this can be done differently – but discussing how, goes beyond the scope of this digression.

3.7 *Kotarbiński*

Tadeusz Kotarbiński, another early student of Twardowski (PhD in 1912) is known for work in three domains: logic and ontology (reism), ethics (independent ethics of trustworthy protector) and praxeology (the theory of efficient action). It is this latter area that made him close to pragmatic thought. Already the first Kotarbiński's book, *Szkice praktyczne* [Practical Essays], published in 1913, contained a set of lectures on various areas of philosophy of action.

In the previous paragraph, in reference to the Twardowski's analyses, the problem of the logical consequences of some sentences (out of which some may be confronted with reality) and the psychological (strictly speaking: motivational) consequences of accepting a given statement was discussed. Can the term “practical consequences” have another meaning? The problem of connections between the theory and the practice was analyzed in detail by Kotarbiński. For instance, in his book *Elementy teorii poznania, logiki formalnej*

i metodologii nauk [Elements of the Theory of Cognition, Formal Logic and the Methodology of the Sciences] (translated into English as *Gnosiology*), Kotarbiński pointed to the fact that pragmatists do not examine what it means that a given conviction “leads” to a given action. He wrote:

[Pragmatists] hold that truth is nothing other than that property of a judgement that leads to effective actions. Since, however, there are many examples of people, who, guided by a notorious assumption, have reached their goal successfully, and of other people, who, guided by unquestionable truth, have achieved nothing, it turns out that the general formula should be given more precision, if it is to prove tenable. [...]

And what is meant, in the pragmatist formulation, when it is said that truth “leads” to effective actions? Does this refer to developing ideas of plans of effective action? Or does it refer to the fact that one passes from a true thought to a plan of effective action by means of correct reasoning? Or does it simply refer to some stimulation to effective action? Perhaps the effectiveness of actions “based” on a true judgement, while not being a truth itself, is merely a consequence of truth that consists in accordance with reality? Such and similar doubts undermine confidence in pragmatism.

KOTARBIŃSKI 1929: 106

Kotarbiński was interested in all elements of pragmatic formula, but in particular he aimed to explain what an effective action is, what the conditions and components of such an action are and what the connections between practical and theoretical sentences are. All these problems are the object of interest of praxiology, the discipline that Kotarbiński founded and developed for many years.¹⁷ It is impossible to present here all elements of praxeology. From among the many concepts which harmonize with the idea of pragmatism, let us mention one: the concept of the praxiological directive. It seems that this concept points to the “practical consequences” of sentences which are different from both the logical consequences and the motivational connections mentioned above.

Kotarbiński wrote:

By establishing, for example, the normative statement “To protect a child against contracting smallpox, it suffices to vaccinate it”, we contribute

17 Kotarbiński’s main praxiological treatise was translated into English as Kotarbiński [1965].

to the success of the norm proper “Vaccinate against smallpox!” in the milieu of those people who want their children to be healthy.

KOTARBIŃSKI 1929: 378

Kotarbiński gives attention to the connection between theoretical statements and practical statements (in this context: expressed in the imperative mode). Normativity is another kind of practicality.

Generally speaking, practical directives are, on the grounds of praxiology, sentences of the following form:

- (1) If X wants that p then X should see to it that q .
- (2) If X wants that p , then let X see to it that q .¹⁸

The fact that p may be called the aim and the fact that q constitutes the means of the directive.

One of the main tasks of praxiology is to build bridges between theoretical disciplines and practical ones: between instructions and their fundamentals. Practical directives of the form (1)-(2) have their fundament in sentences stating that the occurrence of one state of affairs is a necessary, sufficient or favorable condition of the occurrence of another state of affairs.

The concept of the practical directive enriches the idea of the practical consequences of beliefs in the following way. Besides the logical consequences of sentences and the motivational consequences of convictions, there are also deontic consequences: if we want to achieve a certain aim then we are teleologically obliged to realize the means leading to this aim.

4 Final Remarks

Let me summarize the content of the previous paragraphs.

Firstly, the works of the pragmatists: Peirce,¹⁹ James and Schiller were known to the members of the LWS and commented on by them quite early. However, the most polarized (positive as well as negative) reactions to pragmatism in Poland took place outside the School (Biegański, Kozłowski, Lutosławski versus Chwistek).

18 Sometimes, practical directives may be expressed in the declarative mode (“If X sees to it that q , then p ”).

19 Uebel wrote: “As it is the Central European reception up to about 1930 that concerns us, it is William James’s *Pragmatism* that is relevant [...]. Peirce remained largely neglected in the German and Austrian discussions until the publication of his *Collected Papers* in the 1930s” [Uebel 2017: 84]. There were no translations of Peirce in Poland in that period but I would risk to say that Peirce was known better in Poland than in other parts of Central Europe.

Secondly, members of the LWS criticized the works of the pragmatists as they did not meet the methodological criteria of clearness and justification. On the other hand, the importance of some intuitions expressed by the pragmatists was accepted in the LWS.

Thirdly, members of LWS distinguished between various shades of pragmatic thought; for instance, Twardowski differentiated theoretical and moral pragmatism. The differences between pragmatic theory of sense and pragmatic theory of truth as well as between consequences of judgements and consequences of actions were also noticed.

Fourthly, many concepts important for the idea of pragmatism – namely the concept of the truth and its criteria, effective action and action based on conviction – were fruitfully analyzed in the School.

Fifthly, for almost all members of the LWS the pragmatic conception of truth was unacceptable. They accepted the correspondence conception of truth and considered truthfulness an absolute property of true judgements or sentences.

In the end, let me mention one trait that was common for both pragmatists and members of the LWS. For both groups, the idea of the elimination of verbal controversies and clarification of philosophical problems was important:

Pragmatists assumed that if the same practical consequences follow from two different theses, then there is no real difference between them; there is only a verbal difference. They were convinced that by the use of this method, they had introduced an objective criterion to philosophy and made it independent from the personal beliefs of a given philosopher.

TATARKIEWICZ 1950a: 198

Pragmatists tried to fight against idle philosophical controversies by examining the practical consequences of various standpoints. Members of the LWS believed that these controversies may be resolved or at least presented more clearly by logical analysis of their verbal expressions.

James wrote:

So many disputes in philosophy hinge upon ill-defined words and ideas, each side claiming its own word or idea to be true, that any accepted method of making meanings clear must be of great utility.

JAMES 1911: 37

Twardowski and his students would agree with that statement without hesitation.

Appendix

Early reception of pragmatism in Poland outside of the LWS

1 Biegański and Kozłowski Towards Pragmatism

The most vivid adherents of James in Poland were philosophers not connected to the LWS, such as Władysław Biegański, Władysław Mieczysław Kozłowski and Czesław Znamierowski.

Ideas similar to pragmatism were presented in Poland by Biegański – a physician, methodologist and ethicist. He saw the essence of cognition not in the reproduction of reality but in prediction of events; that is why he called his conception “previdism”.

The final chapter of Biegański’s book, *Traktat o poznaniu i prawdzie* [Treatise on Cognition and Truth] was entitled “A pragmatic conception of truth” [Biegański 1910b: 214–227]. Despite some similarities between his previdism and James’s pragmatism, Biegański rejected James’s conception of truth, which was considered by Biegański to be the “essential nucleus” of pragmatism. He summarized this concept in the form of three theses:

(1) By the term “truth”, each thought (resp. each idea) is called which is proved in later experience, in its effects. (2) Truth is never a goal, but only a tool to proper activity. By true thoughts, we come to the deeds that benefit us and satisfy the needs of life. (3) Truth is a relative, moving concept. What is a truth at some time, in the face of certain facts, can be a mistake at another time, in the face of other facts.²⁰

BIEGAŃSKI 1910b: 220

Biegański questioned all three of these theses. (1) Not everything that is proved is true. (2) “If we consider true thought as beneficial and erroneous thought as harmful, then we judge not thought but the activity connected with the content of this thought” [Biegański 1910b: 225]. (3) The view that truth is relative and “moving” is valid only in the domain of scientific theories and explanatory hypotheses. “But the hypotheses are not true in the strict sense of the word, and none of the scholars who speak about them treat them as truths” [Biegański 1910b: 225]. This criticism was repeated by Biegański in his polemical paper “Prewidyzm i pragmatyzm” [Previdism and Pragmatism] [Biegański 1910a].

²⁰ Whenever the quotation comes from a work that has not been translated into English so far (see – Bibliography), the translation is mine.

James's true Polish ally was Kozłowski,²¹ whose "practicism" was really similar to pragmatism. In 1908, Kozłowski attended the 3rd International Congress of Philosophy in Heidelberg where he became acquainted with James's book and discussion concerning it [Kozłowski 1908]. Soon, he translated *Pragmatism* into Polish. He found the ideas of the American philosopher so familiar that he confessed: "We have nothing else to do but join the rising movement known under the term 'pragmatism'" [Kozłowski 1913: 12]. He also admired Schiller's conceptions and even coined the term "Polish humanism" as a mutation of Schiller's term. No wonder that he set up a special philosophical journal *Mysł i Życie* [Thought and Life], to promote pragmatist ideas in Poland; it was released in Warsaw in the years 1912–1915.

Interesting light on the attitude of James himself towards the translated book and to the reception of pragmatism is shed in a fragment of a letter dated January 27, 1910, which was included by Kozłowski in the Polish translation in his "Introduction":

Since you turn to me first on this subject, I promise you that I will not give anyone else permission to translate. You do not need formal authorization in Russian Poland.²² I do not think that I could contribute a new preface to your translation. I am so tired of the subject! But I would recommend that publishers send you my latest book, *The Meaning of Truth*. You can choose some of the paragraphs from it and add them to the translation, because they remove misunderstandings, which, as experience shows, almost every reader shares. Sincerely, William James.

2 Znaniecki, Grzybowski and Znamierowski: Analysis and Absorption of Pragmatism

In 1912, three books by Polish authors related to pragmatism were published. The first one was titled *Humanizm i poznanie* [Humanism and Cognition], and was written by Florian Znaniecki, who would come to be an excellent sociologist, known especially in the USA. The next one – *Pragmatyzm dzisiejszy (próba charakterystyki)* [Pragmatism Today (attempt at a characterization)] – was written by Waclaw J. Grzybowski, who

21 In 1910, Kozłowski wrote to the influential daily *Kurier Warszawski* [The Warsaw Courier] a posthumous memorial about James, and in 1912, he published a paper under a significant title and subtitle "Filozofia żywa i filozofia martwa. Cieniom W. Jamesa" [Living Philosophy and Dead Philosophy. Devoted to the Shadows of W. James] [Kozłowski 1912].

22 The matter is about the part of Poland that was occupied by the Russian Empire as a result of the partitions of Poland in the end of 18th century.

would later be a high-ranking diplomat²³ and who, incidentally, undertook his studies, among other places, in Vienna. The author of the third one was Czesław Znamierowski, who would go on to be an excellent ethicist and theorist of law; its title was *Der Wahrheitsbegriff im Pragmatismus*.

Grzybowski's book [Grzybowski 1912] was the first large monograph on pragmatism written by a Pole as a doctoral dissertation, and was presented at the Jagiellonian University. It presents the genesis and theory of pragmatism and its evaluation. Grzybowski has an ambivalent opinion of pragmatism. For the unquestionable advantage of pragmatism, he considers that pragmatism is a "harbinger" of a satisfying solution to the psychological problem of creativity, which, according to Grzybowski, was beginning to dominate philosophical reflection at that time. By the way, the philosophical problem of creativity soon became the topic of a fierce polemic in the LWS: between Leśniewski and Kotarbiński.

Znamierowski prepared his book as a dissertation in Basel (that is why it was written in German). The work was a thorough analysis of the title problem. This is evidenced by, among other things, the fact that in his lectures *Theory of Knowledge* Twardowski referred to the results of Znamierowski's reconstruction [Twardowski 1925: 223ff]; the book by Grzybowski was also cited in the mentioned lectures.

In opposition to Grzybowski's and Znamierowski's analytic monographs, Znaniński's book was a kind of program manifesto. Znaniński was not so much referring to James's pragmatism and Schiller's humanism but he tried to show that both these doctrines fit into broadly understood humanism, which was coined and had to be co-created by him. He wrote, among other things:

Among numerous, divergent currents, a general direction of the evolution [...] [of philosophy] is becoming clearer. [...] This general direction could be called "humanism" after Schiller; the main problem, to which all other concerns are beginning to be reduced, is the problem of VALUES, and in particular, a part of it: the problem of ACTIVITY.

The word "humanism" [...] expresses here the tendency of philosophical thought to subordinate ALL "absolutes" to "man": truth, beauty, goodness, in whatever form they appear. [...]

Pragmatism is only ONE of the humanistic currents. If today it is identified with humanism in general, as Schiller identifies it in practice, distinguishing in

23 Grzybowski was the ambassador of the Republic of Poland in September, 1939. On the night of September 16–17, 1939, he was summoned to the Soviet Commissariat for Foreign Affairs, but refused to accept the note stating that the Polish state had ceased to exist. At that time, the Soviet troops – under the secret Ribbentrop-Molotov contract – had already entered the Polish borders.

theory – in that case, one could treat the humanistic trend as equal with other contemporary philosophical trends. [...] But the matter is that at the same time in different countries, on the ground of various assumptions, individual thinkers and entire philosophical schools are coming to the same extreme problem, various lines of thought evolution converge at a single point.

ZNANIECKI 1912: 239–241

3 The “Case” of Lutosławski

One of the Polish thinkers of that time, Wincenty Lutosławski, not only found many stimulating ideas in James’s philosophy but also a kindred spirit in James himself. Lutosławski, a philosopher, polyglot and social activist, met James for the first time at a conference in Cambridge, in 1893. Soon, they started to exchange letters. Their correspondence numbers over 100 items, lasted 17 years and was ended by James’s death. In letters written by Lutosławski to James and by James to Lutosławski, they exchanged both philosophical views and reflections on every-day problems, both practical problems and the states of their souls. James considered Lutosławski an unusual personality, and even a genius (of course, Lutosławski willingly agreed with this opinion). Lutosławski, treated suspiciously or even rejected in many communities, found an important supporter in his American friend. James even invited “Luto” (as he called the Polish philosopher) to his house. At the same time, James saw in Lutosławski an interesting case of a certain mental illness (manic-depressive illness, as we would call it today) and cheered him in overcoming his problems through yoga exercises. Lutosławski confessed that also the procedure of writing letters was a therapy of a certain kind.

James treated Lutosławski to a certain extent as a patient. Fittingly, for Lutosławski, James was mainly a psychologist – not a philosopher. In his memoirs *Jeden łatwy żywot* [One Easy Life] he wrote about James in such words:

The living symbol of the American spirit was for me William James, who became one of my closest friends. I found in him a noble man, extraordinarily intelligent and capable, but deprived of those decisive signposts that were possessed by me thanks to my knowledge of the history of philosophy. He did not know the Greek language and did not read Plato or Aristotle in the original. [...] For him, every opinion could claim an equal right to be accepted and approving or rejecting it depended solely on his own will. For me, there was a gold thread connecting the true thinkers of all nations and eras, generating the unity of this *philosophia perennis*, which stems from the work of many thinkers throughout the ages.

LUTOSŁAWSKI 1933: 201–202

Let us note that James wrote the “Introduction” to Lutosławski’s work, *The World of Souls* (the book was published in 1924 – after James’s death) [Lutosławski 1924]. Moreover, Lutosławski was probably the only Polish philosopher that could influence James to some degree. Piotr Gutowski’s hypothesis is that James’s pluralistic philosophy was constructed partially under the influence of his Polish friend.²⁴

4 Chwistek’s and Elzenberg’s Severe Criticism of Pragmatism

The other end of the attitude to James and pragmatism was occupied by Chwistek, a logician, philosopher and artist who worked initially in Cracow and then moved to Lvov.

His theory of many realities had some points in common with James’s pluralism. According to James, there is no “objective reality”. There are only individual pictures of the world and the conception of the plurality of realities was in fact the conception of many pictures of the world which depend on the actual attitude of the individual. Despite the similarity of these ideas to his own conceptions, Chwistek assessed very harshly their implementation by James. Chwistek was not a member of the LWS, but he can certainly be included in the Polish analytic movement, and in the area of logic he kept in touch with the Warsaw Logic School, in particular with Stanisław Leśniewski. His virulent criticism of pragmatism was made from the point of view of his position of anti-irrationalism, the methodological position accepted in the LWS. It must be emphasized that Chwistek, at the same time, expressed appreciation for Mach as a philosopher thanks to whom “the contemporary naturalistic view of the world has been produced, based upon the principle of the economy of thought” [Chwistek 1935: 11], not mentioning Peirce’s contribution to logic. Even in Schiller, Chwistek sees something worthy of praise, namely his “critique of the old logic” in *Formal logic*, being “a document of an act of honest sincerity and keen observation” [Chwistek 1935: 109].

As a curiosity, let me cite another criticism of James, as sharp as in Chwistek, which was written by Henryk Elzenberg, an “outsider” of Polish philosophy. In his philosophical diary *Kłopot z istnieniem* [Trouble with Existence], he wrote on April 28, 1911:

24 See [Gutowski 2009], p. 132. In the letter of 2 September, 1896, James admits that he read Lutosławski’s articles published in *The Monist* and confesses that he was becoming more and more individualist and pluralist.

“What is the usefulness for us of philosophy or religion that does not help us live? What does our life care, whether God created evil or only tolerates it?”²⁵ (James). I’ll turn it around: What is the usefulness for me of a life which does not allow me to philosophize? And what does God care about, whether a certain Yankee lives smoothly or with little impediments?

ELZENBERG 1963: 61

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PART 5

Anti-Irrationalism



Why Totally Unjustified Convictions Persist?

Twardowski on the Nature of Prejudice

Johannes L. Brandl

Abstract

The project of the Enlightenment was – and still is – to combat prejudices through philosophical criticism: that is, to make prejudices recognizable as such, to make their harmful influence on our thoughts and actions clear, and thus to undermine their lasting existence. Pessimists would say that this is tilting at windmills and can never succeed because people cannot live without prejudice. Must we bow to this fatalistic insight? At the beginning of the twentieth century Kazimierz Twardowski vehemently opposed declaring the project of the Enlightenment a failure. For him, it was a central project of philosophy that must never be abandoned because of its social relevance. Only if we understand better what prejudices are and how they work can we prevent them from being passed on from generation to generation.

The following considerations are intended to show that Twardowski's attitude is still exemplary, even at the beginning of the 21st century. In the first two sections, I will explain what the strength of Twardowski's epistemic analysis of prejudice is, and draw a comparison with a structurally similar approach in the social sciences. In the second part, I will discuss the historical dimension that Twardowski adds to his purely epistemic definition of prejudice when he describes social prejudices as "relics of the past". In the last section, I will look at the strategies Twardowski proposed to combat prejudice and will give some reasons why these strategies might fail.

Keywords

Cognitive failure – criticism – prejudice – social sciences – superstition – Kazimierz Twardowski

1 Superstition as Cognitive Failure¹

Twardowski's commitment to the spirit of the Enlightenment is evident in many places in his lectures and writings.² In the following I rely primarily on the text of a public lecture, "On prejudices", that Twardowski gave at the University of Lvov in March 1906. As required by such a lecture, Twardowski confines himself to brief remarks that do not yet constitute a complete theory of prejudices. In a relaxed lecture style, he draws a sketch of a theory that needs to be completed by an appropriate interpretation.

Let us begin with the following question: Why does Twardowski choose his particular examples of prejudice out of popular superstition? Does this have systematic reasons or is it part of the dramaturgy of his lecture? His first example is the superstitious belief that the number 13 is an unlucky number. Some people would not even call it a prejudice, because it has nothing to do with discrimination of people on the basis of race, sex, or religion. Twardowski also discusses examples of discriminatory attitudes in the further course of his lecture, but for him these are just one among many other examples of prejudice.

In fact, the wide range of examples Twardowski uses is not accidental, but rather is part of his concept, which identifies prejudices as epistemic failures. His critique of prejudice is therefore primarily an epistemological critique. The negative social consequences play a secondary role and, in the case of popular superstition, they are harmless compared to racial or religious prejudices. This idea is also reflected in Twardowski's lecture. He does not begin with examples that focus on consequences, but with examples that illustrate the questionable habits of thought without which prejudices would not be preserved.

But why should we criticize popular superstition in the first place? The brief remarks that Twardowski makes about this contain three essential starting points for such criticism:

First, folk superstition shows that even people who realize that it is superstition hold on to it. They do so without asking for reasons that justify this belief.³ For example, in the case of the superstition that the number 13 is an unlucky number. Those who believe this do not want to live at an address with

1 The text was prepared as part of the project 2016/23/B/HS1/00684 "Kazimierz Twardowski's place in Polish culture and European philosophy", financed by the National Science Centre (Poland).

2 For a summary of Twardowski's writings on prejudice and education, see [Schaar 2015b].

3 Twardowski goes a step further when he claims that it is not possible to give good reasons for a prejudice: "This is precisely the difference between a prejudice and any other judgment: there is nothing we can say to explain or justify it" [Twardowski 1906b: 74].

the number 13. But do such people really believe that unhappiness threatens if they ignore this prohibition? An argument against the superstition is the fact that there are hardly any experiences which confirm it. Superstitious people avoid exactly such situations in which this belief could prove true. Why then do they hold on to this superstition? If they believe it simply because others believe it too, they may think that it is at least possible that the number 13 brings bad luck. That attempt to justify superstition can easily be exposed as an epistemic blunder, for it is just as possible that the number 11 brings bad luck. So, anyone who invokes the possibility that there might be some truth in the superstition succumbs to a fallacy.

A second point of departure for a critique of superstition arises from the observation that a superstition often survives because its original source has fallen into oblivion. The number 13 also serves as an illustrative example of this. The origin of this prejudice could have to do with the fact that, as Twardowski supposes, 13 people were sitting around the table at the Last Supper. However, this is a mere supposition and is not known to most of those who subscribe to this superstition. Would it encourage them to avoid a hotel room with the number 13 if they knew the source of the superstition? Probably not, because then the question is obvious to everyone of what the Last Supper has to do with the numbering of hotel rooms. The same applies to the superstitious advice not to get up with your left foot. In this case, too, it can be assumed that the superstition stems from the fact that most people are more adept with their right hand than with their left. But why should a right-handed person not get out of bed with the left foot just as well? Also, in this case the conclusion is obvious: It is better for superstitious people if they do not know where this belief comes from. The fact that such ignorance benefits superstition naturally makes it epistemically suspicious.

This leads us to a third point at which a critique of popular superstition can begin: the enemy of superstition is science, for it provides the methods to test and refute epistemically suspicious views. Twardowski does not forget to point out that even within science, rational means are not always used. On the contrary: he points out that prejudices also affect the practice of science:

But it is only when we realize that prejudices are present in science and not only in daily life that we begin to realize the true power of prejudices.

TWARDOWSKI 1906b: 80

Nevertheless, he trusts science to succeed in pushing back superstitious thinking. Like many before him, Twardowski draws the line between superstition

and science on the ground that science has the power to correct its own mistakes.

However, this trust in the self-correcting power of science must first be justified. The fact that science is a proven remedy for superstition does not yet show that it also has a suitable remedy for prejudices within its own ranks. This is precisely where a pessimist can therefore speak up and claim that scientific thinking is ultimately nothing more than blind faith in science. The impassioned appeal with which Twardowski ends his lecture is directed against such pessimism:⁴

The aim is to teach people to think independently, reasonably, critically, and to accustom them to be aware of whether their convictions are justified or not. The only way leads to promoting science and education, since education and science endow us with the treasure of knowledge and enrich our lives, and at the same time free us from obstacles which prevent individuals and societies from sound development.

TWARDOWSKI 1906b: 80

Such appeals, by nature, quickly fade away. What remains is the question of how science and superstition fundamentally differ. This is where a theory of prejudices should make its contribution, and it is also precisely at this point that Twardowski's systematic considerations come into play. His first thesis is that all prejudices – including those from which science itself is not immune – are knitted according to a certain pattern. Finding these patterns is the first task of a philosophical analysis.

2 A Question of Definition

If one looks for some feature that is common to all prejudices, the following thought seems suggestive: Prejudices are an expression of uncritical behavior towards authorities. It seems *prima facie* plausible that both popular superstition and social prejudices are similar in this respect: Superstitious people behave uncritically towards customs or a religion, and racist or sexist people

4 Twardowski becomes similarly emotive at the end of his lecture on "Independence of Thinking": "Thence the meaning of science for society is apparent. It does not only bring society a number of new laws, thus providing numerous benefits, but it also cultivates the ideal aspect of independent thought, which is being objective, free from prejudice and secondary considerations, dispassionate, intrepid and adamant" [Twardowski 1906a: 89].

uncritically follow the authority of a social environment that has raised them to be racists or sexists.

Twardowski also considers this line of thought, but then decides to take a different approach. The ability to think independently is for him, too, a means of protecting himself from prejudice. This is especially true in dealing with beliefs and attitudes that Twardowski calls “relics of the past” [Twardowski 1906b: 79]. However, not every occurrence of uncritical trust automatically leads to prejudice. Nor does the reversal of this thought seem to be compelling: Not every prejudice is a relic of an authority-believing thought in the past. Prejudices can always arise anew. This speaks for Twardowski’s decision to seek the pattern common to all prejudices in epistemic deficiency and to propose the following definition:

We may very generally define a prejudice as a preconceived, unjustified and erroneous conviction, or in other words, a preconceived and totally unjustifiable conviction.

TWARDOWSKI 1906b: 75

A very similar definition was already suggested by the *Chevalier de Jaucourt* in the great Encyclopedia of the Enlightenment published by Denis Diderot and Jean le Rond D’Alembert in (1765):

Prejudice: A false judgement which the mind forms about the nature of things after an inadequate use of the intellectual faculties; this unhappy fruit of ignorance gives bias to the mind, and blinds and entralls it.⁵

It is striking that in both definitions the content of the beliefs at stake does not play any role at all. Twardowski therefore only says succinctly about the scope of the term prejudice: “They can assume many forms and concern various matters” [Twardowski 1906b: 75]. This makes it clear that his view is that a prejudice can be criticized simply because it is a prejudice, irrespective of its content. Both definitions also agree that it is not an unfortunate coincidence or a question of fate whether someone has a “totally unjustifiable conviction”. Such convictions only arise when someone does not know how to use his cognitive abilities adequately. But can this really be said so generally? Does this not presuppose an excessive degree of rationality? Perhaps we are not in a position to examine each of our opinions to see whether it is justifiable or not?

⁵ Translation quoted from [Acton 1952: 325].

But this fear is not appropriate at this point. These definitions do not express a demand that might exceed our cognitive abilities, but rather a simple epistemic norm that may or may not be respected:

One should not accept completely unjustifiable opinions.

Prejudices are epistemic misconduct because they violate this norm. This is the claim. This does not mean that we can always recognize this misconduct as such and also correct it. One can respect such a norm even if one can only partially fulfill it due to limited cognitive abilities. This does not mean that a prejudice does not contain more than just a violation of this general epistemic norm. In the case of racist or other social prejudices, social and moral norms are obviously also involved. The thesis is, and this is initially plausible, that the violation of social or moral norms is always accompanied by the violation of the norm not to accept completely unjustified opinions. However, we should not accept this view without also taking a look at the way the term “prejudice” is used in the social sciences.

There, the focus is naturally on socially discriminating prejudices. But not all social scientists see in this the defining characteristic of social prejudice. Gordon Allport uses a definition structurally similar to that of Twardowski:

[A prejudice is] an aversive or hostile attitude toward a person who belongs to a group, simply because he [*sic*] belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to this group.

ALLPORT 1954/1979: 7

Therefore, the principle applies here as well: prejudices can be criticized simply because they are prejudices. Allport’s definition neither defines which group a prejudice is directed against, nor does it specify the negative characteristics that are attributed to that group. In the background, there is a social norm here that has again general validity:

One should not judge other people solely by the group to which they belong.

What speaks for the validity of this norm? It seems inevitable that in answering this question, the general epistemic norm of not accepting completely unjustified opinions will be invoked. Anyone who judges a person solely on the basis of his or her membership in a group overlooks the fact that each person is an individual with his or her own history. To deny or ignore this is epistemic misconduct that cannot in any way be justified.⁶

⁶ Endre Begby has challenged this claim on the grounds that the use of stereotypes can be justified from the standpoint of a non-ideal epistemology (see [Begby 2013] and [Begby 2021]).

But aren't these general norms far too abstract to base a theory of prejudice on? This is an objection that can be raised against both Twardowski and Allport because both of them pay homage to the principle, as we have seen, that you can criticize prejudices just because they are prejudices. But shouldn't the criticism of a prejudice also depend on its content? One could say that the meaning of the term 'prejudice' can only be explained by examples. However, if we maintain that a definition is possible, then I think that one will not be able to do without reference to the above-mentioned norms. This can be shown by Allport's definition as well as that of Twardowski.

Suppose we remove from Allport's definition the terms "hostile", "aversive", and "objectionable" in order to make it unrelated to any social norm. We would then be left with the definition of a social stereotype:

A social stereotype is an attitude toward a person who belongs to a group, simply because she or he belongs to that group, and is therefore presumed to have the qualities ascribed to this group.

The use of social stereotypes is not fundamentally bad. Susan Fiske, for example, points this out when she illustrates the usefulness of social stereotypes with the following example:

When people categorize a person as a gas station attendant, they know how to interact. People cannot possibly treat every person (or object) as unique, but must understand them in terms of prior experiences.

FISKE 2005: 37

Fiske therefore thinks that prejudice could be considered as a kind of "unwanted by-product" of a socially useful ability. Before we ask what prejudices are, we should therefore consider: "How exactly do social categories lump people together, and what impact do they have on understanding, feelings, and action?" [*ibid.*].⁷

A similar move can be made in the case of Twardowski's definition. Like before, one could neutralize the reference to the epistemic norm by thinning out the definition. If one deletes the expressions 'erroneously' and 'completely unjustified,' one gets a kind of minimal definition of a prejudice:

A prejudice is a preconceived opinion.

However, one can stick with Twardowski's view and still concede that the use of stereotypes can be justified on social grounds, even if not on epistemological grounds (see below).

7 Here Fiske follows a current trend in social psychology. See the anthology [Dovidio *et al.* (eds.) 2005] and the contributions and introduction by the editors of the *Cambridge Handbook of Prejudice* [Sibley & Barlow (eds.) 2016].

What could be the use of such a minimal notion of prejudice? A possible benefit emerges from the historical debate on whether there are legitimate prejudices. Voltaire was a pioneer of this view, as one can see from his definition of prejudice in the *Dictionnaire Philosophique* (1764):

Prejudice is an opinion void of judgement: thus everywhere many opinions are instilled into children before they are able to judge.

VOLTAIRE 1764/1802, p. 289

One can hardly reproach children for starting their lives with preconceived opinions. It is very reasonable for children to orientate their behavior towards adults and to adopt their views as long as their own judgment is not yet sufficiently developed. It would be nonsense to incite children not to believe anything their parents say. The same applies here as in the case of social stereotypes: Preconceived opinions need not be bad. However, this also removes the principle that prejudices can be criticized simply because they are prejudices. Whether it is right to use a stereotype or to adopt a preconceived opinion without examination depends on the context and the nature of the stereotype or the content of the opinion.

Plausible as it might seem, I am not convinced by this argument. It may be true that the content and the context play a central role when considering the negative consequences that a prejudice can have. But does that argue against the fact that the term can also be defined independently? And why should one not refer to general, abstract norms?

At this point it becomes clear what central role the examples of superstition play in Twardowski's analysis. They provide an argument for the usefulness of his chosen definition. For in the case of superstition, the content does not matter much. It is trivial whether there is a room 13 in a hotel or not, or whether you get up with your left or your right foot. The fact remains that one can and should also criticize a trivial superstition. For even the most harmless superstition shares with a serious prejudice a structural characteristic that makes it worthy of criticism.

3 The Ambivalence of Social Prejudices

If prejudices are worthy of criticism regardless of their content, then the following question arises all the more: How is it that they so easily creep into our thinking and become fixed there? And if the thesis is correct that prejudices violate generally accepted norms, then the questions arise: Why do we

not notice such norm violations and why are they tolerated in our society? These are fundamental questions that a philosophical theory of prejudice has to deal with if prejudice is to be understood as an epistemic failure, as Twardowski did.⁸

In Twardowski's lecture these questions are not explicitly discussed. Therefore, one has to take a closer look at the different examples to be able to estimate what kind of answer Twardowski might give to these questions. Especially revealing, as we will see in a moment, is a phenomenon that I would like to call the "ambivalence of social prejudices". We encounter this phenomenon when it remains open whether a norm violation occurs in secret or whether it is recognized as such but simply tolerated.

One of the examples of social prejudice that Twardowski discusses concerns a landowner who has a prejudice against certain professions:

An average landowner believes it would be improper for his son to become a merchant, a journalist, or God forbid, an actor.

TWARDOWSKI 1906b: 78

To explain the origin of this prejudice, Twardowski adds:

This kind of prejudice is also clearly influenced by associations – profession, superiority, servility. There were times when indeed there existed a social difference between different classes and professions, which had different rights and thus were separate from each other. This sort of separation is long gone now. (*Ibid.*)

I understand Twardowski here to mean that he does not want to claim that in his time there were no class differences at all between the members of different professions. That would be too naive. His explanation only makes sense if one understands it to mean that in earlier times there were virtually no social contacts and no changes between certain professions, and that this *strict* separation is fortunately over. The point of the example is then that greater social mixing has not led to the disappearance of the prejudice based on the former separation. If one now examines the question of why this prejudice has been preserved, one needs to explain the inability or refusal to acknowledge a historical change. The father adheres to rules that are determined by social

⁸ Not to forget, of course, that the thesis presupposed in these questions also requires further justification, namely the thesis that every prejudice violates an epistemic norm. Begby [2013], for example, argues against this thesis.

barriers that no longer exist in this form. He pretends that as a landowner he still has fixed rights that merchants, journalists, and actors are not entitled to. Since he understandably does not want his son to risk a social decline, he does not want him to take up one of these professions. But what is behind this phenomenon that Twardowski calls “association?”

One can roughly describe the epistemic failure that becomes visible in it as inflexible thinking. But that does not say much. What we want to know more precisely is what kind of epistemic norm violation we are to attribute to the well-meaning father. One possibility would be that he does not even notice how inflexible his thinking is because he overlooks how the social conditions have changed. Then, of course, he does not realize that he is in error and that the opinion he holds was once, but now is no longer justified. The tragedy of the story in this case would be that it would be of no use to remind the father of the normative principle he is violating: One should take note of changes and act accordingly. From his point of view, there is no violation of this norm, because for him certain professions are still associated with clear social disadvantages. His advice is honest and well-meant.

But there is another way of interpreting the father’s mistake. It could be that the father stubbornly admits his prejudice. He then knows very well that times have changed and that even merchants and actors now have all rights and are respected citizens, perhaps even famous for their talent. But he still sticks to his opinion: his son should take up a “proper” profession. This second possible explanation brings the example closer to the case of superstition, as Twardowski also notes:

Here as well as in the previously analyzed examples, we encounter generalizations and an unjustified broadening of certain events and relationships. [...] We tend to generalize [...] where it is not justified, just as, for instance, we generalize the inferiority of the left hand and the left side of the body and tend to believe that, since we are less skilled in performing everyday activities with our left hand, getting up with the left foot first will necessarily negatively influence our activities and dispositions etc.

TWARDOWSKI 1906b: 78

One could understand the comparison like this: There are certainly risks in the life of a merchant, a journalist or an actor that a landowner need not fear. From this, the father draws the conclusion by generalization that these cannot be ordinary professions. This conclusion is just as flimsy as the conclusion that it is better to stand up with the right foot, because in some activities one is clumsier with the left hand.

But there is something else in the comparison that should not be overlooked. This is the false certainty that distinguishes someone who draws such conclusions and is not able to recognize how threadbare they are. This false certainty belongs to those attitudes which Quassim Cassam calls “postures”. These are attitudes that are affectively charged and that can dominate us like an emotion, without us being able to defend ourselves. These postures include contempt, indifference, disdain, suspicion, nonchalance, cynicism, and respect [Cassam 2019: 81].

He who always takes care to stand up with his right foot could, through this prejudice, acquire a certain posture that he likes. He may feel particularly conscientious in this, or he may bask in a feeling of superiority over those who stand up with the wrong foot. This then contributes to his having become fond of superstition and holding on to it, although he realizes that there is no rational reason for it. A similar thing could be said about the father in Twardowski’s example: he too could have acquired a posture through a social prejudice, which he learned to appreciate. As a landowner, he feels superior to other people. If you point out to him the opportunities offered by other professions, he may respond with a cynical smile. And if you admire the genius of an actor, he may react with contempt or with the remark that this fame will not last long.

If the father’s behavior is explained in this way, there is nothing tragic about it. For in this interpretation, it is in a certain sense perfectly clear to the father that he is in the wrong. He only does not want to admit it, and therefore takes refuge in an attitude which gives him a feeling of satisfaction. This is comparable to the attitude of a superstitious man who celebrates his superstition with relish, although he secretly knows that it is a humbug.

Twardowski also points out another aspect that fits into this picture. Both superstition and social prejudice often go hand in hand with a refusal to deal with them critically:

Since, despite the lack of justification, prejudices still persist and are commonly cultivated, there has to be another reason apart from the mere mental association, and it is that people who adhere to prejudices get attached and used to them, and do not even want to get exposed to any evidence against the veracity of their prejudices.

TWARDOWSKI 1906b: 79

What Twardowski describes here is a particularly ingenious mechanism of how a prejudice can be preserved: You get used to it and don’t want to drop it because it is so easy to live with. In this way, an attitude can spread that can be described as a false tolerance of epistemic norm violations. Everybody knows

that it is a mistaken belief or an unjustified prejudice, but one comes to terms with this. Either one suppresses this unpleasant truth, or one even imagines something about not caring about the norm.

So, what is this ambivalence of social prejudices? It consists in the fact that they can be either: a tragic case of ignorance or an unbearable case of complacency. It may be that someone actually has blind spots in his or her perception of reality that make this person incapable of recognizing the contradictions in his or her thinking. This would be the landowner who has not managed to adapt his world view to the changed social circumstances. But it could also be that someone is proud to arrange the world as it suits him or her, accepting the violation of basic epistemic norms. This description fits well with a politician who cynically uses his power.

Of course, explaining the existence of a prejudice does not in any way mean legitimizing its existence. Even Twardowski's statement that prejudices are relics of the past does not change the fact that they remain what they are: preconceived and completely unjustified beliefs. But knowing that there are various explanations for how prejudices are preserved has more than a theoretical benefit. It is the basis for doing something about it. The measures taken in the fight against a prejudice must be based on whether or not it is a tragic mistake.

4 The Practical Relevance of Philosophical Criticism

The theoretical analysis of prejudices can be limited to determining what makes prejudices epistemic failures, and making visible the norm violation that is associated with them. It is clear, however, that following such an analysis, the question of its practical relevance arises: What can be done against such norm violations? This brings me back to the above mentioned view that it is naive to believe that a critique of prejudices based on philosophical analysis can change anything about their persistence.

Pessimists are in a similarly comfortable position here as the skeptics in epistemology. They can use anything that analysis brings to light to justify their pessimism. For example, a pessimist might take Twardowski's analysis as confirmation that the project of the Enlightenment was bound to fail. Since people often behave irrationally, are prone to self-deception, and show a tendency to be complacent, they are inherently prone to epistemic failures. No philosophical insight will be able to change this. It only shows how rich our repertoire of pseudo-rationalizations is, with which we succeed in giving our prejudices the appearance of legitimacy.

There is no compelling argument against such a pessimistic attitude towards the project of the Enlightenment with which one could refute this view. However, one can show that there is another option. It consists in expanding the project: a critique of prejudice will only be successful if it is at the same time a critique of the pessimistic thesis that theoretical analysis is practically irrelevant. That Twardowski advocates this option is shown by the already quoted plea with which he ends his lecture. It is clear from this that he does not want to leave the fight against prejudice to politicians, journalists, or other opinion leaders. Political or journalistic interventions can be important and effective in the short term. But we also need a long-term strategy to build a protective wall against prejudice. According to Twardowski, philosophy must assume this task, together with all other sciences.⁹

But what does this more comprehensive program to combat prejudice look like? Twardowski makes three demands, which one might initially understand as demands on politicians. However, they are at the same time an appeal to philosophy to expand the criticism of prejudice into a criticism of pessimism: First, Twardowski demands that the value of independent thought should be emphasized and promoted. Secondly, one should emphasize the value of scientific thinking and promote science. And third, one should emphasize the value of education and promote general education. There is more in these three demands than one might at first glance suspect. There is an inner connection between them, which gives these demands additional weight.¹⁰

Let us start with the demand for independent thinking. As plausible as this demand may sound at first, it does not fit in with the observation that people like to make themselves comfortable in their own world view. Twardowski's example of this was the landowner who did not want his son to become a merchant or actor. There is nothing in this example to suggest that the father lacks independent thinking. On the contrary, we can imagine this landowner as a man who is as proud of his intellectual independence as he is of his economic independence. This is precisely why he refuses to acknowledge that times have changed. So, the demand for more autonomous thinking is going nowhere. But that does not make the demand any less meaningful. It only shows that one must additionally demand that autonomous thinking is measured against standards that have intersubjective validity.

9 The role of philosophy as a long-term strategy against prejudices is also emphasized in [Madva 2020].

10 With Twardowski, these three demands also flow seamlessly into each other when he treats them in more detail. See his lectures "On Mistakes of Thinking" [Twardowski 1900] and "Independence of Thinking" [Twardowski 1906a].

This leads us to Twardowski's second demand, to emphasize and promote the value of science. Scientific thinking is, by its very nature, committed to procedures of epistemic evaluation that are intersubjective and hence protected from idiosyncrasy. But here, too, a possible conflict looms. There are probably criteria with which one can distinguish between science and pseudo-science, but to arm oneself against pseudo-rationalizations, more is needed. The history of science contains enough examples of how scientific methods have been used to prove, for example, that people of different races are differently intelligent. Not all of these studies can be immediately classified as pseudo-scientific, as the debate about the book *The Bell Curve* has shown (see [Jacoby *et al.* (eds.) 1995]). So, what do you do if someone establishes a racist or sexist prejudice based on seemingly solid scientific evidence? There is no way around the realization that science is about more than just the truth. Science has practical effects that need to be considered when evaluating its results. However, the evaluative situation is often not symmetrical: studies that do not find a relevant difference between races or genders often contribute little to reducing discrimination. By contrast, if studies show supposed differences, their publication demonstrably leads to even greater discrimination against the already disadvantaged group.

The conclusion must not, of course, be that studies should be suppressed or even banned because they could have adverse effects. Nevertheless, one must ask what the standards of intersubjective validity are if not all informed persons can agree. This is not to be expected in studies that contribute significantly to the discrimination of a group of people. No one in the disadvantaged group will believe these claims, however scientifically sound they may be. The demand for emphasis on value and for the promotion of scientific thinking can therefore also go nowhere. It only makes sense to take measures that see the value of science in the fact that in many cases, although not always, it produces results that any sufficiently informed person can accept.

This brings us to the third demand, the demand for general education. Everyone can agree that education is a great asset, which is why all modern societies invest large sums of money in the education of young people and in the training of adults. However, not everything can be delivered through education. It would be naïve to assume that higher levels of education automatically go hand in hand with a decrease in prejudice.

We must therefore be aware that education can conflict with our moral concepts. Take, for example, the ability to justify one's behavior to others, but also to oneself. This ability promoted by education can also be used to turn untruths into their opposite. In this way, an educated anti-Semite could wonderfully explain why he is not an anti-Semite. Education alone is therefore no

guarantee that people can better protect themselves against epistemic or moral errors. In particular, education can also contribute to the development of subtle forms of self-deception that make people blind to their own prejudices. The demand must therefore be a demand for an education that does not prevent people from trusting their simple cognitive instincts. Such instincts are often the best means to expose a downright lie, especially if they can unfold together with autonomous thinking. This closes the circle.

There is, I think, a lot in these considerations that can be held against those pessimists who doubt the practical relevance of philosophical arguments in the fight against prejudices. If one understands the demand for autonomous thinking and the promotion of science and education in such a way that they dovetail appropriately, then such an interaction of different forces seems to be the right approach to push back the influence of prejudices in our society. Admittedly, this program is not new and has not yet given us a world without prejudices. But to conclude from this that prejudices are part of human nature and that our basic cognitive equipment in this respect is unchangeable is also nothing but a prejudice.

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Twardowski and the Rationality of Beliefs

Ryszard Kleszcz

Abstract

The problem of rationality as opposed to irrationality is a remarkable epistemological question. This problem was interesting for philosophers who belonged to the Lvov-Warsaw School. The founder of this school, Kazimierz Twardowski, formulated a non-binary model of rationality. This model was developed and specified in the Lvov-Warsaw School, among others by Izydora Dąmbska. The text critically analyzes and discusses the proposals formulated in this school. The author proposes some modifications of the model, accepting its basic assumptions.

Keywords

Conditions of rationality – non-binary model of rationality – rationality of beliefs – types of rationality – Izydora Dąmbska – Kazimierz Twardowski

Vera philosophiae methodus nulla alia nisi scientiae naturalis est.

FRANZ BRENTANO

•••

Philosophy is ... a science [...] its goal is to search for truth and the truth in every subject can only be one ...

KAZIMIERZ TWARDOWSKI

•••

Sciences does not have exclusive rights to 'knowledge';
its province is far narrower than that of inquiring reason in general.

NICHOLAS RESCHER

••
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1 Standard Understanding of the Rationality of Beliefs¹

Twardowski's understanding of philosophy and its methods is close to patterns that appeal to the slogans of Brentanism, a type of moderate scientism, empiricism and criticism.² Twardowski, in all his work, also emphasizes rationalism and the approach that demands rationality for philosophical reflection, even when it does not literally use such terms as "rationalism" or "rationality". Since the term 'rationality' functions in two (main) contexts: the context of beliefs and the context of action, it should be noted that in the following comments I am limiting myself only to the context of belief.³ The standard approach assumes that belief will be rational if the judgement – the acceptance of which is the point in a given case – meets certain criteria. These criteria include three conditions:

- (1) language accuracy (clarity),
- (2) compliance with logic requirements,
- (3) having epistemic justifications.

Whether these conditions are adequate in relation to all beliefs is a matter of dispute, but at this point, this preliminary set of conditions can be accepted.⁴

2 Twardowski's Views on Rationality

2.1 *Rationality, Irrationality, and Non-Rationality*

Now, coming to Twardowski's views, it should be noted that the very notion of „rationality” appears only occasionally *expressis verbis* in his texts and speeches. In a systematic way, it appears in his speech at the 25th anniversary of the Polish Philosophical Society in Lvov (1929). This is an important text for the characterization of his mature metaphilosophical views, though expressed only in a sketchy form. In this text, he uses three terms: rationality, irrationality,

1 The text was prepared as part of the project 2016/23/B/HS1/00684 "Kazimierz Twardowski's place in Polish culture and European philosophy", financed by the National Science Centre (Poland).

2 On the topic of Twardowski's metaphilosophical ideas, see [Kleszcz 2013], ch. 1.

3 Beliefs are understood here as attitudes towards opinions/judgments. If opinions/judgments were subject to truthfulness qualification, then beliefs would be characterized as rational/irrational.

4 Discussion on this subject, along with the presentation of a slightly different set of criteria is presented in [Kleszcz 1998].

and non-rationality.⁵ Therefore, there is no simple dual (binary) division of beliefs into rational and those deprived of rationality, which are often seen as terms that allow us to characterize the whole world of our beliefs. Let us now have a look at how these three terms regarding beliefs are understood by Twardowski.

Twardowski's idea is that rational beliefs (in his meaning, rational = scientific) are those that are acquired using methods known from science, justified by means of methods appropriate for science and thus having an objective value.

On the other hand, the BELIEFS referred to by him as IRRATIONAL, use sources beyond science. Drawing their content from there, they do not have to be in contradiction with the scientific theses. They are, however, according to Twardowski, non-rational convictions, because:

But no matter how we should label those non-rational sources of beliefs, they will always remain sources extrinsic to reason,[...] that is irrational, and as a result, even to extent that they were to constitute knowledge, these beliefs will not have a scientific character, nor will that knowledge be scientific.

TWARDOWSKI 1931: 272

Finally, the third type is nonrational beliefs, that is, the content of which is in conflict with the findings of science. These beliefs, therefore, have no objective character. In their case, we are dealing with a contradiction, or at least with non-conformity, with the theses adopted in science at a given time.

This allows us to classify human beliefs, according to Twardowski's proposal, into three groups (three sets) of beliefs.⁶

(A) RATIONAL BELIEFS, which are characterized by the fact that in their case both methods of gaining beliefs and the ways of their justification are derived from the arsenal of science. Rationality, as understood by Twardowski, is synonymous with scientific. As a result, the beliefs from the sphere of science would fit entirely in this set of beliefs. Let's call it the set A set.

(B) IRRATIONAL BELIEFS, which differ from rational ones in terms of sources from which they are derived. In their case, you can refer to various (sources) that science does not use, such as intellectual perception, special type of intuition or metaphysical speculation. Then, however, when considering

⁵ Compare with [Twardowski 1931]. It should be noted that the use of these three terms by Twardowski is unusual for a modern reader. This problem is discussed in point 4.

⁶ See [Kleszcz 2018], pp. 168–170.

such beliefs at the content level, they do not have to be in conflict with rational beliefs, and hence with theses of science. Let's call this collection of beliefs the B set.

(C) NON-RATIONAL BELIEFS, which are characterized by incompatibility with the content of data provided by science. What is important for the assessment of their cognitive values is not so much the method of reaching them (obtaining them), but the fact of non-compliance of their content with the scientific data. This kind of belief, contradictory or noncompliant with beliefs based on science, would form a C set of beliefs.

2.2 *Worldview versus Scientific Philosophy*

Kazimierz Twardowski believes that in the set of beliefs that people have, the majority are those that according to the above terminology should be included in the second group of beliefs, defined – in his terminology – as irrational. So metaphysical (worldview) beliefs would fit into the B set. Note that even without them being rational, they do not have to be contradictory with beliefs classified as rational or, remembering Twardowski's terminological convention, scientific. Such are, according to Twardowski, beliefs belonging to the sphere of worldview.

When the term “worldview” appears in the context of Twardowski's thought, we should recall the metaphilosophical tenets that are characteristic of his philosophical thinking. Twardowski distinguishes between scientific philosophy and philosophical (metaphysical) view of the world and life.⁷ Scientific philosophy is primarily (though not exclusively, because there is also a general theory of the object) a theory of knowledge. The methodological premises adopted by Twardowski, can, however, be used only in a limited sphere of investigation, the one that remains available for research conducted with the help of scientific tools and methods. It cannot be used, for example, when we want to answer some definitive questions about human nature that remain outside the area of scientific philosophy. According to Twardowski, it is impossible to prove the validity of a view in the sphere of worldview through scientific argumentation. Twardowski poses the question:

Does not scientific criticism exclude the acceptance and promulgation of views that make pretense to embodying the ultimate solution to the most difficult problem ever confronted by man – problems that touch the essence, beginnings and *telos* of all beings, and of man's destiny?

TWARDOWSKI 1931: 271

⁷ See [Kleszcz 2013], pp. 43–46, 50–56.

In the history of philosophical thought, many attempts have been made to find a way of cognition which would allow finding answers to such questions. Attempts made by Kant, Plotinus, or Plato can be indicated. But as Twardowski emphasizes, all these measures have always been (as he maintains) beyond reason and did not allow and could not allow for the construction of a philosophical system of a scientific nature. At the same time, it must be remembered that we are not dealing here with a criterion of empirical meaningfulness that would disqualify worldview beliefs (metaphysical sentences) as meaningless. They remain meaningful, though they are not and cannot be scientific. Sets A and B, therefore, have no common parts. Let us add, however, that this is the case only in Twardowski's standard (idealized) model. When we look back at the history of science, we find various examples of claims included in science, which later came to be recognized as poorly justified, or even irrational. At the beginning of the 20th Century Twardowski's approach to metaphysics as a philosophical science (discipline) became critical.⁸ TWARDOWSKI POSTULATES SEPARATION BETWEEN SCIENTIFIC PHILOSOPHY AND THE SPHERE OF WORLDVIEW (OUTLOOK), A VIEW WHICH LATER BECAME TYPICAL FOR THE LVOV-WARSAW SCHOOL. In any case, the majority of the School members, although there were exceptions, shared this view.

It was obvious to Twardowski that people had and still have beliefs of a metaphysical nature. He did not disregard this sphere, because the practical value of these beliefs is, in his opinion, enormous. They make it possible to get clues to as what attitude to adopt towards the world, the environment and yourself. As Twardowski notes:

Visions of the world and of life possess great value for their subscribers, constituting read marks for their comportment to the world, to their human surroundings, and to themselves.

TWARDOWSKI 1931: 273

Views from the sphere of a worldview which are not scientific are not rational according to Twardowski's view. But – as Twardowski emphasizes – beliefs relating to worldview do not have to be non-rational and therefore contrary to the theses of science. The views of Twardowski's pupils, though generally, they were proponents of separation of scientific philosophy from questions concerning worldview, are not always fully consistent with Twardowski's own position.

⁸ See [Kleszcz 2016].

Such positions, not always fitting in Twardowski's model, can be found in Jan Łukasiewicz or Tadeusz Kotarbiński's views. However, the solution based essentially on this division of beliefs, adopted by Twardowski, is found in ideas of his student, Izydora Dąmbska.

3 Dąmbska's Views on Irrationality: Logical and Epistemological Irrationality

She included her views on this matter in the work "Irrationalism and Scientific Cognition" [Dąmbska 1938]. Although Dąmbska mainly analyzes irrationalism, indirectly she also discusses rationalism and rationality. She distinguishes four types of irrationalism, but two of them, logical irrationalism and epistemological irrationalism are important for our considerations here.⁹

Logical irrationalism would be a feature of beliefs where the propositions believed are either contradictory or essentially undecidable.¹⁰ On the other hand, EPISTEMOLOGICAL IRRATIONALISM is a view that recognizes the existence of a scientifically authorized way of attaining epistemically justified beliefs which guarantees the validity of some logically irrational sentences about reality.¹¹ Dąmbska formulates the features of rational knowledge, which would become typical for the views of those members of the Lvov-Warsaw School who would discuss this issue. In this approach, rational knowledge is characterized by expressiveness, communicability and intersubjective controllability.¹² These characteristic features of rational beliefs seem to be in line with the common standard rationality model mentioned in the introduction to this text, which sets criteria such as:

- (1) language accuracy,
- (2) compliance with logic requirements,
- (3) justification (having justification).

Dąmbska assumes that the anti-irrationalist attitude (the opposite of irrationalism) is connected with the recognition that irrationalism has no right

9 See [Dąmbska 1938], pp. 58–74.

10 To put it more precisely: "Sentence *S* of language *L* is irrational when it is either internally contradictory or irresolvable". Should we, however, assume that the sentence becomes irrational logically only when it occurs in language as a thesis, then the above definition would be as follows: "Sentence *S* of language *L* is irrational when *S* is internally contradictory or fundamentally irresolvable and when *S* is a thesis of language *L*". See [Dąmbska 1938], p. 63.

11 See [Dąmbska 1938], p. 65.

12 See [Dąmbska 1938], pp. 70–71.

to exist in science. However, a proponent of such a view would be taking an extreme version of his rationalist (anti-irrationalist) view if he were to hold furthermore that issues that cannot be solved in a scientific (rational) way should be left unanswered. Meanwhile, the moderate version of the anti-irrationalist view seems to be, according to Dąbmska, more justified. According to it, beliefs on questions that cannot be solved in a scientific way should be treated as a subjective confession of faith, and not as a thesis of a scientific nature. Such a status would, therefore, include convictions that Twardowski and many of his students after him consider being in the sphere of worldview. This position of Dąbmska's and likewise, the position of Twardowski himself, can be regarded as only moderately scientific.

By analyzing the presented position of Dąbmska we can see that she follows the path set by Twardowski, although it enriches and refines the terminology used. She distinguishes, unequivocally, the plane of what belongs to science and scientific philosophy, and what would belong to the sphere of worldview. This kind of approach can be described as moderate rationalism which avoids radicalism, characteristic of philosophers with a radically scientific attitude (scientism).

4 Modification of Twardowski's Position

Now let's try to explicate those positions that are built on the foundation provided by Twardowski. As part of this explication, I will revise somewhat the terminology of Twardowski himself. This will allow us to distinguish three types of beliefs in the sphere of belief:

(A) Rational beliefs, or those at which we arrive by means of methods well-known from science, by which we understand the methods of particular sciences. They would, in Dąbmska's terminology, include such features as: expressiveness, communicability and intersubjective controllability. In later terminology derived from Kazimierz Ajdukiewicz, they would be characterized as intersubjectively communicable and controllable.¹³ These two proposals only seem to be different, while they are in fact completely inter-translatable. In Twardowski's language, there would be an equivalence between rational beliefs and scientific beliefs. These rational beliefs meet the criteria indicated above (Dąbmska, Ajdukiewicz). Beliefs in the field of scientific philosophy would belong to the sphere that makes up the A set.

¹³ See [Ajdukiewicz 1949], pp. 45–49.

(B) Extra-rational beliefs (called irrational by Twardowski) are beliefs which do not necessarily conflict with A-type views but differ from rational beliefs due to the fact that methods of reaching them are different from those of A-type (intellectual insights, intuition, metaphysical speculation.). They may also apply to the sphere, let's say, the extra-empirical, on which science does not comment. Then their non-contradiction with the theses of science would be guaranteed. The majority part of metaphysics, as Twardowski understood it, would belong to this B set.

(C) Non-rational (irrational) beliefs, characterized by the fact that they are incompatible in content with beliefs of A-type. If the name IRRATIONAL belief should be used, then in my opinion it would be better to apply it to this kind of case, because by definition beliefs of this kind are incompatible with scientific theses. We would thus have a C set of beliefs.

Beliefs in the area of worldview belong in principle (but not exclusively) to the B-type beliefs because even if they originate in the scientific data, they carry them beyond the standard science sphere of applicability. This is the case with a type of metaphysics called inductive metaphysics. In the opinion of Twardowski, her statements should belong to the sphere of the worldview. Both Twardowski and Dąmbska distinguish the plane of what belongs to science and scientific philosophy and what would belong to the sphere of worldview. Answers to the questions of the latter type belong already to the sphere where we do not have the scientific tools, so they are not part of science (or scientific philosophy). On the other hand, for K. Twardowski, beliefs in the sphere of metaphysics would largely (apart from ontological views) belong in the domain of worldview. Despite the indicated differences between scientific beliefs (and philosophical beliefs in the sense of scientific philosophy) and worldview beliefs, they permeate each other to a certain degree. Sciences sometimes draw their ideas and conceptual apparatus from the sphere of metaphysics, and metaphysical systems (worldviews) receive them somehow back, but already subjected to scientification. Consequently, the view of the world (in the sense of a set of beliefs) may be subject to scientification, or rationalization. Of course, this process is infinite and no worldview can be fully scientific (rational).¹⁴ Consequently, it is obvious that we cannot legitimately speak about the existence of a scientific worldview in the strict sense of the word on the grounds of this concept. In other words, there cannot be a worldview that uses only the data of science and is moreover scientifically justified.

14 See [Twardowski 1931], p. 275–276.

Limiting ourselves to these metaphysical (worldview) issues, it is worthwhile to pose a question: what requirements should be applied to worldview (extra-rational) beliefs? For Twardowski, worldview beliefs would be such beliefs, especially ones regarding: a) the existence of God, b) immortality of the soul, c) the existence of free will.

Twardowski points to three such requirements, which these extra-rational beliefs (in his view irrational) would need to satisfy to protect us against falling into non-rationality (Irrationality in the terminology I use). These would be the following requirements: 1) no internal contradictions, 2) intelligibility at the language level, and 3) no incompatibility with the theses of science.

However, we do not find in Twardowski any examples of the application of these requirements to specific metaphysical thesis. These requirements for acceptable extra-rational beliefs, which go beyond but are not contradictory to requirements of (scientific) rationality, according to Twardowski, does not permit us to claim that any single view of the world may be considered scientifically justified, and thereby possessing the values of universality and objectivism.

5 General Assessment of Twardowski's and Dąmbska's Positions

Those briefly mentioned views of Twardowski's on rationality should be considered valuable and based on a coherent vision of philosophy. As I pointed out, they were expressed and analyzed in a systematic way in the work of Dąmbska. It seems, however, that some solutions adopted by the founder of the Lvov-Warsaw School in the matter of rationality of beliefs are debatable and would require further development and possible correction. Here, I allow myself only a few general critical remarks.

In the matter of rationality of beliefs, Twardowski's proposal's to distinguish between rational, irrational and non-rational beliefs seems to go in the right direction. The dichotomous division of beliefs into rational and devoid of rationality (rational and irrational) seems to unduly simplify or even distort the language of discourse on this subject. Many people intuitively perceive that such a division of our beliefs, throwing each of them into one of the two drawers, cannot be sustained. In this respect, binary division seems to be far from sufficient. For this reason, Twardowski's proposal provides richer tools for organizing our world of beliefs.

However, when we consider his proposal in more detail, various doubts arise. a major issue for debate is the very fact that Twardowski (also Dąmbska, although more subtly) equates rationality with science. If we associate

rationality with science, then none of the beliefs that belong to the sphere not subject to the application of scientific methods can be rational. However, it does not seem right to include everything that cannot be treated by means of methods suitable for science in the sphere of irrationality. That conclusion requires the controversial adoption of scientific metaphilosophy. Hence an approach that does not accept the equation of rationality with science seems appropriate.

Then, if we reject the equation of rationality with science, we should distinguish not only rationality, irrationality and non-rationality but also – in my opinion – we should identify various types of rationality. Rationality could be different, for example, for the sphere of various specific sciences, for philosophy and the sphere of worldview beliefs, differing from each other by the power of formulated requirements.¹⁵ The model of rationality presented, especially by philosophers of science, is often derived from the sphere of natural sciences. This means that consequently not every type of science „implements” the same model of rationality (natural sciences, social sciences, mathematics). It seems necessary, because of the clear methodological differences occurring within the specific sciences. The problem that arises with the indicated approach is the identification of adequate models of rationality appropriate for various fields. Presenting such a model, however, is an issue requiring a separate consideration.

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PART 6

Logic and Education



Formal and Informal Logic in the Lvov-Warsaw School as a Heritage of Twardowski

Anna Brożek

Abstract

In Kazimierz Twardowski's program, logic and psychology are two basic philosophical disciplines. He considered broadly understood logic as the tool of scientific and every-day thinking. He was interested in the development of symbolic logic and was the first person that lectured about it in Poland. However, as the author of "Symbolomania nad Pragmatophobia" (1920), he remained highly suspicious towards some overuses of formalism. The present chapter is aimed to show that Twardowski's attitude became an impulse for the development of both formal and informal logic in the Lvov-Warsaw School. The thesis that formal and informal tendencies were present in the development of the School from the very beginning is also justified.

Keywords

Formal logic – informal logic – Kazimierz Twardowski – Lvov-Warsaw School

1 Introductory Remarks¹

Let us start by reminding that among Kazimierz Twardowski's earliest students in Lvov, there were Władysław Witwicki (PhD in 1901) and Jan Łukasiewicz (PhD in 1902). The scientific interests of these two were quite different. Witwicki followed Twardowski in practicing descriptive psychology and became one of the pillars of the Lvov School of Psychology, but was also interested in the methodology of sciences and semiotics. Łukasiewicz, seeking the exact method for

1 The text was prepared as part of the project 2016/23/B/HS1/00684 "Kazimierz Twardowski's place in Polish culture and European philosophy", financed by the National Science Centre (Poland).

philosophical investigation, finally found it in mathematical logic and initiated the Warsaw School of Logic.

For both Witwicki and Łukasiewicz, Twardowski was the only teacher of logic. It is significant what they thought about their teacher's attitude towards logical matters. Witwicki wrote:

[Twardowski] was the first in Poland to give lectures on algebraic logic, but he himself always wrote in the ordinary Polish language which we speak on an everyday basis. But he did so more precisely. He respected algebra very much – in other people.

WITWICKI 1938: 273

Łukasiewicz also received his first logical impulses from Twardowski. It was his teacher who interested him in the theory of reasoning and the methods of philosophy. Łukasiewicz also stated that he learned about mathematic logic from Twardowski. However, he added that mathematical logic matters as presented by his teacher did not make any impression on him. On his way to mathematical logic, he took other paths. In his *Diary*, Łukasiewicz wrote:

It seems that Twardowski was not talented in logic and mathematical logic was always alien to him. To Twardowski, I owe not philosophical or logical knowledge but the ability to clearly present even the most difficult problems and views.

ŁUKASIEWICZ 2012: 67

In fact, Twardowski lectured about mathematic logic, followed its development and analyzed it from a methodological point of view but never abandoned his reservations towards mathematical logic.

In this paper, I will concentrate on the thesis that the main reason for the incredible development of all areas of logic in the Lvov-Warsaw School (hereinafter, the LWS) was the activity and teaching practice of Twardowski. This thesis is not new.² The aim of this paper is rather to provide some comments and new justifications for it. I would like to argue that the two features of Twardowski's teaching: the emphasis on logical education together with his reservation towards the (over)use of formal tools shaped the development of logical investigations in the LWS. This meant that from the very beginning, formal and informal logic investigations were practiced simultaneously and that

² See, for instance [Jadacki 2018].

Polish logicians paid much more attention to the informal interpretation of their systems than was done in other centers of logic.

One should add that the striking development of mathematical logic in the LWS is a quite well recognized fact. However, the contribution of Twardowski and his students to informal logic has only begun to be revealed (see, for instance, [Johnson & Koszowy 2018]). This chapter is another step in this direction.

In order to understand this simultaneous development of formal and informal logic in the LWS, not only some historical facts but also some conceptual distinctions are needed. These distinctions will be introduced in the next paragraph.

2 Logic. Some Distinctions

Now, namely in the first decades of the 21st century, in the English speaking world, the term “logic” is most often used (apart from historical research) as a synonym of “formal logic”. This was already the case 40 years ago when the so-called “informal logic initiative” occurred in opposition to the dominant formal logic trend.³ The situation was different in the first decades of the 20th century. One hundred years ago, what was known as “logistics” (or mathematical logic, formal logic in one senses of the term) was considered an opposition to the dominant inexact philosophical logic or psychologistic logic so that Łukasiewicz had to write his “In Defense of Logic” [Łukasiewicz 1937].

Members of the LWS adopted a broad understanding of logic and considered it to be composed of three areas: methodology (theory of knowledge-creating actions and products of those actions), formal logic (the theory of formal languages and axiomatized theories), and logical semiotics⁴ (the theory of signs, especially of language signs). The following three quotations, coming from various periods of the development of the LWS, prove that this conception of logic was steady in subsequent generations of the LWS (my emphasis, AB).

The usual partition of logic, which is influenced by psychology, divides it into: elementary logic and methodology, while elementary logic covers knowledge about concepts, judgment, and conclusion, and thus about

³ See, e.g., the first issue of *Informal Logic* [Blair & Johnson 1978]. Noted fact: Ajdukiewicz's pragmatic logic in Poland deals with the same problems as the informal logic initiative.

⁴ The terms “semasiology” and “semantics” were also used in reference to this part of logic in general.

certain psychic phenomena. Our division will be: (1) SEMASIOLOGY, (2) FORMAL LOGIC, and (3) METHODOLOGY.

AJDUKIEWICZ 1924a: 138

I would be glad to see logic defined broadly, covering not only FORMAL LOGIC but also the theory of cognition, SEMANTICS, and the science of categories, as well as a general and DETAILED METHODOLOGY OF SCIENTIFIC RESEARCH and teaching of the results of such research.

KOTARBIŃSKI 1957: 55

Today, logic consists of three main parts, namely: of FORMAL LOGIC (which is a theory of objects in general and therefore a kind of ontology), of a GENERAL METHODOLOGY of sciences and of SEMIOTICS (i.e., a logical theory of speech). Formal logic currently has a mathematical form (logistic).

BOCHEŃSKI 1987: 60

One could risk a hypothesis that this broad understanding of logic was a kind of synthesis of the traditional concept with the new one that appeared in the first decades of the 20th century.

As we can see, one of the branches of logic *sensu largo* is called here “formal logic”. The opposition “formal”-“informal” also occurs in contemporary discourse. Does it mean that the term “informal logic” covers what was have called here “logical semiotics” and “methodology”? It is not so. In fact, there are several different distinctions hidden here.

Let us first note that the term “formal” in the phrase “formal logic” may refer to a few different things.

Firstly, “formal” may simply refer to the signs used or studied by logicians. Signs artificially constructed by logicians (and not only by logicians) are sometimes called “symbols”, and a language using such signs is called a “symbolic language”, or just a “formal language”.

Secondly, some logicians would agree that symbols they use are abbreviations of certain informal expressions repeated in the statements they are interested in (e.g., in statements that express inferences). Such symbols are called “logical constants”, and the formulas in which these symbols occur are considered to be logical forms of statements formalized with these symbols. Here is how Kazimierz Ajdukiewicz characterized logical constants:

In all [...] sciences, apart from the terms proper to these sciences, there are also certain terms common to all sciences, [namely:] the term “is”, [...] quantifying words and [...] truth-functors. [...] There is a [...] science that has special care for these terms. This science is distinguished by the fact that, in order to build its theorems, it uses, apart from variable symbols, only these three kinds of terms, and those which can be defined by them. This science is called “formal logic”.

AJDUKIEWICZ 1934b: 41

A language that includes symbols that are logical constants is also called a “formal language”, and formal logic is often characterized as the theory of logical constants. As Józef M. Bocheński put it years later:

What a science is, is determined by its constants. Therefore asking what formal logic is and what “formal” means is asking what are the constants of that logic, what is their nature.

BOCHEŃSKI 1989: 77

In both cases, the languages in question can be more or less formal(ized). In consequence, the distinction formal-informal is not sharp. Only natural languages are “purely informal” as no interventions are accepted there. Languages of sciences – where meanings of words are specified – are half-formal.

Thirdly, the term “formal” in the phrase “formal logic” may refer to methods. A procedure is conducted formally when all stages of this procedure are operations on symbols, where these operations occur according to the rules of the transformation of symbols without referring to the meaning of these symbols (some kinds of transformations require prior axiomatization of the theory based on which they are performed). In consequence, one may say that a formal logical procedure is performed purely mechanically; in order to perform it, knowledge of the abovementioned rules of transformation is sufficient. The opposition formal/informal in this sense is also not rough. Steps of inference may be more or less formally established. It is also important to note that methods MAY BE MORE OR LESS MECHANICAL.

Formal-informal distinctions should not be confused with the distinction between pure (or detached) and applied (or pragmatic) logic. Both formal and informal logic may be applied to various disciplines, and both formal and informal logic may be developed without any idea of possible applications. Applications of logic may also be well differentiated. For instance, the applications of logic in mathematics (which can take the form of the program of logicism, namely the reduction of mathematics to logic) are quite different

than applications in everyday thinking or humanities. Suffice it to say that logic in mathematics and in the exact sciences is sometimes a tool of axiomatization, and in the humanities it serves to make them more precise. Thus, the Aristotelian idea that logic is the *organon* of all disciplines had two interpretations among the representatives of the LWS.

The distinction “mathematical logic” – “philosophical logic” also appears in the literature. The terms are defined variously, sometimes simply to distinguish the logic practiced by mathematicians from the logic practiced by philosophers. However, the term “philosophical logic” is sometimes also used as referring to the philosophy of logic.

And within the philosophy of logic, there are various conceptions of what logic is. Among the answers to this question, there are some that interpret logic as the theory of thinking (or products of thinking), as a theory of reality, or as a theory of language. We should not omit “nominalistic” conceptions in which logic concerns “nothing” (and consists in “senseless” operations on “senseless” symbols).

Generally speaking, the problem of the object of logic should be distinguished from the applications of logic. (For instance, logic may be a theory of reality but be applied in thinking etc.).

Keeping all these distinctions in mind, let us look more closely at Twardowski’s attitude towards logic and the effect of this attitude on his students.

3 Twardowski and Logic

3.1 *Logic as One of the Pillars of Philosophy*

From his teacher Franz Brentano, Twardowski inherited his conviction about the central role of descriptive psychology for philosophical investigations. From the very beginning and constantly throughout his life, Twardowski also pointed to logic as the second pillar of philosophy.

Philosophy has [...] [two] basic branches [...] – logic and psychology; that is why they contribute to the propaedeutics of philosophy. [...] Logic and psychology represent two types of methods of research, and these types are applied to philosophical study as well. Logic uses a priori methods and psychology empirical ones. It is difficult to state which of them precedes the other but mature minds are not bothered by that. It is enough to say that one has to begin with one of these two sciences. Otherwise, “ethical” and “aesthetical” papers will appear which lack both a logical

background – like a detailed knowledge of the conditions under which an a priori method may be applied or the need to define notions in a precise way, and a psychological background, such as a knowledge of the laws that govern human mental life and, especially, of these mental facts which are situated on the border between psychology, ethics and aesthetics!

TWARDOWSKI 1910: 55

As we may see, Twardowski considered logic and psychology to be two branches of philosophy that represent two different types of reasoning: he considered psychology in its descriptive sense to be inductive science while logic uses only deduction. Psychological and logical training was, for Twardowski, a necessary basis for every philosopher because these two types of reasoning are used in the sciences and philosophy is a science (or rather a group of sciences). That is why he started teaching his students by introducing them to the sphere of problems of psychology and logic. He always wanted this to be a standard in any philosophy course. When as the president of the Polish Philosophy Society, he could influence the *curriculum* of philosophy courses in high schools, he opted for limiting the program of a philosophy course to the elements of logic and psychology.

In 1920, the Polish Philosophical Society in Lvov thought several times about teaching the propaedeutics of philosophy. [...] The final fruit of these meetings was, first and foremost, the opinion that it is necessary to limit the subject to logic and psychology, which, however, would be mandatorily taught in all junior high schools, and only the mutual scope could be different, depending on the type of school. Secondly, the need to teach philosophical propaedeutics for two years, at least 2 hours a week, was emphasized.

TWARDOWSKI 1921a: 524

What is worth noting, when Twardowski as a young boy attended the Viennese gymnasium *Theresianum*, his philosophy course was composed just of these two disciplines: psychology and logic. That could be one of the sources of his sentiment towards such a *curriculum*.

In Twardowski's opinion, there is one more advantage of starting philosophy studies from logic and psychology. According to him, these two disciplines are somehow independent of other philosophical disciplines and may be studied by those of various worldviews and various metaphysical or ethical preferences. He wrote:

Proponents of various philosophical systems, in the sense of metaphysical visions of the world and of life, can participate together in dealing scientifically with those philosophical problems that come within the purview of logic, psychology, etc.

TWARDOWSKI 1929: 273

It is an often emphasized feature of Twardowski's School that members of the LWS differed with respect to philosophical views and metaphysical assumptions.

Twardowski's opinion that logic is one of the fundamental philosophical disciplines was adopted by all his students. It bore fruit in their productive work in all the areas of logic as well as in various applications of logic in philosophy. First of all, it contributed to the fact that the output of the School fulfilled high methodological standards of precision and justification. That is what Twardowski wrote, filled with pride, about the LWS in 1926:

The fundamental feature that characterizes [my] School lies in the domain of formal methodology, namely in the quest for the greatest possible precision and exactness in thinking and in the expression of what is thought, as well as in the most exhaustive substantiation possible of what has been thus brought forth, and in the utmost rigour in the conduct of proofs.

TWARDOWSKI 1926: 28

3.2 *The Object of Logic. Psychologism and Antipsychologism*

Certainly and constantly, Twardowski considered logic and descriptive psychology the two basic branches of philosophy. His views on the relation between logic and psychology were more complicated and evolved in time. His Viennese point of departure was psychologistic and could be summed up in the statement that logic is founded in psychology. This general statement may be understood variously; let us mention at least two interpretations. In the first interpretation (which we may call "ontological"), logic concerns some psychical objects such that the object domain of logic is a part of the object domain of psychology. In the second interpretation (which we may call "methodological"), we arrive at logical objects or truths by studying psychical phenomena. Twardowski in fact hesitated about the interpretation of psychologism and about his attitude to it. In 1897, he wrote:

[Recently,] instead of getting lost in metaphysical inquiries pertaining to the essence of truth, the question has become what traits distinguish convictions that are universally regarded as true from those that are not. [...] Metaphysics ceased to be the basis of philosophical work; psychology took over that role.

TWARDOWSKI 1897a: 57–58

Here Twardowski admires replacing speculative metaphysics with empirical, descriptive psychology as the point of departure of philosophy, including the point of departure of logic. However, in the same paper, as early as in 1897, he expressed his reservations towards psychologism in logic:

Some [...] simply consider logic – perhaps incorrectly – to be part of psychology.

TWARDOWSKI 1897a: 58

Moreover, the 1927 edition of Twardowski's [1897a] paper was equipped with the following author's note:

The author has rejected his previous views on the relation of psychology to logic [...], and has taken the anti-psychological standpoint defended by him from 1902 on.

TWARDOWSKI 1897b: 107

If this autobiographical confession is sincere, then we might assume that Twardowski abandoned some kind of psychologism around 1902. One cause for this could be Edmund Husserl's first volume of *Logical Investigations* which was surely studied in Lvov; another could be the appearance of a genius student: Jan Łukasiewicz (see also the next paragraph). It is important to note this declaration of Twardowski's because sometimes his later paper, "Actions and Product" [1912], is indicated as Twardowski's abandonment of psychologism. In fact, Twardowski declared himself at the time to be strongly on the antipsychological side. He stated:

It seems that psychologism stems from the confusion of mental activities with products and the omission of the fact that mental products may have properties whose relations (e.g., relations in terms of their truthfulness and erroneousness) can be determined a priori, which means independently of the results of psychology.

TWARDOWSKI 1913: 271

A rigorous demarcation of products from actions has already contributed enormously to liberating logic from psychological accretions.

TWARDOWSKI 1912: 132

So, if logic concerns something that is connected with mental processes, it is the products of mental processes (the products of acts of judging, for instance), not the processes as such.

However, even after this antipsychological turn, Twardowski remained a methodological psychologist. He did not question the view that at least some aspects of logic owe much to psychological analyses:

The criticism of psychologism should not close our eyes to the fact that we learn even about the existence of such mental properties of mental products, as well as about the existence of mental products in general, only through internal experience and conclusions drawn therefrom.

TWARDOWSKI 1913: 271

Perhaps a hypothesis may be put forth that Twardowski's standpoint is this: mental processes are not the object of logic but logic may still be applied to mental processes, especially to oversee their correctness. What falls under this oversight are the products of the stages of reasoning.

Let us add one comment to this picture of the logic-psychology relation and to the problem of the object of logic as laid out by Twardowski. In his textbook published in 1901, Twardowski expressed the following view:

It may be [...] said that logic is a science that gives us ways to distinguish true beliefs from erroneous ones. Therefore, logic is the science of the conditions for the truthfulness of judgements or, in short, a science of the truthfulness of judgements. [...] So, logic as the science of the truthfulness of judgements determines the conditions on which the truthfulness of unobvious judgements depends. Judgements which satisfy these conditions are true, although not obvious, i.e., although their truthfulness is not immediately visible.

TWARDOWSKI 1901b: 22–23

3.3 *“Symbolic” and “Formal” Logic*

Let us now move to the problem of the use of symbolization and formalism in logic. Perhaps Łukasiewicz was right that his teacher was not talented in formal logic. However, Twardowski was interested in the development of formal

systems and investigated the nature of formal logic from a philosophical point of view. In the winter semester of 1899/1900, he lectured at the Lvov University on "Reformatory aspirations in the field of formal logic". In a paper [1901a], he analyzed the problem of logical formality in thinking. He came back to this problem in 1917, writing about the criteria for formal systems [1917]. Finally, in 1921, he published his program paper "Symbolomania and Pragmatophobia" [1921b].

Twardowski noted many dangers related to the use of logical symbolism in systems that had started to appear at the end of the 19th century.

In recent times, in addition to scholastic logic, a number of variously progressive systems have been created; however, upon closer examination, we discover that they are essentially not different from it, and moreover, they have retained nearly all of its disadvantages. Algebraic logic systems were supposed to avoid all translations of human speech into symbolic speech, and yet the old mechanical and conceptual procedures still need to be performed when using formulas. And so, instead of studying reasoning, we hide it with symbolic formulas.

TWARDOWSKI 1901a: 27

Twardowski expresses here his distrust towards the procedure of symbolization, "translation of human speech into symbols" and towards mechanization of procedures. What the pioneers of formal tools found to be their main achievement, Twardowski considered the most suspicious. The following words also sound strange and surprising in the work of the teacher of Łukasiewicz and Leśniewski:

Logic should be fundamentally reformed, and such ideal logic should not depend on the theory of judgements; nor should it dare to rely on symbolization so that everyone could use it throughout their entire life. To arrive at such logic, one has to say goodbye to formalization and symbolization and look straight into the eye of thought processes where the truthfulness of primary judgments corresponds to the truthfulness of secondary judgements.

TWARDOWSKI 1901a: 27

From the point of view of the development of logic in the first decades of the 20th century, Twardowski seems to be completely mistaken. It was formalization and symbolization that set the tone of the development of logic. It was

using formalization and symbolization that made his students famous and successful.

Yet, Twardowski's words sound different if we take another perspective. Let us keep in mind that Twardowski considered logic a tool of everyday thinking and a remedy for philosophical controversies. In this point, he somehow predicted that formalizations and symbolization alone are not enough. Courses of logic which solely contain mathematical logic turn out to be useless for those who are not interested in some specific areas of logic applications, especially in the foundations of mathematics and the axiomatization of theories. These were the exact ideas of the initiators of the informal logic movement.

That Twardowski had in mind just these every-day and philosophical applications of logic, may be easily seen based on the list of requirements Twardowski imposed on logical systems:

- (1) [A logical system] should not settle which categories of judgments exist, and it should not force us to reduce all judgments to certain forms only. Each judgment must participate in reasoning as exactly as possible, but, at the same time, be able to be expressed as accordingly to a given language as possible. Language buffs make it difficult to investigate inferences.
- (2) [A logical system] must be free from rules and patterns whose learning and application require a separate skill. After all, the rules are easy to forget, and when we forget them, we do not know how to test [the correctness of individual conclusions].
- (3) [A logical system] must correspond to the essence of reasoning, and it should not substitute real reasoning with any other operations that are at best only a certain isolated form of inference.

TWARDOWSKI 1917

Twardowski wanted logical systems to be the theories of actually performed processes of reasoning and indicating the tools for verifying the correctness of these processes. An expected system should be easy enough so that anybody could learn it and apply it to oversee one's own or others' processes of reasoning. Moreover, Twardowski pointed to the fact that the logical structures in systems he knew reduce some judgements to some forms that do not represent them correctly. Such structures do not represent correctly the variety of language categories.

Twardowski's most famous criticism of the overuse of formal methods was his short essay "Symbolomania and Pragmatophobia", mentioned above. This is the most mature expounding of his reservations towards the new trends in

logic. It is easy to notice that in this essay his position is subdued with respect to his earlier reservations.

In [1921b], Twardowski starts by emphasizing the significance of symbolization and formalization, which is a necessary tool in some disciplines. (Let us remember that Twardowski was convinced that the use of symbols enables us to think on abstract matters, for instance in mathematics).

Symbols, in the sense of conventional signs, have rendered an incomparable service to certain disciplines when they have utilized them in place of verbal expressions. In fact, some disciplines could not make any progress at all if they did not employ a system of symbols right from the outset. Indeed, the evolution of those disciplines has gone hand in hand with the evolution of their symbolism, and it continues to do so. Thus, for some disciplines, thinking and operating with symbols has become not just a means for facilitating the investigation of the concepts and objects that fall within their scope, but a device that actually makes such investigation possible.

TWARDOWSKI 1921b: 261

In the process of symbolization, Twardowski listed the following steps. At first, one assigns the symbols to the studied objects. Then, operations are done on the symbols indicated in the first step. Finally, the results of these operations have to be interpreted. Twardowski emphasized the importance of this last step.

The results, appearing as they do in symbolic form, require interpretation. Hence, after performing the operations we may no longer abstract from the fact that the symbols, in the form of which the results of the operations show up, do symbolize something. One must then make the transition from the realm of symbols into the world of concepts and objects symbolized by them; one must once again turn from the signs to what they mean and designate.

TWARDOWSKI 1921b: 261

Twardowski warns that symbols are only means and not an end as such. He formulates the following cautions for logicians:

Not until we have done this, do we reach the goal which the symbols and the operations performed on them were supposed to make easier to attain – or even make it possible to attain. It follows that in using symbols

and operating with them, we must continually reckon as conscientiously as possible with the fact that they play the role of a means intended to lead us to the mentioned goal.

TWARDOWSKI 1921b: 261

We must be as precise as possible in adapting the symbolism (for brevity, we here encompass with this term both the symbols themselves and the operations performed on them) to the concepts and objects symbolized, and submit it repeatedly to rigorous inspection in order not to become susceptible to difficulties in the final interpretation of the results that are acquired with the aid of the symbolism and expressed in its language.

TWARDOWSKI 1921b: 261

It seems [...] that there are minds [for whom] the symbols and the operations performed on them, originally the means to an end, become [...] an end in itself. [...] Indeed, the symbol represents the concept or object symbolized by it; whence the illusion easily arises in which the former replaces the latter. But representation is not after all the same as replacement.

TWARDOWSKI 1921b: 262

The tendency to set symbols above things may lead to subjugating things to symbols, which means that what is asserted of things follows from symbolic presuppositions and operations, irrespective of what the things say about themselves, or even contrary to what they say about themselves.

TWARDOWSKI 1921b: 269

It is very interesting that this paper was published when Łukasiewicz was working on his three-valued logic and Leśniewski had already published his mereology. According to Tadeusz Czeżowski, the paper "Symbolomania and Pragmatophobia" was directed by Twardowski against tendencies that had appeared at that time in Łukasiewicz:

Although the person of Łukasiewicz was not directly indicated there, the direction of the polemic was clearly against the excesses of symbolic operations and treating them in isolation from the symbolized reality, which some of Łukasiewicz's statements could be accused of at the time. Łukasiewicz later withdrew from these too far-reaching positions.

CZEŻOWSKI 1958: 17

3.4 *Twardowski on Logical Semiotics and Methodology*

It is true that Twardowski had no essential achievements in the area of formal logic. However, if the caution in interpreting symbolism and providing solid interpretations for logical systems by Twardowski's students was Twardowski's merit, we may state that Twardowski contributed to the development of formal logic significantly, although only indirectly.

Twardowski's achievements and influence in the area of logical semiotics and methodology are more direct.

Already through his habilitation dissertation, Twardowski had introduced into Polish philosophy some problems of logical semiotics. Twardowski draws an analogy between presentations as well as judgements as elements of mental life and names and sentences as elements of language. These analogies (but not parallelisms) between language and thinking played an important role in his argument, for instance for the absolutism of truth, the distinction act-product, *etc.*

Within the domain of the methodology of sciences, Twardowski set many paths which were followed by his students. He analyzed the concept of reasoning, exploring the distinction between deduction and induction. He indicated the inductive-deductive method as the most promising in empirical sciences. Twardowski scrutinized the problem of the classification of sciences and strictly distinguished between the way scientists arrive at new theorems and the way they justify theorems (between the so-called context of discovery and the context of justification).

Although Twardowski did not use axiomatization, we may find in his investigations the seeds of two philosophical methods applied later by his followers: analysis of concepts and paraphrase of statements.

3.5 *Logic in Everyday Life*

Twardowski was not only convinced that logic is important in secondary education but also that it is a necessary tool for every rational human being. He came to this conviction early on, namely when he was still in his Viennese gymnasium. In his self-portrait, Twardowski recalled that as a teenager not knowing "the rules of logic" he found a way to check the philosophical reasoning presented in philosophical works. This is how he recollected that:

A sort of philosophical impulse first reared its head in the form of a critical reaction to the arguments in [Ludwig] Büchner's *Kraft und Stoff*. [...] I was in my third year of my secondary education when this initial acquaintance with a world-view that was not just different from the Catholic but indeed inimical to it, made such a great impression on

me. But this impression quickly faded when on a closer reading I realise that Büchner's exposition were riddled with logical errors. I immediately started a notebook into which I entered Büchner's logically flawed arguments and – since, of course, I was not at the time familiar with the rules of logic – exposed their defectiveness by replacing the mode of demonstration employed by Büchner with a suitably different, concrete example, which blatantly exposed the inadequacy of the former.

TWARDOWSKI 1926: 18

It is a pity that this notebook with Twardowski's adolescent analysis of Büchner's argument did not preserve. These early experiences made Twardowski appreciate the role of independent thinking and made him careful of logical errors and sophisms. In his lectures on mistakes in thinking, he convinced his students:

[Logic] is important for two reasons: it prevents our own mistakes of thinking and helps to recognize that other people are not right in their thinking.

TWARDOWSKI 1900: 92

He was convinced that in order to teach students to avoid the mistakes of thinking, not only rules have to be taught but also mistakes should be shown with many examples taken from real life (actual reasoning).

For Twardowski, logic was the main defense against anti-irrationalism and the main weapon against irrational attitudes.

4 Twardowski's Influences

4.1 *Formal and Informal Inspirations*

Twardowski's comprehensive influence on the development on logic in the LWS has been the subject of many studies. Here I would like to emphasize that this influence had many different faces. He positively influenced research in the domain of logical semiotics and methodology, while his skepticism towards formal logic became a negative impulse for those who decided on the formal-mathematical path.

Formal logic became an export good of the LWS and quickly became appreciated in the world. Three-valued logic, formal semantics, investigations into propositional calculus, metalogic – all these matters became Polish specialties, appreciated at least since the 1930s.

What about the development of informal logic? Recently, Ajdukiewicz's *Pragmatic Logic* (in Polish 1965, in English 1975) is pointed to as an anticipation of the informal logic movement. However, one should not think that the problems of pragmatic logic appeared in the LWS only with this Ajdukiewicz's work. Such a picture would be erroneous since both branches of logic developed in Poland simultaneously from the beginning of the 20th century and first of all because of Twardowski's inspirations. Even a short look at a list of selected facts and publications (both monographs and textbooks) proves this continuity:

Informal logic
Formal logic

1895: Twardowki in Lvov. His first lectures in (informal) logic.

1899/1900 Twardowski's lecture on "Reformatory aspirations in the field of formal logic"

1901: Twardowski, *Zasadnicze pojęcia dydaktyki i logiki* [Basic Concepts of Didactics and Logic].

1921: Twardowski: Symbolomania i pragmatofobia [Symbolomania and Pragmatophobia].

1901: Twardowski's paper on formalism in logic.

1906: Łukasiewicz's first lectures on algebraic logic.

1910: Łukasiewicz: *O zasadzie sprzeczności u Arystotelesa* [On the Principle of Contradiction by Aristotle].

1916: Leśniewski: *Podstawy ogólnej teorii mnogości. I* [Foundations of the General Theory of Sets. I] (first version of mereology).

1918: Czeżowski: *Teoria klas* [Class Theory].

1920: Discovery of three-valued logic by Łukasiewicz.

1921: Ajdukiewicz: *Z metodologii nauk dedukcyjnych* [On the Methodology of Deductive Sciences].

1924: Invention of bracketless notation by Łukasiewicz.

Informal logic

1929: Kotarbiński: *Elementy teorii poznania, logiki formalnej i metodologii nauk* [Elements of the Theory of Cognition, Formal Logic and the Methodology of the Sciences].

1934: Ajdukiewicz: *Logiczne podstawy nauczania* [Logical Foundations of Teaching].

1951: Kotarbiński: *Kurs logiki dla prawników* [A Course of Logic for Lawyers].

1965: Ajdukiewicz: *Logika pragmatyczna* [Pragmatic Logic].

Formal logic

1929: Łukasiewicz: *Elementy logiki matematycznej* [Elements of Mathematical Logic].

1930: Łukasiewicz & Tarski: *Untersuchungen über den Aussagenkalkül*.

1931: Leśniewski: *O podstawach matematyki* [On the Foundations of Mathematics].

1933: Tarski, *Pojęcie prawdy w językach nauk dedukcyjnych* [The Concept of Truth in Formalized Languages].

1936: Tarski: *Wprowadzenie do logiki* [Introduction to Logic and to the Methodology of Deductive Sciences].

1961: Grzegorzczyk: *Zarys logiki matematycznej* [An Outline of Mathematical Logic].

Twardowski's *Basic Concepts of Didactics and Logic* [1901b], Tadeusz Kotarbiński's *Elements* [1929] and his *Course of logic* [1951], Ajdukiewicz's *Logical Foundations of Teaching* [1934] and his *Pragmatic logic* [1965b] belong either totally or at least partially to the non-formal (however, not necessarily informal) trend.

4.2 *Twardowskian Motives in Łukasiewicz*

To illustrate various paths of Twardowski's influence, I will focus on two case studies.

The first case shall be Łukasiewicz. Here I will quote his own statements extensively, as they combine brevity and precision with great aesthetic qualities.

Łukasiewicz started his studies at the University of Lvov in the Faculty of Law. He attended meetings of the Philosophy Circle where his philosophical talent was noticed by Twardowski. Thanks to Twardowski, he transferred to the Faculty of Philosophy. Since Łukasiewicz learnt about formal logic from Twardowski and Twardowski did not hide his reluctance towards formalism, Łukasiewicz's initial attitude towards formal logic was also full of reservations.

His dissertation, written under the Twardowski's supervision and defended in 1902, concerned induction and deduction and was a contribution to general methodology. Later, Łukasiewicz came back to the theory of reasoning in his essay "Creative Elements in Science" [1912a] and presented a list of elaborations of the classifications of reasoning prepared by Twardowski's students.

From the very beginning, Łukasiewicz was not merely interested in methods but was even obsessed with the idea of finding a perfect method of philosophical investigation. He appreciated the clarity of how Twardowski presented philosophical problems, but he felt a lack of strictness in argumentation. One exposition of Łukasiewicz's methodological concern was the first part of his habilitation which concerned the method of analysis of concepts. In his didactic process, Twardowski often advised his students to provide an analysis of some concept. However, he never systematically exposed the method of analysis. Łukasiewicz tried to fill this gap.

For not only they give me a weapon and an instrument for proceeding in the following studies; they can also instruct the reader about what to pay attention to in *METHODICALLY* led works of this kind. A work lacking in scientific method is not a scientific work at all, but fantasizing about science. I would like this to be remembered not only by dilettantes who feel entitled to address philosophical questions, but also true philosophers who too often proclaim with emphasis far-reaching metaphysical views, such as, e.g., that everything in the world has some cause or that the principle of causality is some innate form of cognition, but because they have no clue what a cause is, they don't satisfy the simplest rules of a scientific method.

In this work, Łukasiewicz also opted for antipsychologism. (However, it could not be against his teacher if Twardowski in fact had abandoned psychologism earlier). He admitted openly that he found the support for his antipsychological positions in Frege, which “spoke through” Husserl’s *Logical Investigations*:

The first volume of [Husserl’s] *Logical Investigations* made an impression in Lvov and particularly on me. I hadn’t liked Twardowski’s psychologism for a long time, but now I refuted it completely. [...] Later, I clarified that in the first volume, it was not Husserl that was talking to me but someone much greater: Gottlob Frege, whose results were used by Husserl in his book.

ŁUKASIEWICZ 2012: p. 65–66

Łukasiewicz’s first positive impulses concerning formal logic came from Bertrand Russell’s *Principles of Mathematics*, which he had read around 1906 (after preparing his habilitation). Step by step, he started to consider formal logic to be the perfect method and a chance to redeem philosophy. He finally proposed his program of the logicization of philosophy around 1920. In his program, he proposed that a philosophical system be presented in the form of axiomatic systems.

A future scientific philosophy must start its own construction from the very beginning, from the foundations. And to start from the foundations means to first make a review of philosophical problems and to select from among them only those problems that can be formulated in a comprehensible manner and to reject all the others. [...] Next, the task would be to try to solve those philosophical problems that can be formulated in a comprehensible manner. The most appropriate method for this purpose again seems to be the method of mathematical logic, the deductive, axiomatic method. We would have to base our arguments on propositions which are as clear and certain as possible from the intuitive point of view and to adopt such statements as axioms. As primitive or undefined terms we would have to select concepts whose meanings can be explained from all sides by examples. We would have to strive for a reduction of the number of axioms and primitive concepts to a minimum and to count them all carefully. All other concepts would have to be defined unconditionally by means of primitive terms, and all other theorems would have to be proved unconditionally by means of axioms and the rules of proof as adopted in logic. The results obtained in this way would have to be checked incessantly against intuitive and

empirical data and with the results obtained in other disciplines, in particular the natural sciences. In case of disagreement, the system would have to be improved by the formulation of new axioms and the choice of new primitive terms.

ŁUKASIEWICZ 1928: 42

Generally speaking, Łukasiewicz's approach evolved from a not-formal to a formal attitude. However, in his formal period, he remembered about his teacher's precautions. He provided formalisms with solid interpretations.

Łukasiewicz accepted Twardowski's conviction that logic is necessary in the process of education. However, he was convinced that it is formal, mathematical logic that should be taught as mathematical logic provides us with the ideal of method and exactness.

It is as if the scales fall from the eyes of whoever has educated themselves in the exact thinking of mathematical logic. They see differences where others do not, and they see nonsense where others look for some mysterious depth. At some point, such a person concludes with horror that even though more than 2,000 years have passed since the creation of logic, we do not know how to think logically, we do not know how to think exactly, consistently, diligently, in philosophy or in other sciences, in public life or in private life. I believe that only mathematical logic will teach us exact thinking.

ŁUKASIEWICZ 1929b: 431–432

Every part of my scientific work has been inspired by the distant idea that by improving logical thinking we will one day reach more correct views of the world and life. In symbolic logic, I found a measure of scientific exactness that far exceeds the exactness of mathematicians and is incomparably greater than the deliberations and reasonings of philosophers. [...] I have never been a soldier but in the spiritual area, I wage a persistent fight against error and inexactness, believing that better logic and better philosophy will one day lead us to a better future.

ŁUKASIEWICZ 1955: 45

Łukasiewicz hesitated in declaring his attitude towards the object of logic and but his dominant view was that logic concerns some ideal objects, ideal construction. Certainly, it is not the case that logic concerns nothing and consists only in operations with symbols. This antinomialistic standpoint was expressed by Łukasiewicz most strongly in his "In Defense of Logistics".

By difficult mental work, going on for years and surmounting enormous difficulties, we are step by step acquiring new logical truths. And with what are these truths to be concerned? With empty inscriptions and spatial ornaments? I am not a graphic artist or a calligrapher, and I am not interested in ornaments and inscriptions. The whole difference between logistic and a game of chess consists precisely in this, that chessmen do not mean anything, while logical symbols have meaning. We are concerned with that meaning, with the thoughts and ideas expressed by signs, even if we do not know what these meanings are, and not with the signs as such. Through the intermediary of these signs we want to grasp some laws of thought that would be applicable to mathematics and philosophy and to all disciplines that make use of reasoning. That goal is worthy of the greatest effort. We formalize logical deductions, and we are right in doing so; but formalization is only a means of acquiring knowledge and certainty about something, and what is important for us is not the means but that of which we obtain cognition through those means.

Today I can no longer adopt a nominalist standpoint in logistic. But I say that as a philosopher, and not as a logician. Logistic cannot settle the question, because it is not philosophy. *A fortiori* it cannot be blamed for nominalism.

ŁUKASIEWICZ 1937: 240–241

Let us add in the end of this point that the interests of another Twardowski's early student, Leśniewski, evolved in a similar way to those of Łukasiewicz. He started from an interest in logic *sensu largo* (logical semiotics, the philosophy of logic) and abandoned this approach for "logistics". Furthermore, he even called himself "an apostate" of philosophy. However, one of the most eminent students of both logicians, Bolesław Sobociński, pointed to the significant difference between Leśniewski and Łukasiewicz. He wrote:

There is an interesting contrast [...] between the two great figures of the Warsaw School of Logic, Łukasiewicz and Leśniewski. The latter also was a philosopher by training; he too moved away from philosophy and avoided even philosophical "asides" in his published work. But unlike Łukasiewicz, he held that one could find a "true" system in logic and in mathematics. His systematization of the foundations of mathematics was not meant to be merely postulational; he wished to give, in deductive form, the most general laws according to which reality is built. For this reason, he had little use for any mathematical or logical theory which, even though consistent, he did not consider to be in accord with

the fundamental structural laws of reality. [...] Thus, in a sense, though he never mentions philosophy, Leśniewski may be regarded as a philosopher of logic, one of the greatest in this small group.

SOBOCIŃSKI 1956: 42–43⁵

4.3 *Twardowskian Motives in Ajdukiewicz*

The second case shall be Ajdukiewicz.

He studied philosophy in Lvov a decade after Łukasiewicz when Łukasiewicz himself was already a lecturer. Ajdukiewicz got his PhD under Twardowski in 1912. After achieving his PhD, he continued his studies under David Hilbert and Husserl in Göttingen. Motivated by Łukasiewicz and Hilbert and encouraged by Twardowski, Ajdukiewicz in his early works analyzed many problems of logistics, and was especially interested in formal systems and the axiomatic method. His habilitation was entitled *Z metodologii nauk dedukcyjnych* [On the Methodology of Deductive Sciences]. Before World War II, Ajdukiewicz was mostly connected with Lvov, but from 1925 to 1928, he worked in Warsaw where he could observe up close the work of Łukasiewicz, Leśniewski, and Kotarbiński and the origins of the Warsaw School of Logic.

In 1924, he wrote about the value of formal logic:

[There are] two conditions that are enough (though not necessary) for attributing value to an activity. (I) An activity that creates the necessary tools for another valuable activity is valuable. (II) An activity that creates precise tools for a valuable activity is valuable. [...] [Thus,] the claims of logic, which are creations of formal logic, constitute: (I) tools necessary for valuable scientific research (because once produced, they are suitable for frequent use; they contribute to the economy of scientific work); (II) precise tools, which guarantee greater reliability of operation, similar to measuring instruments, compasses, straightedges, etc.

AJDUKIEWICZ 1924b: 87b

As one can see, Ajdukiewicz was interested in FORMAL logic as APPLIED to the theory of sciences.

5 In the Polish version of this paper, Sobociński formulated it more radically, calling Leśniewski a “metaphysician in logic”: “Despite the extraordinary precision in the analysis of even the smallest logical problems and their formulation, Leśniewski, paradoxically speaking, was a metaphysician in logic” [Sobociński 1957: 21].

Ajdukiewicz's works from the 1930s certify his versatile approach to the problem of logic and its applications. His directival conception of meaning has its sources in the construction of formal systems but still uses the pragmatic concept of accepting sentences. His categorial grammar may be considered an answer to Twardowski's idea of the categorial inadequacy of various formalisms. The analogy he drew between metamathematics and epistemology in his criticism of idealism is a canonical example of the use of formal results for the assessment of a philosophical thesis.

Later, Ajdukiewicz's interests evolved towards informal matters. Ajdukiewicz was interested in all areas of semiotics and methodology. After Twardowski's death, Ajdukiewicz often came back to the problems which had been important to his teacher and father-in-law (as I wrote above, Ajdukiewicz married Twardowski's daughter). His dominant goal became to increase logical culture at every level of education. He is the author of two textbooks of logic: *Logiczne podstawy nauczania* [Logical Foundations of Teaching] (1934) and *Logika pragmatyczna* [Pragmatic logic] (1963).

In 1951, Ajdukiewicz wrote:

Firstly, if any formal logic is necessary for students who are becoming familiar with logic as a service subject, it is the logic of sentences built from words of the natural language that students use in life and during their studies, not the formal logic of an artificial language. [...] Secondly: it seems that drawing attention to logical errors, which are often encountered, and warning about them is especially significant when it comes to logical "repairing" of minds. [...] Science regarding logical errors should definitely be extended on the basis of vast studies and monitoring of human illogicalness. This "logical pathology" should capture logical errors and flaws in speeches, debates, literature, and the press red-handed.

AJDUKIEWICZ 1951: 135–136

Perhaps, the most important constituent of logical culture is care for the objective precision of word utterances and the thoughts expressed by them. [...] Definition that brings the content of some concepts down to others, and that constructs new concepts from other, simpler, ones is a tool that one will use very often. [...] Another significant constituent of logical correctness is the objective order of our word utterances and thoughts. [...] The third constituent of logical correctness is a rational attitude towards the propositions that we believe to be true, namely criticism. [...] The ability to reason and infer correctly is closely related to the

aforementioned constituent of logical culture. We focus on this ability, first and foremost, when talking about someone's logical culture or someone's logical skills. [...] The final constituent of logical culture that attention should also be paid to is consistency in thinking, and – to a certain extent – consistency in action.

AJDUKIEWICZ 1959: 324–327

This could have been written by Twardowski. The same can be said about Ajdukiewicz's view on the applicability of logic in everyday life. He wrote:

Logic in the broad sense of the term could be called a “theory of science”. From a general point of view, it deals with tools and methods, that is, with the procedures used in the sciences. Since the methods used in sciences are also sometimes applied in everyday life, the scope of logic's theses reaches beyond science, including the cognitive practice of everyday life.

AJDUKIEWICZ 1933–1936: 53

Let us add a remark that Ajdukiewicz was not the only Twardowski's student that moved from formal to informal interests. His path was similar to that of, for instance, Czeżowski.

5 Recapitulation

Twardowski considered logic in a broad sense as one of two pillars of philosophy. He was interested in all areas of logic, becoming the first lecturer of mathematical logic in Poland and a great propagator of logical culture. His approach caused that the concept of logic accepted in the LWS was broad and included formal logic as well as the methodology of sciences and logical semiotics. The problems of informal, applied (pragmatic), philosophical logic were analyzed in the LWS from the beginning; “formal logicians” and “soft-logicians” influenced each other.

Moreover, partially because of Twardowski's skepticism towards the formal methods, “logicians” in the LWS (first of all, Łukasiewicz and Leśniewski) were more careful about the interpretation of their systems than logicians from other centers. It was also probably Twardowski's merit that the interests of formally (at the beginning) oriented Ajdukiewicz or Czeżowski evolved into the informal direction.

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For Logical Education

The Resonance of Twardowski's Ideas in the Views of Selected Members of the Lvov-Warsaw School

Marcin Będkowski

Abstract

In the paper, I have presented how ideas formulated by Twardowski in three texts, i.e., “For Logical Education”, “Symbolomania and Pragmatophobia”, and *Basic Concepts of Didactics and Logic* resonated in the views of Kazimierz Ajdukiewicz, Tadeusz Czeżowski, and Tadeusz Kotarbiński. There are three main problems raised in these texts. Firstly, what is logical education and why is it important? Secondly, who should teach logic or who is responsible for developing students’ logical skills? And finally, what kind of logic should be taught (in order to develop these skills)?

Keywords

Logical culture – pragmatic logic – school logic – Kazimierz Ajdukiewicz – Tadeusz Czeżowski – Tadeusz Kotarbiński – Kazimierz Twardowski – Lvov-Warsaw School

1 Introduction

Kazimierz Twardowski is considered a great teacher of great philosophers [Brożek 2018] and a personal model of an academic teacher [Zegzuła-Nowak 2012]. He was the founder of the Lvov-Warsaw School whose fundamental feature lied in the domain of methodology, not specific philosophical convictions. As Anna Brożek claims, Twardowski instilled in his pupils not so much individual ideas, but rather certain methodological assumptions [Brożek 2018: 30]. In this paper, I will present the resonance of Kazimierz Twardowski’s ideas concerning logic and the teaching of logic in the views of the members of the Lvov-Warsaw School.

By “the resonance of ideas” I mean the impact of Twardowski’s ideas and convictions on his students. I borrowed this metaphorical but convenient category from Jacek Jadacki [Jadacki, 2019]. According to him, resonance may involve sharing common ideas, as well as modifying them: strengthening or weakening, supporting with different – sometimes better – reasons [Jadacki 2019: 13]. I believe that we can also find the essence of what resonance of (Twardowski’s) ideas is in the following passage from Czeżowski:

For years, Twardowski’s students have been active in philosophy departments, a new generation of their students has undertaken philosophical work and now a lot of them are academic teachers. They propagate further philosophical ideas which Twardowski once implanted in the minds of their teachers, his disciples. Undoubtedly, this is not just repeating the Master’s words. The most outstanding students of Twardowski went their own way, taking responsibility for what they teach. However, the continuity of development has remained intact, as well as the unity of philosophical work.

CZEŻOWSKI, 1948: 11

Speaking a bit more specifically, I will investigate the resonance of ideas formulated by Twardowski in three texts, i.e., “For Logical Education” [Twardowski 1920], “Symbolomania and Pragmatophobia” [Twardowski 1921], and *Basic Concepts of Didactics and Logic* [Twardowski 1901b]. There are three main problems raised in these texts that I will recall here. Firstly, what is logical education and why is it important? Secondly, who should teach logic or who is responsible for developing students’ logical skills? And finally, what kind of logic should be taught (in order to develop these skills)?

In this paper, I will focus mainly on the views of three members of the Lvov-Warsaw School, i.e., Kazimierz Ajdukiewicz, Tadeusz Czeżowski and Tadeusz Kotarbiński. In their articles and textbooks Twardowski’s views on logical education resonate most strongly.

2 For Logical Education

In the paper entitled “For Logical Education”, Twardowski presents the concept of general logical education. Twardowski assumes that we can distinguish some basic logical skills and knowledge which every educated person should acquire:

It is not professional logical education that I want to speak about here but general one that every “educated” person should have – as well as general historical, mathematical, grammar, scientific, and literary education.

For example, general grammar education – just like general logical education – consists of having a certain amount of knowledge and having developed certain skills.

TWARDOWSKI 1920: 65

Then, he describes what is required from a person in order to call him or her someone educated in logic:

We will not consider a man who does not know basic logical concepts or is not able to reason properly to be educated in logic – as we do not attribute being educated in grammar to someone who does not know what an adjective is or who cannot build a proper sentence; just as we do not attribute being educated in mathematics to someone who does not know what a function is; or who cannot solve an ordinary first-degree equation with one variable.

Therefore, it would not be unreasonable to require from a man to whom we can rightly credit general logical education, e.g., to know what a syllogism is or at least to respect in his arguments the postulate of logical consequence.

TWARDOWSKI 1920: 65

Twardowski also mentions several typical errors originating from the lack of logical education (e.g., concerning the usage of the word “syllogism” without knowing its proper meaning). And finally, he indicates some general consequences of the lack of logical education:

Pointing out these deficiencies may seem to be school pedantry. I think, however, that contrary to appearances, it is about things that are very important and of great impact. The lack of logical education not only lowers the intellectual level in theoretical aspect, but also brings ignorance and inaccuracy into the practical application of our thoughts. This means – into our whole life!

TWARDOWSKI 1920: 71

There are several papers developing the concept of general logical education although without explicit reference to “For Logical Education”, e.g., T. Czeżowski’s “On Logical Culture” [Czeżowski 1954], K. Ajdukiewicz’s “What

Can the School Do to Raise the Pupils' Logical Culture" [Ajdukiewicz 1959], and T. Kotarbiński's "Logic as a School Auxiliary Subject" [Kotarbiński 1970a]. Much like Twardowski, both Czeżowski and Ajdukiewicz distinguish two aspects of logical culture (shared with other kinds of culture): ability and knowledge concerning thinking and speaking ([Czeżowski 1954: 68]; [Ajdukiewicz 1959: 322]).

Czeżowski enumerates elements of the inventory of logical culture regarding descriptions, definitions, generalizations, reasoning and speaking. He also considers other aspects of logical culture, i.a., connected with intellectual personality. A person with logical culture is aware of his or her range of competence and is sensitive to logical errors.

In his paper, Ajdukiewicz characterizes a person who possesses a logical culture as a person who is able to think correctly and express his or her thoughts, has at his or her disposal certain apparatus of logical concepts, knows basic theorems of logic.

Ajdukiewicz considers also the problem how students should be taught this kind of logical culture. He states that it is the role of all school subjects to develop students' logical culture and in particular, to help them develop habits of logically correct thinking and speaking.

In fact, developing logical culture seems to be in a sense a superior goal of education, as according to Ajdukiewicz teachers of all subjects should exploit every occasion to familiarize students with the basic theorems and concepts of logic (referring to the specific teaching material of their subjects). Lessons in logic – due to the limited hours dedicated to them – should recall, systemize and summarize the knowledge gained during other lessons (Czeżowski states that logical culture is one of the important educational goals and its concept is necessary for pedagogy and didactics).

Ajdukiewicz also enumerates several elements of logical culture and conditions of logical correctness – he does not distinguish these matters clearly enough:

- care for the precision of verbal expressions and of the thoughts they express,
- order and arrangement of our verbal statements and thoughts,
- rational attitude towards statements that are considered to be true, i.e., criticism,
- ability to reason correctly, recognize errors, and resist them.

A very similar view was adopted by Kotarbiński. In his article, he put forward ten theses concerning logic as a school subject. According to the third thesis, the goal of logic lessons is to make a student able to undertake scientific inquiries. In order to do that, a student should be familiarized with universal or common problems and typical errors that occur in science or knowledge

work. In the sixth thesis we can find what he thought to be a satisfactory level of logical education:

What a graduate of general secondary school should achieve as a form of logical culture can be described as mastering the vocabulary of philosophical logic. He should be familiarized with the terms of this discipline. A large part of these terms are names of mental activities. In regard to these activities, a graduate should gain practical acquaintance whose main task is disposal of usual deformation in their performance.

KOTARBIŃSKI 1970a: 623

Of course, the question arises how to develop this kind of logical culture, knowledge and abilities – in particular, what is the role of mathematical logic in this endeavor.

3 Against Mathematical Logic

In his famous paper “Symbolomania and Pragmatophobia”, published in 1921, Twardowski presents two – now well known – categories. Let me briefly characterize them. As Twardowski describes his own view:

Symbolomania is an exuberant passion, which dominates a person’s way of thinking and acting and forces him or her to have an unfaltering belief in the infallibility of the symbolism they use and to ignore the difficulties (in the final interpretation of the results obtained by means of a symbolism and expressed in its language) emerging if the results are at variance with those convictions of ours which are independent of any symbolism. [...]

Facing such a conflict, we need to decide whether to reject our convictions (independent of symbolism) and accept the results obtained contrary to them or to accept those convictions and reject the results obtained by the use of symbolism. [...]

Symbolomania is associated with a negative element called “pragmatophobia”. Pragmatophobia is “an aversion for things, i.e., those things which symbols, being names of things in the most general sense of the word, symbolize”.

TWARDOWSKI 1921: 4

Twardowski points out the risk of developing symbolomania and pragmatophobia while doing symbolic logic. Symbolic logic demands for every theorem to be proved in a strictly deductive and formal manner, without reference to the meaning of the symbols. As Twardowski states:

In that case, symbolic logic would degenerate into a purely formal theory of combinations, devoid of any content.

TWARDOWSKI 1921: 4

In the case of a divergence between formal theorems and convictions, if one is willing to declare the triumph of symbolism over what it symbolizes they would be a model example of symbolomaniac and pragmatophobe.

TWARDOWSKI 1921: 4–5

It is worth stating that similar ideas can be found in Twardowski's earlier work, i.e., in his lecture "On Logical Formalism in Thinking" given in 1901 during the scientific meeting of the Nicholas Copernicus Polish Society of Naturalists. Here, Twardowski states what should be done to construct an ideal logic:

In modern times, apart from the scholastic logic, a number of various progressive systems have been created. Upon closer examination, we find that they are basically no different from it, and have retained almost all of its bad sides.

According to the speaker, logic should be thoroughly reformed, and such an ideal logic should not depend on the theory of judgments; should not rely on symbolization. Then all people will be able to use it throughout their lives.

To achieve such a logic, one must say goodbye to formalization and symbolization, and look straight into the eyes of the processes of thinking.

TWARDOWSKI 1901a

The criticism of symbolic logic was formulated in Twardowski's (quite) early thought and it seems it was not an ephemeral but essential element of his philosophy.

Similar "objections" to mathematical logic were formulated in an educational context in a number of works of Twardowski's disciples, for example, T. Kotarbiński's "Logic in the School Sense and Mathematical Logic" [Kotarbiński 1925b], "Logic for Teachers *versus* Mathematical Logic" [Kotarbiński 1925a], "The Specific Tasks of the School Logic" [Kotarbiński

1951], “The Case of Logic on the Eve of the Decisions” [Kotarbiński 1956], “The School Logic, Its Problems and the Significance for Pedagogy” [Kotarbiński 1964], “On the Curriculum of Logic for Lawyers” [Kotarbiński 1967], “Crisis of Logic” [Kotarbiński 1955], and K. Ajdukiewicz’s “Logic – Its Tasks and Needs in Contemporary Poland” [Ajdukiewicz 1951], “On the Need for a Service Logic Course in Studies Curricula” [Ajdukiewicz 1955a].

The earliest discussion about this problem which is worth recalling dates to 1925. It was had between Łukasiewicz and Kotarbiński. On December 15, 1924, a scientific meeting of the Polish Psychological Society was held and Łukasiewicz presented the talk “Why Are We Not Satisfied with Philosophical Logic?”. He recapitulates it as follows:

According to the speaker, philosophers as such do not have sufficient qualifications to do logic. In order to do it usefully, one must stand on the firm ground of scientific deductive methods that can be absorbed by a study of mathematics. In philosophical logic, there is hopeless impotence of thought. This impotence was detrimental to the whole modern philosophy and to many natural sciences. The logic of this kind not only does not teach you to think well but creates harmful thinking habits. Therefore, it should disappear as soon as possible, especially from school education, and its place should be taken up by mathematical logic.

ŁUKASIEWICZ 1925¹

Four weeks later, on January 12, 1925, Kotarbiński replied in the talk entitled “Logic in the School Sense and Mathematical Logic”. He states:

The speaker, fully recognizing the revolutionary role and the excellent advantages of mathematical logic, especially in comparison with traditional formal deductive logic, tried to show that mathematical logic partly due to its current stage of development, partly due to its proper nature, leaves fallow the whole fields of issues belonging to logic in a broader sense.

KOTARBIŃSKI 1925b: 25b

1 It is worth noting that although I emphasize the formalist aspects of Łukasiewicz’s views he had strong philosophical interests. He thoroughly studied Aristotle and ancient Greek logic. Some of Łukasiewicz’s important contributions have philosophical source and inspiration, e.g., his three-valued logic and the discussion on indeterminism. I would like to thank anonymous reviewer for this important point.

He introduces the notion of logic in the broader sense (which he calls “logic in the school sense”) and assigns to it the role of the science of science. Already in this early paper, he points out that to logic in this sense should belong among others:

The problems of mental work techniques, general didactics, historical methodology [...], analysis of concepts applied in natural sciences (building a historical dictionary of scientific terms), the analysis of semantic aspects of language, theory of knowledge, finally, the logic of induction along with the theory of experiment.

KOTARBIŃSKI 1925b

In the same year 1925, Kotarbiński published a paper based on his talk given in the Polish Psychological Society in which he elaborates on the idea of logic in a broader sense. He introduces the opposition between logic understood as a branch of mathematics and as a branch of epistemology:

Logic is broadly understood as a science of thinking, or narrowly, as a science of scientific thinking. And that is why, in disputes over the reform of the philosophical faculty programs at the university and at secondary schools, it is generally recognized that it has a unique role as a universally applicable subject. But the progressive exponents of logic understand it differently today! In their eyes, it does not teach thinking because it is not a practical but a theoretical skill. However, even as a theory, it is not a science of thinking, it does not belong to psychology. What's more, it is not even the science of correct thinking or of the correctness of thinking, because it does not speak about thinking at all. What is it then? The answer is difficult, but it is sure and indubitable that it is a basic branch of mathematics: through misunderstanding only and as a result of a faulty tradition is it included in the so-called philosophical sciences. So we have a special kind of mathematics instead of something like an epistemology.

KOTARBIŃSKI 1925a: 519–520

The distinction between logic as a branch of mathematics and branch of epistemology corresponds to the distinction between bad and good logic:

A stylish, so to say, contemporary logician sees around himself two “logics”: one “philosophical”, that is, bad, the other “mathematical”, that is, good.[...] Since symbolic logic is the only true logic and the only good logic, it should reign alone in all institutions devoted to logic. This

conclusion, never uttered, in all its brightness, seeps through words and actions.

KOTARBIŃSKI 1925a: 520

By “stylish logistician” Kotarbiński means Leśniewski. The latter used to say that the discipline he practices is called “logika” (‘logic’) with an accent on the vowel “o”, whereas “logika” as the name of philosophical logic practiced by Kotarbiński should be accented on the vowel “i” ([Jadacki 2016: 179], [Kotarbiński 1970a: 622]), i.e., incorrectly in Polish but often used in colloquial language. This disapproving statement did not stop Kotarbiński’s efforts to develop the concept of logic in a broader sense. Although he recognized Leśniewski’s authority in the field of logic he emphasized the differences between the discipline as a field of academic research and a school subject. In his later article on the topic, Kotarbiński states:

In general, if there is any separate science and if this science is taught in a general school then *cum duo faciunt idem, non est idem*: the problems and the method of teaching differ significantly when comparing this university education and this so-called school discipline.

KOTARBIŃSKI, 1970a: 621

Let us come back to Kotarbiński’s paper published in 1925. In the context of the argument with Łukasiewicz, he declares that he will not defend philosophical logic but offers a different term – “pedagogical logic”:

It is not good to defend a “philosophical” logic as such. An ambiguous adjective, a tool of great confusion, here also makes communication difficult. [...] So we will send to the court of cassation, for formal reasons, a dispute over whether it is a good or bad philosophical logic, and we will try to put the issue that concerns us here, without using this deceptive name. And the problem is of a practical nature and concerns the organization of academic teaching, intended for teachers. We ask what domains of issues, discussed today or in the past, being called “logic” or being related to it by the development of their subjects, do not enter the current symbolic logic curriculum, although they need to be included in the pedagogical logic curriculum. Using this word, we mean logic as the subject of studies and obligatory examinations for candidates for teachers, in particular for candidates for the teachers of “philosophical propaedeutics”.

KOTARBIŃSKI 1925a: 521–522

There is no doubt that Kotarbiński highly valued the theoretical achievements of Polish formal logicians. In 1959, he formulated famous words appreciating their work and results: “the name ‘Polish logician’ is a symbol of a kind of mastery, just like the name ‘Italian singer’ in another profession” [Kotarbiński, 1959: 366]. However, according to Kotarbiński – as well as Twardowski or Ajdukiewicz – courses in symbolic logic are not sufficient to develop practical logical skills. In fact, sometimes they are even harmful. Anyway, the next question in need of an answer is what the pedagogical logic curriculum should look like, e.g., what topics it should cover.

4 Curriculum of School Logic

To recognize the importance of school logic, we should take a closer look at the relation between logic and didactics.

As Twardowski put it in 1901 in his textbook *Basic Concepts of Didactics and Logic*:

One of the auxiliary sciences of didactics is logic, i.e., the science of truth of judgments. Didactics teaches how the teacher should act giving the student information and developing his or her intellectual abilities. Well, having information about any object means the same as being able to make true judgments about it. And the development of intellectual abilities is also aimed at making the student capable of independently stating true judgments. Obviously, if one wants to teach well, one must also get acquainted with logic which is dealing with the truth of judgments.

TWARDOWSKI, 1901b: 12

In *Logical Foundations of Teaching*, Ajdukiewicz also raises the issue of the relation between logic and didactics. He indicates that one of the branches of logic is the methodology of science which deals with activities that make up the practice of science. Thus, the methodology of science deals with activities constitutive for science understood as an activity (not as a product) [Ajdukiewicz 1934: 5].

Then, he shows that because (a) didactics is a theory of teaching, (b) the methodology is a theory of science, and (c) science is one of the most important objects of teaching, the methodology should provide the basis for didactics.

Ajdukiewicz also underlines that to be able to train students effectively a good teacher should know the theory of the object of teaching:

In order to be a good teacher, i.e., to teach students effectively, it is not enough to be able to perform activities being a subject of teaching efficiently by oneself, one must also have a theoretical knowledge of these activities, one must know their theory.

AJDUKIEWICZ 1934: 5

Now, let us move on to the issue of what should be included in the program of pedagogical or pragmatic logic. In Twardowski's textbook *Basic Concepts of Didactics and Logic* we can find among others the following chapters: "On judgments in general", "On the truth of judgments", "On reasoning", "On inferences and proofs", "On presentations in general and concepts", "On methods of scientific research". These topics in one form or another also constitute the content of the following, classic textbooks: T. Kotarbiński's *Gnoseology* [Kotarbiński 1929] (reviewed by Ajdukiewicz in [Ajdukiewicz 1930]), *Logic for Lawyers* [Kotarbiński 1951], K. Ajdukiewicz's *Logical Foundations of Teaching* [Ajdukiewicz 1934], *Outline of Logic* [Ajdukiewicz 1953], *Pragmatic Logic* [Ajdukiewicz 1965b].

The main topics of these textbooks seem to be: semiotics (semantic functions of language, definitions, semiotic defects), epistemology (presentations, concepts, judgments), formal logic (laws of logic, logical inference, logical relations between propositions, deductive systems), the general methodology of sciences (kinds of reasoning, inductive and deductive methods, types of scientific disciplines).

Although mentioned textbooks share common elements they differ in details. Ajdukiewicz in his review of Kotarbiński's *Gnoseology* wrote that it is not merely a textbook as it "comprises a wealth of tersely formulated original opinions which would suffice to fill a number of monographs" [Ajdukiewicz 1930: 7]. These words can equally well be applied to a *Pragmatic Logic* by Ajdukiewicz or *Basic Concepts of Didactics and Logic* by Twardowski due to their original nature.

Pragmatic Logic presents an advanced approach to inductive methods, elements of the theory of measurement, and statistics. *Gnoseology* contains a short chapter devoted to practical skills and a treatise on reism. In *Logic for Lawyers* we can find elements of eristic. In his textbook, Twardowski included didactic issues.

Kotarbiński postulated to incorporate some elements from the heritage of traditional logic to the program of pedagogical, school, or pragmatic logic, e.g., Aristotle's *Organon* (issues concerning natural language) and Bacon's *Novum Organum* (problems of induction and statistics).

However, I find particularly interesting the suggestions of Ajdukiewicz and Kotarbiński to include elements of praxeology and psychology, e.g., studies on human illogicality [Ajdukiewicz 1951: 135–136], techniques of mnemonics [Kotarbiński 1964: 617], of focusing attention – in general: practical advice or academic lifehacks (so to say) concerning general principles of good work [Kotarbiński 1951: 548]. Ajdukiewicz in his paper “The Matter of the Research Plan in the Field of logic” [Ajdukiewicz 1955b] writes that pragmatic logic should include considerations on auxiliary activities and the organization of intellectual work – and he points out that it would be a continuation of pre-war investigations of prof. Rudniański on the technology of mental work [Ajdukiewicz 1955b: 269]. The fact that Ajdukiewicz saw such investigations and topics as a part of logic is quite striking.

Kotarbiński states that logic as a school subject is not a homogeneous theoretical discipline and should not strive for such homogeneity. School logic is supposed to make students – and teachers! – more efficient in mental work [Kotarbiński 1964: 615]. As we can see, the concept of school logic is practical in nature and aims to improve not only adepts’ thinking but also their everyday life.

5 Conclusion

Let us recapitulate the main ideas and theses resonating in the views of the selected members of the LWS regarding the teaching of logic:

- Every educated person should get a basic logical education (logical culture, logical literacy).
- It is teachers of all school subjects (not professional logicians) who are responsible for the development of the logical culture of people.
- Every teacher should be educated in pedagogical logic.
- Mathematical logic is not sufficient to develop logical culture.
- Conception of pedagogical logic should embrace conceptual tools from the so-called traditional logic and other disciplines: formal logic, linguistics, eristic, rhetoric, praxeology, psychology.
- Every student should master at least the vocabulary of pedagogical logic.

The debate concerning the role of mathematical logic and logical curriculum in developing logical culture is still ongoing and therefore, Twardowski’s ideas are still resonating. Every now and then in Poland, the debates on these matters are sparked off. To mention just a few examples, in 1955 on the pages of *Mysł Filozoficzna* [Philosophical Thought] (vol. v, No. 1), in 2002 – on the pages of *Filozofia Nauki* [Philosophy of Science] (vol. x, No. 2, concerning the textbook

by Ryszard Wójcicki), and in 2018, in *Studia Philosophica Wratislaviensia* (vol. XIII, No. 3, regarding the textbook by Andrzej Kisielewicz).

It is also worth noting that the idea of pedagogical (pragmatic) logic is very similar (in some aspects: their tenets, curriculum) to some versions of critical thinking theory or informal logic (cf. [Johnson & Koszowy 2018]). Of course the idea of pragmatic logic is much earlier than the theory or program of critical thinking. For some, the conviction that service logic and critical thinking theory are inferior kinds of logic, remains valid to this day. Their conception, however, originates from the very core of the Lvov-Warsaw School and its methodological ideals such as postulates of clarity and justification. And their social and educational importance seems to be invaluable. Therefore, these theories deserve to be reconstructed and developed in the style of the great teacher of great philosophers and his disciples.

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Closing Word



Twardowski in Poland and in the World

Anna Brożek and Jacek Jadacki

The significance of Kazimierz Twardowski is measured differently from different perspectives.¹ For historians of general philosophy, Twardowski is perceived, first of all, through the prism of the role he played in the Brentano School and the original results of his thesis *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen* (1894). The view from this perspective is accurately reflected by Arianna Betti:

His main work, *On the Content and Object of Presentations* (1894), established the need for the distinction between the content and the object of a presentation within Brentanian theories of the intentionality of mental acts. The distinction is a psychological, non-platonistic counterpart of Frege's distinction between sense and reference. Other students of Brentano, notably Edmund Husserl and Alexius Meinong, integrated the distinction between content and object in their works after the appearance of Twardowski's book. Twardowski spoke of contradictory objects before Meinong: he was the first philosopher to hold a theory of intentionality, truth, and predication in which thinking and speaking about non-existents, including contradictions, involves presenting and naming non-existents, including contradictory objects. Like Meinong, Twardowski belonged to a tradition of non-idealistic German-language philosophy that originated with Bernard Bolzano, and that influenced, via G.F. Stout, Moore and Russell's transition from idealism to analytic philosophy.

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By historians in Poland, Twardowski is considered through the prism of the role he played in the awaking of Polish philosophy. Twardowski was the founder of the greatest scientific school so far in the history of Poland and the initiator of many philosophical institutions that are still active today. Last but not least, the role of Twardowski is evaluated through the comprehensive and outstanding results of his students. This last role of Twardowski

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is so significant that to a certain point it overshadowed his own original achievements.

In this introduction, we combine these two perspectives in the following way.

In the first part, we give the reader who is not acquainted with the Polish philosophical tradition a sketch of the role Twardowski played in it. In the appendix to this part,² we give a list of the members of Twardowski's school, that is, the Lvov-Warsaw School (LWS for short).

In the second part, we position Twardowski in philosophy in general, based on some "objective data". The extensive appendix to this part contains a bibliography of works by/on Twardowski in European languages other than Polish.

Part One. Twardowski and His School

1 Twardowski in Vienna and in Lvov

Twardowski's life may be naturally divided into two periods: the Viennese (1866–1895) and the Lvovian (1895–1938). He was born in 1866, in a Polish family living in Vienna. At the age of ten, he entered Theresianum, a reputable gymnasium where he received comprehensive education, including many languages (Greek and Latin among others) and philosophy propaedeutic. Thanks to the discipline of the school, Twardowski also became accustomed to systematic work.

After graduating from Theresianum in 1885, Twardowski began his studies at the University of Vienna. He started in the faculty of law but after one year changed his object of studies and moved to the Faculty of Philosophy. In Vienna, Twardowski became a close student of Franz Brentano, who soon became Twardowski's model of philosophical researcher and teacher. Although Twardowski was not a perfectly "faithful" student of Brentano, he accepted the general Brentanian attitude towards philosophy, adopting the methods of descriptive psychology together with the conviction of its basic role in philosophical investigations. He also became interested in the area of problems which were analyzed in Brentano's environment.

² Appendix (A) comes from [Brożek 2020b]. We have made here a few corrections to its original version.

In 1891, Twardowski took his doctorate in philosophy in 1891 under the official supervision of Robert Zimmerman (Brentano was only a Privatdozent at that time and could not supervise Twardowski's dissertations). In 1892, Twardowski travelled to Leipzig and Munich where he became acquainted, among other things, with the experimental psychology movement. After returning to Vienna, Twardowski started to work as a clerk in order to provide for his family (he married Kazimiera Kołodziejska in 1892; soon their three daughter were born) and simultaneously prepared his habilitation. This very dissertation – the aforementioned *Zur Lehre ...* – became Twardowski's most famous and influential work outside of Polish philosophy.

Twardowski spent one more academic year (1894/1895) in Vienna lecturing as a Privatdozent. In 1895, only 29, he was offered the vacated chair of philosophy at the University of Lvov where he was allowed to teach in Polish.³ Since Twardowski was brought up in a very patriotic tradition and working for Poles had long been his aim, he found this opportunity a dream come true. Working as a professor of philosophy in Lvov for 35 years, Twardowski devoted himself to didactic work and tried to organize Polish philosophical (and more broadly, scientific) life.

In Twardowski's Lvovian period, there are two major sub-periods. The border between them was World War I and its finale: Poland regained independence (1918). Twardowski stated that this was for him the source of joy and pride as well as worry.

Twardowski retired in 1930 but was still active in his environment. He died in 1938 and fortunately did not see the tragic end of what he built in Lvov.

2 Twardowski's Teaching Activities

Twardowski's task after coming to Lvov was not an easy one. The state of philosophy in Lvov before Twardowski came there was referred to as "a fallow" or "a collapse." Twardowski gradually changed this situation.

Twardowski's basic activity at the university was to lecture on various philosophical disciplines. Some of his lectures were attended not only by philosophy students, but by members of all faculties. Gradually, these lectures became

3 Lvov, an old center of Polish culture, was in the 19th century a part of Galicia, a province incorporated in the end of the 18th century to the Austro-Hungarian empire. Around 1850, after attempts to Germanize the University of Lvov, the Austrian government allowed lectures to be conducted in Polish. Hence, by the end of the 19th century the majority of lectures were being delivered in Polish.

so popular that one year the number of participants exceeded 900. The university had to rent a concert hall because there was no place big enough in any of the university buildings. Twardowski did not talk about fashionable, political, or worldview matters. Moreover, Twardowski was not a “friendly” or “easy-going” person. He kept others at a distance and was full of his own sense of dignity. Very strict and accepting no exceptions to the established rules, he even used to start his lectures at 7 a.m. None of that discouraged his students. What Twardowski became famous for was his ability to present any philosophical problem in a clear manner. Why this composition of clarity and dignity was so attractive for young Lvovians is a certain historical puzzle.

The second important element of Twardowski’s pedagogical program was his philosophical seminar. “Seminar” at that time meant a place (lectorium) where advanced philosophy students could work, with access to a large library (equipped by Twardowski personally) and the opportunity to meet with the professor. During the meetings in the lectorium, classic philosophical texts were studied and discussed, always in the original language (English, French, German, but also Greek and Latin). Students could use the library from 6 a.m. to 10 p.m. Shortly speaking, these were perfect work conditions. The only price students had to pay for access to the seminar was to strictly obey the regulations. Twardowski expected these to be observed without the smallest exception. He was always available and helpful for his hardworking students. Moreover, they could always count on his sincere opinion and just evaluation. It is not surprising that many of the papers prepared in Twardowski’s seminar were outstanding works and often the second or third work prepared under Twardowski’s seminar supervision could be considered a dissertation or the basis for pedagogical exams.

In order to get to Twardowski’s seminar, students had to take a preparatory course (proseminar). There were sometimes more than 80 participants of this course. The main task of the participants was to prepare, every week, a summary of a certain philosophical essay which Twardowski would correct. His basic rule was that summary authors had to show that they understood the summarized texts better than the authors of these texts themselves. That is why Twardowski’s students used to say that their professor told them to prepare a philosophical thesis every week which he called “a summary”.

Twardowski did not expect his students to accept any of his own philosophical views.⁴ He only taught them reliable, systematic work and served as

4 By “philosophical views”, we mean here views in the field of ontology, epistemology, axiology, possibly psychology and logic, but excluding methodology or metaphilosophy.

a perfect example of a philosopher for them. He also expected that his students would express their views with clarity and justify them appropriately. He put effort into teaching them independent thinking and the way to achieve their own philosophical results. He often suggested problems that should be resolved but never imposed any results. In fact, some of Twardowski's students definitely refuted many of Twardowski's philosophical views. For instance, Łukasiewicz's antipsychologism was a reaction to the psychological tendencies of the Brentanian tradition. Kotarbiński admitted that his reistic ontology was directed against the rich and extravagant ontological views of his former teacher.

Was the school of philosophy that Twardowski organized in Lvov something special or unique in those times? It cannot be said for sure without serious cooperative research. However, Twardowski's students, whom he sent to other philosophy centers in Europe, usually stressed that philosophical life there was not as vivid and creative, and philosophy studies not so well organized as those in Lvov. Surely, the reports sent from these places were more than simple flattery towards the old professor. The examples of Leśniewski and Tatarkiewicz are also significant. Leśniewski had studied in many European institutions but in Lvov he found the most perfect place to study. Tatarkiewicz had studied in Berlin and Marburg, but after coming to Lvov (in order to pursue habilitation), he stressed that the philosophers in Twardowski's school worked at a higher level than philosophers abroad.

The LWS is called "a school" not because it was a group of people that shared the views of a certain master but it is a school because the central binder between the members was the relation of teacher-student. In fact, many of Twardowski's students, when attaining chairs in various universities, tried to imitate the Lvov pedagogical pattern they knew. Some of Twardowski's students also became great teachers and caused Twardowski's pedagogical ideas to be implemented outside Lvov.

3 The Expansion of Twardowski's School

From the beginning until the end of his career, Twardowski was lucky to have very talented students. The first of them got their PhDs in 1900 (Pręgowski), in 1901 (Witwicki) and in 1902 (Łukasiewicz). A few years later, Borowski (PhD in 1904) and Bandrowski (PhD in 1905) followed them. The second significant group appeared in Lvov in the 1910s; it included Zawirski (PhD in 1910), "the big three from 1912", i.e., Ajdukiewicz, Kotarbiński, and Leśniewski, and one year later Czeżowski (PhD in 1914).

In this way, Twardowski's school was prepared to spread to other centers. An occasion for this occurred during World War I. In 1915, a Polish university was reopened in Warsaw and Łukasiewicz was given a chair there. Soon, Kotarbiński and Leśniewski joined him; later also Tatarkiewicz, Witwicki, and (for a few years) Ajdukiewicz. As a consequence, Twardowski's school became the LWS. Later, Twardowski's students also appeared in Vilna (Czeżowski), as well as in Poznan and Cracow (Zawirski).

The interwar period (1918–1939) was the time of the greatest prosperity for the LWS. The talents shaped by Twardowski bore fruits in their creative work in all areas of philosophy, and dozens of new young people appeared in the orbit of the school (see Appendix (A)).

It may seem surprising from the present perspective that Twardowski and his students were not interested in expansion “abroad”. This should be seen from the perspective of the historical and political situation. When Twardowski had started, Poland did not exist on the political map of Europe. He openly stated that he was afraid that if Polish thinkers succumbed to one-sided influences, they would cease to work independently. More vivid contacts between members of the LWS and “foreign” philosophers took place in the 1930s with partners from Vienna, initiated by Tarski and Carnap.

The outbreak of World War II was a disaster for the School. Soviet and then Nazi occupation ended the period of Twardowskian philosophy in Lvov. Some representatives of the younger generation were murdered by German invaders. Emigration (Łukasiewicz left for Ireland, Lejewski for Great Britain, Hiż, Sobociński, and Tarski for the USA) ended the logical branch of the LWS in Warsaw. The change of Polish borders after the Yalta conference of the Grand Alliance caused the loss of Lvov and Vilna. This gap was only partially filled with newly established universities, in which students of Twardowski received chairs: in Łódź (the Kotarbińskis, briefly Ossowskis), Toruń (Czeżowski), and Wrocław (Kokoszyńska).

Post-Yalta Poland was, however, dependent on the Soviet Union and governed by the Communist party, according to which the only acceptable philosophy was Marxism. During the darkest years of Stalinism, some members of the LWS (Tatarkiewicz, Dąmbska, Ossowskis) were banned by the communists from teaching at universities. Other members of the school were only allowed to lecture on logic which was considered ideologically neutral. The journals which served as the forum for free philosophical thought – *Przegląd Filozoficzny* [Philosophical Review], *Ruch Filozoficzny* [Philosophical Movement], *Kwartalnik Filozoficzny* [Philosophical Quarterly], and *Studia Philosophica* – were closed by the authorities, and the nationalized publishing houses did not publish ideologically “disloyal” works in the field of philosophy.

The LWS's philosophers were publicly condemned as exponents of hostile bourgeois philosophy. All that caused the influence, or even intellectual presence, of Twardowski's school to become less visible.

The situation started to change gradually in 1956. Selections of works by Kotarbiński (in 1957–1958), Ajdukiewicz (in 1960–1965), Łukasiewicz (in 1961), and Twardowski (in 1965) began to appear, as well as reissues of works by Łukasiewicz (in 1958) and Kotarbiński (in 1961) – and new monographs by representatives of the LWS from various generations. Books about the school began to appear, and – last but not least – co-editions (with the participation of Polish publishers) of translations of classic positions of the representatives of the school into English.

Beginning in the 1990s – when the political and ideological pressure had ceased for good – more and more young Polish philosophers began to feel an intellectual bond with the tradition of the LWS.

4 The Currents of Twardowski's School

Twardowski started from psychologistic positions but always repeated that there are two basic philosophical disciplines: logic and psychology. It is not surprising that Twardowski's earliest two students: Witwicki and Łukasiewicz represented exactly these two disciplines: psychology (Witwicki) and logic (Łukasiewicz), and then became the pillars of the so-called "Lvov School of Psychology" and the "Warsaw School of Logic". Both these currents penetrated each other such that there was no strict division into psychological Lvov and logical Warsaw. It is worth adding that Zawirski's ten-year stay and several years of Ajdukiewicz's stay at the University of Poznań (the first before World War II, and the second after its end) resulted in the appearance of the so-called "Poznań Methodological School", which some people rightly consider to be the third current of Polish philosophy, referring to the LWS tradition.

Among the members of the psychological branch, there are Twardowski, Witwicki, Baley, Bandrowski, Błachowski, Kreutz, Słoniewska, and the Blausteins. Psychology practiced in the LWS had some peculiarities. "Lvovian" psychologists made use of introspection and the analysis of psychical phenomena and introduced detailed conceptual distinctions. They opposed reductionistic tendencies in psychology and understood psychical life as a composed object possessing important humanistic elements. The main achievements here are Twardowski's distinction of action-product, Witwicki's cratism, and Baley's "psychologizing" analyses of literary works. Although they mostly practiced descriptive psychology in Brentano's style, Twardowski himself was the

initiator of experimental psychology in Poland, opening the psychological laboratory in Lvov.

The main representatives of the “logistic” current of the LWS were Łukasiewicz, Leśniewski, Tarski, Lindenbaum and Sobociński. Both Łukasiewicz and Leśniewski were trained philosophers but their “logistic conversion” and established cooperation with mathematicians soon bore fruit in many truly significant results in mathematical logic. The most important achievements were Łukasiewicz’s many-valued logics, Tarski’s semantic definition of truth, and Leśniewski’s formal systems. Surprisingly, Twardowski, very skeptical towards logistics, became the “grandfather” of a school of mathematical logic.

Of course, Twardowski’s school was first of all philosophical (psychology and logic were not fully independent from philosophy 120 years ago). In the philosophical investigations in the LWS, there were also two tendencies: the psychological and the “logicoidal”. The first attitude gradually evolved in semiotic directions (Twardowski’s students, instead of presentations, judgments, etc., studied names, sentences, etc.). The use of mathematical logic in philosophical investigations also became a hallmark of the LWS.

This coexistence of various currents within one school in Twardowski’s program was *par excellence* interdisciplinary. He was convinced that important philosophical problems usually have many aspects that should be studied inside different disciplines using different methods. Some interdisciplinary problems analyzed by Twardowski and his students are, for instance, the connection between speech and thought or the representation of the reasoning processes in logic.

One may reasonably ask: what justifies including so many different thinkers in one school? Let us stress once again that it was not Twardowski’s aim to create a school of people sharing the same philosophical views. What bound the members was “genesis” and general methodological attitudes. This attitude included the aforementioned postulates of clarity and justification. There were also some methodological procedures applied by Twardowski and his followers. Special attention was paid to analyzing concepts in various forms and to paraphrasing statements in various languages. Łukasiewicz added axiomatization to this list of applied methods.

5 Twardowski’s Institutions

Twardowski did not limit himself to university activities.

In 1904, he established the Polish Philosophical Society in Lvov. Twardowski stressed that the only “dogma” of the Society is the lack of dogma in its activities; it became a forum in which any professional philosopher could present their views and count on reliable discussion and constructive criticism. Twardowski was the first president of the Society and held the position for thirty years (until his death).

In 1897, Twardowski participated in the establishment of the journal *Przegląd Filozoficzny*, and in 1911, he initiated the journal *Ruch Filozoficzny*. It provided information regarding philosophical life in Poland, including reports on meetings of the Polish Philosophical Society, information about contemporary Polish and foreign publications, etc. For historians, historical, bio- and bibliographical issues of *Ruch Filozoficzny* are a great source of data concerning the origin of many ideas and the way philosophical life was organized in those times. Here is what Carnap wrote in 1934 about this in a letter to Twardowski (kept in the Archives of Kazimierz Twardowski in Warsaw):

I read the bibliography and the table of contents of your journal with a great interest. I would wish very much to have something like that in German.

The First Polish Philosophical Congress in 1923 was another great undertaking of Twardowski. This meeting of all the most important Polish philosophers took place in Lvov and was followed by congresses in Warsaw (1927) and in Cracow (1936).

During World War II all Polish scholarly institutions were closed by both of the occupying forces: German and Russian. Only *Ruch Filozoficzny* was restarted after the war and has been published up to the present in Toruń. The Polish Philosophical Society, after its “dormant” existence in the Stalinist period, is still active, with sections in the most Polish cities. The tradition of Polish Philosophical Congresses also continues (the 10th Congress was organized in Lublin in 2019). In this way, the products of Twardowski’s spirit still play a significant role in Polish philosophy.

Let us add one more comment here.

Twardowski did not care whether his ideas appeared under his name or under the name of his students. His only aim was to achieve truth and truth is not assigned to any label. That is why not only Twardowski’s spirit but many of his own ideas live in his students’ work.

Appendix (A) Members of the Lvov-Warsaw School

In an interview given a few years ago – Bogusław Wolniewicz, otherwise a student of Czeżowski – said, among other things:

A science school is determined by two factors.

First, by the spirit that animates its members: the common spirit [...].

The spirit itself, however, does not yet define the school [...]. There is a second component, the second condition of belonging to a school, which I define as “apostolic succession”. [...] The school [...] is entered [...] only through contact with the master on whom the sacred rests, and which goes backwards – in [...] the case of the [LWS] – to Twardowski.

WOLNIEWICZ 2016: 16–17

We have operationalized it like this: the LWS includes (if someone is offended by our definition, we add: first of all) philosophers to whom Twardowski gave this *successio apostolica* by virtue of the fact that he was the supervisor of their doctorates; and also philosophers for whom the direct students of Twardowski were supervisors. Accordingly, by “members of the first and second generation of the LWS” we mean here: (a) people who received their doctorates under Twardowski’s supervision, and (b) people who received their doctorates under members of group (a).

We have listed them on lists 1 and 2 respectively. Additionally, Tatarkiewicz is included on list 1, because he certainly meets Wolniewicz’s first criterion: his work is permeated with the spirit of the LWS: the “bright spirit”.

On list 3 we have included the members of the third generation of the LWS, i.e., people who received their doctorates under members of the second generation of the LWS – while on list 4 there are people who received their master’s degrees (but not a doctorate) under members of the first and second generation of the LWS.

Finally, on list 5, we include people who attended classes (lectures, pro-seminars, seminars) given by Twardowski or his students – or who worked for shorter or longer periods in their departments – but did not obtain a doctorate or master’s degree under their supervision.

Unfortunately, lists 1–5 are not complete. The most important thing to alleviate this deficiency, the Lvovian archives, has survived, but access to them is still difficult; while the Varsovian archives were largely destroyed during World War II. Anyway, we suppose there should be a few dozen more names on these lists; we know that many of these people met Wolniewicz’s second criterion (so we know that they were PhD students of Twardowski or his PhD students) – and we list some of them under the appropriate tables – but we do not have all the data about them that would allow us to put here responsibly their names.

Let lists 1–5 be preceded by a short report on the celebration of the seventieth anniversary of Twardowski's birth:

On October 20 [of 1936], which was the seventieth anniversary of the birth of Prof. Twardowski, representatives of the Committee of Former Students of Prof. Twardowski handed him a beautifully made album with photographs of former students and those university lecture halls in which the students of Prof. Twardowski are currently working as professors of philosophy or psychology. The album contains 121 chronologically arranged photographs of former pupils as well as images of the following university laboratories: the Philosophical Seminar of the John Casimir University in Lvov (Heads: Prof. Dr. K. Ajdukiewicz and Prof. Dr. M. Kreutz), the Philosophy Seminar of the Faculty of Mathematics and Natural Sciences of the Józef Piłsudski University in Warsaw (Head: Prof. Dr. J. Łukasiewicz), the Philosophy Seminar of the Faculty of Humanities of the same University (Heads: Prof. Dr. T. Kotarbiński and Prof. Dr. Wł. Tatarkiewicz), the Department of Psychology of the same University (Head: Prof. Dr. Wł. Witwicki), the Department of Educational Psychology of that University (Head: Prof. Dr. St. Baley), the Philosophical Seminar of the Stefan Batory University in Vilna (Head: Prof. Dr. T. Czeżowski), the Department of Psychology of the University of Poznań (Head: Prof. Dr. S. Błachowski), the Philosophical Seminar of the same University (Head: Prof. Dr. Z. Zawirski) – 31 photos in total. To the album, the Committee added an address, expressing the pupil's appreciation and gratitude to the professor.

Ruch Filozoficzny vol. XIII, No. 5–10, p. 183b.

And here is the text of this address:

To Kazimierz Twardowski from his students on October 20, 1936:

On this day, we all feel united and grateful for you:

- for the fact that, in unforgettable and decisive moments, you introduced us to the most comprehensive philosophy, sparing no effort and kind;
- for the fact that in the vastness of your contemporary activities you have sensed and shown us the paths that are outlined, and the future is fertile;
- for teaching us, by means of a living example, how to follow these paths in a constant cognitive effort, alert to the progress of all kinds of knowledge, full of echoes of its past, grown out of a brave and most just life;
- for showing us that there is no happiness in life more complete than that which stems from research, nor beauty more perfect than the beauty of the work of this product, or knots more permanent than those tied by teaching.

The album – unfortunately not preserved in its entirety – includes, among other things, photographs of the following people (with signatures): Stanisław Leśniewski (2), Izydora Dąmbska (12, 138), Daniela Gromska (14, 77), Zygmunt Zawirski (35, 53), Władysław Witwicki (40), Jan Łukasiewicz (41), Zygmunt Skorski (47), Kazimierz Sośnicki (52), Stefan Baley (66), Mieczysław Treter (67), Bronisław Biegeleisen (70), Alfons Baron (71), Tadeusz Czeżowski (75), Tadeusz Kotarbiński (76), Stefan Dańcewicz (84), Franciszek Smolka (85), Salomon Igel (90), Władysław Tatarkiewicz (92), Edmund Gromski (95), Roman Ingarden (96), Mieczysław Kreutz (106), Tadeusz Witwicki (123), Helena Słoniewska (124), Joachim Knossow (131), Henryk Mehlberg (137), Seweryna Romahnowa (139), Walter Auerbach (141), Józefina Mehlbergowa (142), Leopold Blaustein (143), Eugenia Blausteinowa (144), Franciszek Manthey (148) and Zygmunt Schmierer (150). The presence of Ingarden's and Tatarkiewicz's photographs draws attention.

1 The First Generation of the LWS: PhD Students of Twardowski

The titles of dissertations written in Polish are given here only in the English translation. Approximate or hypothetical information is marked with the symbol: [H]. Lack of all data is marked with the symbol: [?].

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation
1	Ajdukiewicz, Kazimierz	1890 Tarnopol	1963 Warsaw	1912 Lvov	<i>Kant's apriorism of space and the problem of the genesis of the spatial character of images</i>
2	Baley, Stefan	1885 Borki Wielkie	1952 Warsaw	1911 Lvov	<i>On the need to reconstruct the concept of the psychological basis of feelings</i>
3	Bandrowski, Bronisław	1879 Mościska	1914 Tatra	1905 Lvov	<i>On the methods of inductive research</i>

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation
4	Blaustein, Leopold	1905 Lvov	1944 Lvov	1927 Lvov	<i>Husserlian study of the act, content, and object of presentation</i>
5	Blaustein(owa), Eugenia née Ginsberżanka	1905 Lvov	1944 Lvov	1927 Lvov	<i>About self-existence and non-self-existence</i>
6	Bornstein, Benedykt	1880 Warsaw	1948 Łódź	1907 Lvov	<i>Performed transcendental harmony as the basis of Kant's theory of knowledge</i>
7	Borowski, Marian [vel Władysław Marian]	1879 Lisko	1938 Zielonka	1904 Lvov	<i>On the essence and types of a whole</i>
8	Czeżowski, Tadeusz	1889 Vienna	1981 Toruń	1914 Lwów	<i>Class theory</i>
9	Dąmbaska, Izydora	1904 Rudna Wielka	1983 Cracow	1927 Lvov	<i>Edmond Goblot's theory of language</i>
10	Drexlerowa, Zofia née Paśawska	1887 Lvov	1979 Warszawa	1912 Lvov	<i>On the relation between hypothetical and categorical judgments</i>
11	Fischbein(owa), Irena née Krampnerówna	1901 Lvov	1941 Kamionka Strumiłowska	1927 Lvov	<i>Lachelier's views on syllogism</i>
12	Frenkel, Karol	1891 Lvov [H]	1920 Lvov	1914 Lvov	<i>Sympathy and compassion in Hume and Schopenhauer</i>

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation
13	Gluziński, Tadeusz	1888 Cracow	1940 Budapest	1912 Lvov	<i>On the implicit existence of certain sayings in the other sayings</i>
14	Gromska, Daniela née Tennerówna	1889 Lvov	1973 Cracow	1916 Lvov	<i>Existence as the "content" of judging and judgment</i>
15	Hłuskiewicz, Eugeniusz	1882 Lvov [H]	ca 1914–1918 [H]	1914 [H] Lvov	<i>On the essence of negative judgments</i>
16	Horodyska, Maria née Jędrzejewska	1900 Lvov [H]	1984 Wrocław [H]	1928 Lvov	<i>The concept of philosophy in Jan Śniadecki</i>
17	Igel [<i>vel</i> Igiel], Salomon	1889 Złoczów	1942 Lvov	1919 Lvov	<i>The relation of feelings to presentations due to the classification of psychic facts</i>
18	Jaroszyński, Franciszek	1892 Lvov [H]	1919 Kołomyja	1914 [H]	<i>The psychological terminology of Jan Śniadecki</i>
19	Kaczorowski, Stanisław	1888 Lvov	1971 Wrocław	1912 Lvov	<i>The theory of complex judgments in modern logic</i>
20	Kierski, Feliks	1884 Busko	1926 Vence near Nice	1912 Lvov	<i>The essence and origin of geometric axioms</i>
21	Kotarbiński, Tadeusz	1886 Warsaw	1981 Anin	1912 Lvov	<i>Utilitarianism in the ethics of Mill and Spencer</i>

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation
22	Kreutz, Mieczysław	1893 Lvov	1971 Warsaw	1924 Lvov	<i>On the complexity of desires</i>
23	Leśniewski, Stanisław	1886 Serpukhov	1939 Warsaw	1912 Lvov	<i>Contribution to the analysis of existential propositions</i>
24	Lutman(owa), Maria née Kokoszyńska	1905 Bóbrka	1981 Wrocław	1928 Lvov	<i>General and polisemic names</i>
25	Łukasiewicz, Jan	1878 Lvov	1956 Dublin	1902 Lvov	<i>On induction as an inversion of deduction. A few remarks on the logical structure of inductive reasonings</i>
26	Łysakowski, Adam	1895 Stanisławów	1952 Warsaw	1926 Lvov	<i>Feeling as the basis of value assessment</i>
27	Manthey, Franciszek	1904 Zaborów	1971 Hildesheim	1927 Lvov	<i>The notion of a categorematic word</i>
28	Mehlberg, Henryk	1904 Kopyczyńce	1979 Gainesville	1926 Lvov	<i>On immanent existence</i>
29	Mehlberg(owa), Józefina née Spinnerówna	1904 Żórawno	1969 Chicago [H]	1928 Lvov	<i>Mathematical reasonings and traditional logic</i>
30	Nałęcki [vel Nykołajczuk], Rudolf	1888 Vienna	1973 Nowy Sącz	1919 [H] Lvov	<i>What is the logic of contemporary Polish logicians</i>
31	Nawroczyński, Bogdan	1882 Dąbrowa Górnica	1974 Warsaw	1914 Lvov	<i>Prolegomena for theory of the quality of judgments</i>

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation
32	Pannenkowa, Irena née Jawicówna	1879 Warsaw	1969 Góra Kalwaria	1905 Lvov	<i>Negative and affirmative judgments</i>
33	Pręgowski, Piotr	1874 Czerwińsk	1945 Warsaw	1900 Lvov	<i>Concept, judgment, attention [H]</i>
34	Romahn(owa), Seweryna née Łuszczewska	1904 Mszana	1978 Poznań	1932 Lvov	<i>On indexicals</i>
35	Słoniewska, Helena	1897 Pawłosiów	1982 Wrocław	1926 Lvov	<i>What is physical pain – emotion or feeling</i>
36	Smolka, Franciszek Kazimierz	1883 Lvov	1947 Lvov	1925 Lvov	<i>Criticism of the Russellan vicious circle principle</i>
37	Sośnicki, Kazimierz	1883 Lvov	1976 Gdańsk	1910 Lvov	<i>Explanation and description in scientific research</i>
38	Stögbauer, Kazimierz	1882 Lvov	1914 Lvov	1907 Lvov	<i>On general ideas. A contribution to the psychology of Images</i>
39	Szumowski, Władysław	1875 Warsaw	1954 Warsaw	1907 Lvov	<i>Descartes and Malebranche as predecessors of Charles Lange's theory of feelings</i>
40	Witwicka, Helena née Dubieńska	1889 Lvov	1949 Konstancin	1914 Lvov	<i>Wincenty Lutostawski's theory of judgments. A methodological study</i>

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation
41	Witwicki, Tadeusz	1902 Lvov	1970 Warsaw	1927 Lvov	<i>On representation, i.e. on the relation between an image and an object</i>
42	Witwicki, Władysław	1878 Lubaczów	1948 Konstancin	1901 Lvov	<i>Psychological analysis of ambition</i>
43	Wołowicz, Leopold	1883 Brody	1931 Lvov	1919 [H] Lvov	<i>Suppression as one of the problems of psychoanalysis</i>
44	Zawirski, Zygmunt	1882, Berezowica Mała	1948 Końskie	1910 Lvov	<i>A number of association laws for presentations</i>

2 The Second Generation of the LWS: PhD Students of the Members of the First Generation of the LWS

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
1	Auerbach, Walter	1905 LvoV	1942 Warsaw	1928 LvoV	<i>The Meinongian theory of the objective</i>	Ajdkiewicz
2	Batóg, Tadeusz	1934 Miernów	-	1962 Poznań	<i>The logical construction of the concept of a phoneme</i>	Romahnowa
3	Berman, Adolf [vel Adolf Abraham]	1906 Warsaw	1978 Tel Aviv	1931 Warsaw [also recognized as a master's degree in 1933]	<i>The problem of the object and division of social psychology</i>	Władysław Witwicki
4	Budkiewicz, Janina	1896 Konstancin	1982 Warsaw [H]	1932 Warsaw	<i>A contribution to the psychology of false thinking</i>	Władysław Witwicki
5	Cichoń, Władysław	1924 Borzęta	1987 Cracow	1970 Cracow	<i>The problem of moral values in general axiology</i>	Dąbska
6	Czajnsner, Jerzy	1932 Konin	2020 Poznań	1967 Poznań	<i>From algebraic problems of measurement theory</i>	Romahnowa
7	Czerwiński, Zbigniew	1927 Warsaw	2010 Poznań	1957 Poznań	<i>The problem of the legitimacy of induction in the probabilistic approach</i>	Ajdkiewicz

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
8	Drewnowski, Jan	1886 Moscow	1978 Warsaw	1927 Warsaw	<i>The fundamentals of Bernard Bolzano's logic</i>	Kotarbiński
9	Fritzhand, Marek	1913 Buczacz	1992 Warsaw	1951 Warsaw	<i>On obligation and moral norms</i>	Kotarbiński
10	Geblewicz, Eugeniusz	1904 Warsaw	1974 Warsaw	1931 Warsaw	<i>On the psychology of olfactory experiences</i>	Władysław Witwicki
11	Ginsberg(owa), Aniela née Meyerówna	1902 Warsaw	1986 São Paulo	1933 Warsaw	<i>The psychological principle of contradiction</i>	Władysław Witwicki
12	Gliksman [vel Glücksman], Ignacy	1880 Model	1943 [H] Warsaw [H]	1925 Warsaw	<i>Locke's concept of ideas</i>	Kotarbiński
13	Goryńska, Ewa Ewelina Elzbieta née Rybicka	1909 Warsaw [H]	1943 Warsaw	1938 Warsaw	<i>Educational experiences. A contribution to the psychology of educational experiences of secondary school youth in the period of adolescence</i>	Baley
14	Gregorowicz, Jan	1921 Skierniewice	1998 Łódź	1959 Warsaw	<i>Definitions in law and legal science</i>	Kotarbiński

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
15	Gumański, Leon	1921 Warsaw	2014 Toruń	1960 Toruń	<i>Classical logic and existential assumptions</i>	Czeżowski
16	Jaśkowski, Stanisław	1906 Warsaw	1965 Warsaw	1932 Warsaw	<i>Rules of inference with rhw aid of assumptions</i>	Łukasiewicz
17	Jordan, Zbigniew	1911 Gołaszyn	1977 Ottawa	1936 Poznań	<i>On the mathematical foundations of the Plato's system</i>	Zawirski
18	Kobrzyński, Zygmunt	1893 Radomsko	1944 KL Oranienburg	1930 Warsaw	<i>On the determinants of logical terms</i>	Łukasiewicz
19	Korcik, Antoni	1892 Krasnystaw	1969 Lublin	1930 Warsaw	<i>Aristotle's theory of the conversion of assertory sentences in light of the theory of deduction</i>	Łukasiewicz
20	Kotarbińska, Janina née Dina Szejnburg-Kamińska	1901 Warsaw	1997 Warsaw	1927 Warsaw	<i>The problem of explaining in natural sciences by J.S. Mill and E. Meyerson</i>	Kotarbiński
21	Kraszewski, Zdzisław	1925 Radom	2012 Warsaw [H]	1962 Warsaw	<i>Studies in the field of systematization of statements in propositional calculus</i>	Kotarbiński
22	Kreczmar, Jerzy	1902 Warsaw	1985 Warsaw	1930 Warsaw	<i>On the figurative meaning of words</i>	Kotarbiński

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
23	Kubiński, Tadeusz	1923 Lvov	1991 Tarnów- Mościce	1952 Wrocław	<i>Conventionalism in Carnap's views on science and philosophy</i>	Lutmanowa
24	Kulczycki, Marian	1924 Stanisławów	1995 Wrocław	1952 Wrocław	<i>Some conditions for productive thinking</i>	Kreutz
25	Kunicka, Joanna M.	1907 Warsaw	1943 KL Auschwitz (camp number 64431)	1938 Warsaw	<i>Methods of studying the psyche of a school class</i>	Baley
26	Lejewski, Czesław	1913 Minsk	2001 Doncaster	1939 Warsaw	<i>De Aenesidemi studiis logicis</i> [the work was accepted, but the promotion did not take place due to the outbreak of the war]	Łukaszewicz
27	Lindenbaum(owa), Janina née Hosiasson(ówna)	1899 Warsaw	1942 Vilna	1926 Warsaw	<i>The foundation of inductive reasoning</i>	Kotarbiński
28	Malewski, Andrzej	1929 Warsaw	1963 Warsaw	1959 Warsaw	<i>Problems of construction and usefulness of the sociological theories</i>	Ajdukiewicz

Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
29 Małowist, Maria née Frydland(ówna)	1912 Warsaw	1942 KL Treblinka	1934 Warsaw	<i>Illustration and text in a press advertisement. A contribution to research on the psychology of advertising</i>	Władysław Witwicki
30 Markin(ówna), Eстера	1903 Warsaw	1942 KL Treblinka	1929 Warsaw	<i>Experimental research on fantasy</i>	Władysław Witwicki
31 Oleksiuk, Stefan	1892 Ponikwa	1941 Lvov	1932 Lvov	<i>On so-called perceptive judgment. A study in the psychology of cognition</i>	Ajukiewicz
32 Ossowska, Maria née Niedzwiecka	1896 Warsaw	1974 Warsaw	1922 Warsaw	<i>Outline of stoic axiology</i>	Łukasiewicz
33 Ossowski, Stanisław	1897 Lipno	1963 Warsaw	1925 Warsaw	<i>Analysis of the concept of a sign</i>	Kotarbiński
34 Pański, Antoni	1894 Łódź	1942 Vilna	1927 Warsaw	<i>The concept of perpetration against the views of criminal law</i>	Kotarbiński
35 Pasenkiewicz, Kazimierz	1897 Kijów	1995 Cracow	1933 Warsaw	<i>On cognitive activities constructing deductive theories</i>	Kotarbiński
36 Pogorzelski, Witold Adam	1927 Łódź	2018 Białystok	1960 Wrocław	<i>Theories of deductive systems adequate to propositional calculi</i>	Lutmanowa
37 Porębska, Maria	1923 Myslenice	2019 Wrocław	1961 Wrocław	<i>Analysis of behavior under the influence of difficulties</i>	Śloniewska

Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
38 Poznański, Edward	1901 Warsaw	1974 Jerusalem	1932 [H] Warsaw	<i>Operational analysis of physics concepts</i> [H]	Kotarbiński
39 Pszczołowski, Tadeusz	1922 Vilna	1999 Warsaw	1951 Warsaw	<i>The praxeological concept of work</i>	Kotarbiński
40 Rajgrodzki, Jakub	1883 Kiev	1943 Warsaw	1933 Warsaw	<i>From problems of historical thinking</i>	Kotarbiński
41 Rogowski, Leonard	1926 Inowrocław	2007 Gdańsk	1961 Toruń	<i>The problem of logical sense and correctness of Hegel's thesis about the contradiction of movement and change</i>	Czeżowski
42 Rudniański, Jarosław	1921 Warsaw	2008 Warsaw	1967 Warsaw	<i>Methods of the pupil's mental work</i>	Kotarbiński
43 Rutski, Jan	1903 Vilna	1939 The Zaleszczyki area	1934 Vilna	<i>Hume's Doctrine of Probability</i>	Czeżowski
44 Schiller(owa), Irena, née Filozofówna, 1 ^o voto Korzymiewska	1906 Warsaw	1967 Warsaw	1932 Warsaw	<i>Psychological research on the actor's acting on stage</i>	Władysław Witwicki

Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
45 Schmierer, Zygmunt	1910 [H] Lvov [H]	1943 [H] KL Janów Lubelski [H]	1935 [H] Lvov	<i>On characteristic functions in many-valued logics</i> [H]	Ajdkiewicz
46 Skorny, Zbigniew	1926 Lvov	2012 Wrocław	1963 Wrocław	<i>The directions, content and genesis of psychological interests</i>	Sloniewska
47 Słońska, Irena née Skowronek [Skowronkówna]	1906 Lublin	1989 Warsaw	1933 Warsaw	<i>Child vagrancy in the light of psychology</i>	Baley
48 Słupecki, Jerzy	1904 Harbin	1987 Wrocław	1938 Warsaw	<i>Proof of the axiomatization of complete systems of many-valued propositional calculi</i>	Łukasiewicz
49 Sobociński, Bolesław	1906 Petersburg	1980 South Bend	1936 Warsaw	<i>Axiomatization of certain many-valued systems of the theory of deduction</i>	Łukasiewicz
50 Stonert, Henryk	1923 Płock	1992 Warsaw	1956 Warsaw	<i>Definitions in the deductive sciences</i>	Kotarbiński
51 Suszko, Roman	1919 Podoborze	1979 Warsaw	1948 Poznań	<i>On analytical axioms and logical rules of inference. From the theory of definition</i>	Ajdkiewicz

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
52	Swieżawski, Stefan	1907 Hohub	2004 Konstancin	1932 L'vov	<i>The concept of intention in the philosophy of John Duns Scotus</i>	Ajdukiewicz
53	Tarski [ve/ Tajtelbaum], Alfred	1901 Warsaw	1983 Berkeley	1924 Warsaw	<i>On the primitive expression of logistics</i>	Leśniewski
54	Tomaszewski, Tadeusz	1910 L'vov	2000 Warsaw	1938 L'vov	<i>Methods of research into complex dispositions</i>	Kreutz
55	Wajsberg, Mordchaj [ve/ Mordechaj]	1902 Łomża	1942 Łomża	1931 Warsaw	<i>The axiomatization of three-valued propositional calculus</i>	Łukasiewicz
57	Wallis [ve/ Walfisz], Mieczysław	1895 Warsaw	1975 Warsaw	1921 Warsaw	<i>Defense of the humanities in contemporary methodology</i>	Kotarbiński
56	Wiśniacka, Romana	1902 Warsaw	1942 KZ Treblinka	1930 Warsaw	<i>Experimental research of witness testimony</i>	Władysław Witwicki
57	Wolniewicz, Bogusław	1927 Toruń	2017 Warsaw	1962 Toruń	<i>The semantics of natural language in Wittgenstein's new philosophy</i>	Czeżowski
58	Wójcicki, Ryszard	1931 Krzywicze Wielkie	-	1962 Wrocław	<i>Analytical components of arbitrary definitions</i>	Lutmanowa
59	Wójcik, Tadeusz	1917 Przemysł	1975 Warsaw	1960 Warsaw	<i>Outline of classification theory. Formal problems</i>	Kotarbiński

Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
60 Zawadzki, Bohdan	1902 Turbów	1966 New York	1928 Warszawa	<i>On comism. A psychological study</i>	Władysław Witwicki
61 Żebrowska, Maria née Skrzywan	1900 Kordelówka	1978 Warsaw	1931 Warsaw	<i>The concept of intelligence and methods of its research</i>	Władysław Witwicki
62 Zeidler, Franciszek	1907 Komorowo	1972 Poznań	1938 Cracow	<i>Epistemological consequences of quantum theory and field theory in modern physics</i>	Zawirski

Undoubtedly, PhD students of Twardowski's PhD students included: Bailey's students – Zofia Babska, Chaim Bagno and Róża Mutermilchowa née Czaplínska; Władysław Witwicki's students – Maria Adler(ówna), Paweł Horoszowski and Janina Ostaszewska-Skoszkiewicz née Radlińska.

3 The Third Generation of the LWS: PhD Students of the Members of the Second Generation of the LWS

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
1	Biały, Ewa née Żamecka	1930 Cracow	2009 Cracow	1965 Cracow	<i>Modal sentence calculus and its applications</i>	Pasenkiewicz
2	Borkowski, Ludwik	1944 Obroszyn	1993 Wrocław	1951 Wrocław	<i>On analytical and synthetic definitions</i>	Štupecki
3	Bryll, Grzegorz	1935 Gostyń	2017 Opole	1968 Katowice	<i>On the role of deduction in empirical sciences</i>	Štupecki
4	Buszkowski, Wojciech	1950 Poznań	-	1982 Poznań	<i>Studies on the logical completeness and complexity of strong calculi of syntactic types</i>	Batóg
5	Czelakowski, Janusz	1949 Kluczbork	-	1975 Warsaw	<i>Logics based on partial σ-Boolean algebras</i>	Wójcicki
6	Dubikajtis, Lech	1927 Warsaw	2014 Toruń	1954 Warsaw	<i>The axiomatics of (Lie's) geometry of spheres</i>	Jaskowski
7	Glibowski, Edmund	1928 Grodno	2014 Wrocław	1963 Wrocław	<i>Elementary geometry system based on the concept of a segment and the congruence relationship of segments</i>	Štupecki

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
8	Iwanuś, Bogusław	1928 Troki	1995 Wrocław	1969 Wrocław	<i>Traditional calculus of names enriched with quantifiers</i>	Shupecki
9	Katuszyńska, Elżbieta née Kluba [Klubówna]	1921 Siedlce	-	1972 Warsaw	<i>On the notion of determinism</i>	Wójcicki
10	Kiciński, Krzysztof	1938 Warsaw	-	1976 Warsaw	<i>Three aspects of egoism</i>	Ossowska
11	Kleszcz, Ryszard	1950 [?]	-	1985 Łódź	<i>Ch. Perelman's argument theory: its philosophical foundations and practical applications</i>	Gregorowicz
12	Kłoska, Gerard	1943 Niwki	1979 Plecka	1973 Warsaw	<i>The problem of valuation in social sciences</i>	Fritzhand
13	Koziński, Przemysław	Książęce near Kalisz 25.09.1942 Warsaw [H]	Dąbrowa near Płock 1981 Warsaw	1973 Warsaw	<i>Methodological problems of empirical theory. Analysis of the views of P. Duhem</i>	Kotarbińska
14	Leszko, Robert	1937 Vieux Condé	-	1971 Wrocław	<i>Certain dyadic systems of the logic of questions</i>	Kubiński
15	Łoś, Jerzy	1920 Lvov	1998 Warsaw	1949 Wrocław	<i>On logical matrices</i>	Śłupecki

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
16	Malinowski, Grzegorz	1945 Łódź	-	1973 Warsaw	<i>Lukasiewicz's logics and their algebraic interpretation</i>	Wójcicki
17	Mejbaum, Wacław	1933 Lvov	2002 Szczecin	1965 Wrocław	<i>Physical magnitude and experiment</i>	Suszko
18	Mokrzycki, Edmund	1937 Wierzchowce	2001 Warszawa	1961 Warsaw	<i>On explaining in history</i>	Kotarbińska
19	Nowak, Stefan	1924 Warsaw	1989 Warsaw	1958 Warsaw	<i>General laws, historical propositions and causal explanations in sociology</i>	Ossowski
20	Nowak(owa), Irena née Korda	1923 Płock	2007 Płock	1964 Warsaw	<i>Values, adaptation and group position: comparative analysis of two student communities</i>	Ossowska
21	Nowakowski, Ryszard	1921 [?]	-	1964 Wrocław	<i>Structural theory of finite automata defined by matrices</i>	Štůpecki
22	Omyła, Mieczysław	1941 Soblówka	-	1973 Warsaw	<i>Descriptions and definitions in languages of type W</i>	Suszko
23	Pawelczyńska, Anna	1922 Pruszków	2014 Pruszków	1962 Warsaw	<i>Crime of juvenile groups</i>	Ossowska

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
24	Pawluczuk, Włodzimierz	1934 Ryboły	-	1970 Warsaw	<i>The worldview of an individual in the conditions of the disintegration of the traditional territorial community</i>	Ossowska
25	Pawłowska, Ija née Lazari	1921 Arniszyce	1994 Łódź	1958 Łódź	<i>Creation of concepts in the humanities</i>	Kotarbińska
26	Pawłowski, Tadeusz	1924 Warsaw	1996 Łódź	1958 Warsaw	<i>On the conditions of the scientific usefulness of the concepts of natural science</i>	Kotarbińska
27	Pelc(owa), Halina Mirosława née Spionek [Spionkówna]	1924 Pabianice	1991 Warszawa	1955 Warszawa	<i>Educational difficulties and juvenile delinquency (psychological analysis)</i>	Żebrowska
28	Perzanowski, Jerzy	1943 Aix-les-Bains	2009 Bydgoszcz	1973 Cracow	<i>The deduction theorems for the modal propositional calculi formalized after the manner of Lemmon</i> [written originally in English]	Pasenkiewicz
29	Pietruszczak, Andrzej	1954 Tomaszów Mazowiecki	-	1990 Toruń	<i>Logical-philosophical problems in the methodology of standard calculus of names. Systems and their metatheory</i>	Gumański

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
30	Prucnal, Tadeusz	1939 Szaniec (Busko-Zdrój)	1998 Kielce	1970 Katowice	<i>Studies on Lukaszewicz's matrices</i>	Pogorzelski
31	Przełęcki, Marian	1923 Katowice	2013 Otwock	1957 Warsaw	<i>Extra-formal criteria for the correctness of definitions in natural sciences</i>	Kotarbińska
32	Reykowski, Janusz	1929 Warsaw	-	1959 Warsaw	<i>Change and constancy of the human personality</i>	Tomaszewski
33	Rzepecka, Krystyna née Piróg	1929 Klimontów	-	1965 Katowice	<i>Propositional calculus in which expressions lose their meaning</i>	Ślupecki
34	Schrade, Ulrich	1943 Petryki	2009 Warsaw	1976 Warsaw	<i>Philosophical controversies among German Socialdemocrats 1895–1905</i>	Wolniewicz
36	Skardowska, Urszula née Wybraniec	1940 Jastrzębie Zdrój	-	1967 Wrocław	<i>Rejected sentences theory</i>	Ślupecki
35	Soldenhoff, Stanisław	1928 Poznań	-	1965 Warsaw	<i>W.D. Ross' system of ethics</i>	Fritzhand
36	Sowa, Julia Zofia	1935 Warsaw	1975 Warsaw	1967 Warsaw	<i>Axiological assumptions in creating the basic concepts of psychiatry</i>	Ossowska

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
37	Stanosz, Barbara née Zatoryb	1935 Warsaw	2014 Warsaw	1965 Warsaw	<i>Semantic functions of expressions in terms of formal logic</i>	Suszko
38	Strzelecki, Jan	1919 Warsaw	1988 Warsaw	1964 Warsaw	<i>The problem of conflict in industry in the cognitive perspective of Elton May's School</i>	Ossowska
39	Szamkołowicz, Lucjan	1927 Wancewicz near Mohylew	1985 Wrocław	1962 Wrocław	<i>On finite, regular planes</i>	Śtupecki
40	Szaniawski, Klemens	1925 Warsaw	1990 Warsaw	1950 Warsaw	<i>Analysis of the concept of honor against the background of medieval European knights</i>	Ossowska
41	Szmielew, Wanda née Montlak	1918 Warsaw	1976 Warsaw	1950 Berkeley	<i>Arithmetical properties of the Abelian group [written originally in English]</i>	Tarski
42	Weber, Barbara	1930 Warsaw [H]	2007 Warsaw [H]	1970 Warsaw	<i>Contemporary youth and personal models</i>	Ossowska
43	Wiśniewski, Andrzej	1958 Poznań	- -	1986 Poznań	<i>Generating questions through sets of sentences</i>	Kubiński

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
44	Wiśniewski [vel Wiśniewski-Kowalski], Wiesław Józef	1921 Warsaw	1991 Warsaw	1965 Warsaw	<i>Attitudes of tolerance. Correlates and conditions</i>	Ossowska
45	Wróński, Andrzej	1941 Łódź	-	1970 Cracow	<i>Completeness proofs of some implicational intermediate logics by Kalmár's method</i>	Pasenkiewicz
46	Zabludowski, Andrzej	1938 Warsaw	2008 Warsaw	1967 Warsaw	<i>On the so-called verifiable theory of meaning</i>	Kotarbińska
47	Zamecki, Stefan	1936 Warsaw	-	1974 Warsaw	<i>The concept of science in the Lvov-Warsaw School</i>	Geblewicz
48	Ziamba, Zdzisław	1930 Warsaw	2015 Wrocław	1960 Warsaw	<i>On the validity of inferences by analogy</i>	Kotarbińska
49	Zwinogrodzki, Zbigniew	1935 Warsaw	2013 Cracow	1966 Cracow	<i>Leon Chwistek's semantic systems</i>	Pasenkiewicz

Undoubtedly, PhD students of the students of Twardowski's PhD students included: Ossowska's students – Magdalena Jasińska, Hanna Sosińska, Jerzy Bonifacy Tasarski and Władysław Śniegocki; Suszko's student – Zbigniew Lis. On the other hand, the students of Fritzhand (except for Kloska and Slodenhoff) and Swieżawski were omitted from the list above.

4 The Third Generation of the LWS: Some Graduate Students of the Members of the First and the Second Generation of the LWS

	Surname, name	Year and place of birth	Year and place of death	Year of getting master's degree	Title of master's dissertation	Supervisor
1	Czerwiński, Marcin	1924 Warsaw	2001 Warsaw	1949 Warsaw	<i>Sociological elements in Montaigne's Trials</i>	Ossowski
2	Grzegorzczak, Andrzej	1922 Warsaw	2014 Warsaw	1950 Warsaw	<i>Ontology of properties</i>	Zawirski
3	Kalicki, Jan	1922 Warsaw	1953 Contra Costa County	1945 Warsaw	<i>Elements of the deductive system not being subject to formalization</i>	Kotarbiński
4	Kołąkowski, Leszek	1927 Radom	2009 Oxford	1950 Warsaw	<i>Principal tendencies of conventionalism in philosophy</i>	Kotarbińska
5	Lewicki, Andrzej	1910 Lvov	1972 Poznań	1934 Lvov	<i>The act of combining</i>	Kreutz
6	Nowaczyk, Adam	1936 Kobylin	-	1959 Warsaw	<i>The concept of the perceptive sentence in the epistemology of the Vienna Circle</i>	Ajdkiewicz
7	Nowak, Leszek	1943 Więckowice	2009 Poznań	1966 Warsaw	<i>Model, relative truth, science progress</i>	Kotarbińska

Surname, name	Year and place of birth	Year and place of death	Year of getting master's degree	Title of master's dissertation	Supervisor
8 Olesińska née Landau(ówna), Fryderyka	1900 Warsaw	1944 Cracow	1928 Warsaw	<i>Analysis of the more important theories concerning the vision of stroboscopic movement</i>	Kotarbiński
9 Presburger, Mojżesz	1904 Warsaw	1943 [H] KL Auschwitz [H]	1930 Warsaw	<i>On the completeness of a system of integers</i>	Tarski
10 Radwiłłowicz, Maria née Sosnowska	1926 Warsaw	2015 Warsaw	1952 Warsaw	<i>Properties of the perception process in children and adults</i>	Tomaszewski

5 Some Other Polish Philosophers from the Circle of the LWS

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
1	Banach, Stefan	1892 Cracow	1945 Lvov	1921 Lvov	<i>Sur les opérations dans les ensembles abstraits et leur application aux équations intégrales</i>	Hugo Steinhaus & Kazimierz Twardowski
2	Błachowski, Stefan	1889 Opava	1962 Warsaw	1913 Gottingen	<i>Studien über den Binnenkonstrast</i>	Georg Elias Müller
3	Bocheński, Józef M. [vel Innocenty]	1902 Czuszów	1995 Swiss Fribourg	1931 Swiss Fribourg	<i>Die Lehre vom Ding ans ich bei Moritz Straszewski</i>	Marc de Munnynck
4	Chwistek, Leon	1884 Cracow	1944 Moscow	1906 Warsaw	<i>On axioms</i>	Stefan Pawlicki
5	Csató, Edward	1915 Olszanica	1968 Warsaw	1962 Toruń	<i>Sketches on Stowacki's dramas</i>	Bronisław Nadolski
6	Dybowski, Mieczysław	1885 Kamieniec Podolski	1975 Wągrowiec	1925 Poznań	<i>On types of wills</i>	Stefan Błachowski
7	Gansiniec, Ryszard	1888 Siemianowice Śląskie	1958 Cracow	1917 Berlin	<i>De Agathodaemone</i>	Ulrich von Wilamowitz-Moellendorff

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
8	Giedymin, Jerzy	1925 Klecko	1993 Piła	1951 Poznań	<i>Political economy as a historical science</i>	Adam Wiegner
9	Grzegorzczuk, Andrzej	1922 Warsaw	2014 Warsaw	1950 Warsaw	<i>On topological spaces in topologies without points</i>	Andrzej Mostowski
10	Hiż, Henryk	1917 Petersburg	2006 Cap May Point	1948 Cambridge (USA)	<i>An economical foundation for arithmetic</i>	Willard van Orman Quine
11	Jaxa-Bykowski, Ludwik	1881 Zagwoźdź	1948 Poznań	1904 Lvov	<i>Anatomical studies on the species of the genus Fieraster Cuv.</i>	Józef Nusbaum-Hilarowicz
12	Kamiński, Stanisław	1919 Radzyń podlaski	1986 Freiburg im Breisgau	1949 Lublin	<i>Frege's two-valued axiomatic system of propositional variables in the light of contemporary methodology of deductive sciences</i>	Józef Pastuszka
13	Kmita, Jerzy	1931 Rajsk	2012 Poznań	1961 Poznań	<i>Meaning as an exponent of how expressions are understood</i>	Jerzy Giedymin
14	Koj, Leon	1929 Tarnowskie Góry	2006 Zamość	1962 Lublin	<i>The principle of transparency and semantic antinomies</i>	Narczyz [vel Naum] Łubnicki
15	Kridl, Manfred	1882 Lvov	1957 New York	1909 Lvov	<i>Mickiewicz and Lamennais. A comparative study</i>	Józef Kallenbach

Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
16 Lindenbaum, Adolf	1904 Warsaw	1941 Ponary Died in a mass execution	1928 Warsaw	<i>On metric properties of point-sets</i>	Wacław Sierpiński
17 Łempicki, Jan	1910 Warsaw	1944 Warsaw	1938 Warsaw	<i>Hippolytus Taine's historiosophy</i>	Stefan Kołaczkowski
18 Łempicki, Stanisław	1886 Kamionka Strumiłowa	1947 Cracow	1913 Lvov	<i>From studies on Jan Zamoyski as a humanist</i>	Józef Kallenbach
19 Mostowski, Andrzej	1913 Lvov	1975 Vancouver	1938 Warsaw	<i>On the independence of the definition of finiteness in the logic system</i>	Kazimierz Kuratowski
20 Pełc, Jerzy	1924 Warsaw	2017 Warsaw	1951 Warsaw	<i>The content and form of a literary work</i>	Julian Krzyżanowski
21 Podgórecki, Adam	1925 Cracow	1998 Ottawa	1951 Cracow	<i>Trade unions in the development of the English society of the nineteenth century</i>	Jerzy Lande
22 Rybicki, Paweł	1902 Janów Lubelski	1988 Cracow	1926 Lvov	<i>The ethics of Jan Kochanowski</i>	Wilhelm Bruchnalski

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
23	Salamucha, Jan	1903 Warsaw	1944 Died in the Warsaw Uprising	1927 Warsaw	<i>Aristotle's theory of modal resulting</i>	Stanisław Kobyłecki
24	Sierpiński, Wacław	1882 Warsaw	1969 Warsaw	1906 Cracow	<i>About summing a series $\sum m_2+n_2 \leq x$ $f(m_2+n_2)$</i>	Stanisław Zaremba
25	Suchodolski, Bogdan	1903 Sosnowiec	1992 Konstancin	1925 Warsaw	<i>Seweryn Goszczyński's Kaniowski Castle</i>	Józef Ujejski
26	Surma, Stanisław Józef	1930 Jezioro	2018 Auckland (New Zealand)	1961 Moscow	<i>Genesis, structure and significance of measurement procedures: philosophical analysis</i>	Petr Novikov
27	Tatariewicz, Władysław	1886 Warsaw	1980 Warsaw	1910 Marburg	<i>Die Disposition der aristotelischen Prinzipien</i>	Hermann Cohen & Paul Natorp
28	Ujejski, Józef	1883 Tarnów	1937 Warsaw	1907 Warsaw	<i>Rej's concepts about Poland and Poles [H]</i>	Stanisław Tamowski
29	Woleński [ve/Hertrich- Woleński], Jan	1940 Radom	- -	1968 Cracow	<i>Linguistic philosophy and analytical jurisprudence</i>	Kazimierz Opalek
30	Wundheiler, Aleksander	1902 Warsaw	1957 Chicago	1932 Warsaw	<i>Renomic geometry as the basis of quantum mechanics</i>	Antoni Przeborski

	Surname, name	Year and place of birth	Year and place of death	Year of getting doctoral degree	Title of doctoral dissertation	Supervisor
31	Ziemiński, Zygmunt	1920 Warsaw	1996 Poznań	1950 Poznań	<i>Insult trials as a problem of social technology</i>	Czesław Znamierowski
32	Znamierowski, Czesław	1888 Warsaw	1967 Poznań	1912 Basel	<i>Der Wahrheitsbegriff im Pragmatismus</i>	Karl Joël

Part Two. Twardowski's Position in European Philosophy

1 The Components of a Philosopher's Rank

Twardowski's position in European culture – or more broadly: world culture – understood as what is extra-Polish in these cultures, was determined by factors other than his position in Poland, where he worked and where he had direct pupils and successors. So, we will try to “measure” this position in a different way.

Namely, we will consider that the RANK of a philosopher in the world is determined, among other things, by three factors: the RENOWN gained, the INTEREST aroused, and finally, the INSPIRATION provided. Rank is about renown, interest and inspiration – outside the country in which a philosopher operates; we will then refer to these factors as renown, interest and inspiration among foreigners. These factors are, to a large degree, independent. It may happen that one philosopher, despite being greatly renowned and having aroused general interest, does not provide any significant inspiration; it may happen that one is inspirational, but that it does not go hand in hand with arousing interest and gaining reputation.

It is not easy to estimate the level of these three factors achieved by a given philosopher: renown, interest and inspiration. We will risk referring to numerical criteria for the occurrence of these factors – and their intensity. Namely, we will assume that:

- (a) the measure of the renown of philosopher *X* among foreigners is the number of appearances of the *X*'s name as an independent entry in foreign philosophical encyclopedias;
- (b) the measure of interest in philosopher *X* among foreigners is the number of mentions of *X* in foreign philosophical texts, the number of foreign reviews devoted to *X*'s works, and the number of translations of *X*'s works into foreign languages – with particular emphasis on the collected volumes of such translations;
- (c) the measure of inspiration provided by philosopher *X* is the number of foreign monographs related to the work of *X*.

We are fully aware of the imperfection of these criteria. Philosopher *X* can, for example, inspire “asymptomatically”: it may happen that *X*'s ideas spread “anonymously” in the world – and then none of the criteria (a)-(c) will capture it. Twardowski himself said somewhere that he sometimes hears from his students, theses that he had once formulated during his lectures which these students attended. Twardowski was even happy about it, but a historian is unable to reconstruct such genetic sequences.

Renown, interest and inspiration can be differentiated according to their location. One encyclopedia is not equal to the other encyclopedia,⁵ one review is not equal to

5 One could risk the thesis that if some philosophers gain a great reputation in the world, and a given philosophical encyclopedia does not take them into account, it is a compromising fact

the other review and one monograph is not equal to the other monograph. We will stop for a moment on this last opposition. The point is that one can write a monograph on the work of philosopher *X*, either limited to presenting *X*'s views or subjecting *X*'s views to creative criticism: this criticism will be creative in the sense that it will separate *X*'s erroneous views from the correct ones – and thus pave the way for the latter to *opinio communis*.

In fact, we do not feel ready to take into account the positioning parameter when estimating the rank of Twardowski. Similarly, we do not feel strong enough to do something otherwise extremely interesting: to juxtapose the rank of a given philosopher – in this case: Twardowski – calculated in the above manner with that of other philosophers.

The rank of a given philosopher has a history: each of its components may change in different ways during that philosopher's life and – even more “dramatically” – after death. We will try to sketch out the course of this story for Twardowski.

The below remarks are provisional for the following reason. The empirical basis of the estimates made here is a specifically understood “world”: this is a collection of texts, detailed in Appendix B. There is not a complete bibliography of the foreign works that define – according to the adopted criteria – Twardowski's rank; there is not even a complete bibliography of works published in European languages (excluding works written in Polish). Such a complete list – contrary to pessimistic opinions that it is impossible – is still to be prepared; it would have great intrinsic value: independent of its use to estimate Twardowski's rank.⁶

2 The Degree of Interest in Twardowski in the World

Let's start with a description of the factors determining Twardowski's world rank from point (b), and within it – from the publication of his works in foreign languages. The

for this encyclopedia – however only if we already have an independent criterion that these are renowned philosophers. From this point of view, it is worth noting that, for example, the Slovakian philosopher Jozef Sivak, in his review from *Dictionnaire des philosophes* [Huisman (ed.) 1984], which is 3000 pages long, writes, among other things: “The Polish representation is more representative [than the other Slavonic ones], with [J.M.] Wroński, [A.] Tarski, [W.] Tatariewicz, [R.] Ingarden, and [K.] Wojtyła (John Paul II), but insufficient all the same. We deplore the absence of K. Twardowski, the third founder (with Brentano and Husserl) of phenomenology, of T. Kotarbiński, logician and creator of “praxeology”, of K. Ajdukiewicz, logician and metaphysician, of S. Leśniewski, creator of “mereology” and A. Grzegorzczuk, logician and moralist, known to certain French circles” [Sivak 1988: 577].

⁶ The first (almost) complete bibliography of Twardowski's works and works on him was prepared by his pupil and close associate, Daniela Gromska, in the year of her master's

analysis of our empirical base – i.e., let us recall: the bibliography listed below (which includes only the first editions of individual items) – allows us to distinguish between 1892–2020 (the *terminus a quo* of this period is the year of Twardowski's first publication) three phases, the internal boundaries of which are 1903 and 1988.

In the first phase (1892–1903), 4 works by Twardowski were published: all written in German by Twardowski himself – so these are not translations and cannot be considered a testimony to the interest in his work in the world.

It was completely different in the third phase (1988–2020). Firstly – in this phase, 7 volumes of Twardowski's selected writings were published in foreign languages, including: 2 in English and German, and finally 1 in English, Russian, and Ukrainian. Secondly, 124 particular works by Twardowski were published then, of which 48 were in English, 38 in Russian, 27 in Ukrainian, 4 in German and Italian, 2 in French, and 1 in Slovenian. When considering the huge distance between the number of works in German and the number of works in English, we must bear in mind two circumstances: firstly, the English language became the *lingua franca* in 20th century science (which significantly reduces this distance); secondly, all 4 German works are publications of Twardowski's own German manuscripts that were not published during his lifetime (which, conversely, increases the distance even more). The large number of Russian translations is noteworthy.

The second – middle – phase is divided into two periods. Let us call them successively using musical metaphors: the period of “pause” (1904–1976), in which no foreign translations of Twardowski's works were published, and the period of “lento” (1977–1987), when only 5 such translations were published – all in English.

Let us now look at the two remaining components of point (b): reviews and references to Twardowski.

The first phase (1892–1906) of this form of interest in Twardowski in the world was that of reviewing his works – let us emphasize immediately: his original German works. In this phase, 19 such reviews were published – including: 14 – in German, 3 – in English, and 2 – in French. A large number of German reviews stemmed from the fact that during this period – and even later, until the year Poland formally regained independence (1918) – Twardowski's output, as an Austro-Hungarian citizen, was treated

death [Gromska 1938], and completed a year later [Gromska 1939]. The second edition of this bibliography was included in a volume of Twardowski's selected philosophical writings [Gromska 1965]; in this edition, Gromska omitted the texts “concerning the entirety or certain areas of his work and activity” [Gromska 1965: x111], and added texts that appeared in the years 1945–1962. After 35 years, the brochure [Likus & Stopa 2000] was published. It is, as the authors themselves write, “a continuation of part of the bibliography in question by Daniela Gromska” for the period 1962–2000, and it includes almost exclusively works by Polish authors, published in Polish. Appendix (B) uses all of these bibliographies, but is primarily based on our own queries.

as part of Austrian and, more broadly, German (or more precisely: German-speaking) philosophy.⁷ It is worth noting that after this phase (i.e., after 1906), Twardowski's works were never reviewed in foreign languages.

The second phase (1904–2020), overlapping with the review phase, we would call the “Polish” phase, because the authors of the references to Twardowski that appeared at that time were mainly Poles writing in foreign languages. There were 37 such mentions in the Polish phase: 18 in English, 11 in French, and finally 8 in German. What draws attention here is the “apogee” of these references (first of all in German) in the years 1927–1939. References to Twardowski in foreign languages – but not written by Poles – appeared in the years 1897–1909 and sporadically in the years 1922–2020; there were 28 of them in total, and our bibliographic database notes such mentions: 10 in German, 9 in French, 8 in English, 4 in Russian, 4 in Ukrainian (all after 2010), 2 in Italian, and finally 1 in Czech and Serbian.

3 Twardowski's World Inspiration and Renoma

As for the inspirational potential, the measure of which – in accordance with point (c) – is the number of monographs (articles and volumes) entirely or largely devoted to Twardowski, the distribution of this potential is as follows.

Foreign monographs – if we exclude 43 of them, whose authors were Poles (including: 35 in English, 3 in German, 2 in French and Ukrainian, and finally 1 in Russian) – began to appear in 1982; the only exceptions were 1 text (in German) from 1909, and 2 texts (in English) from 1933. In the years 1982–2020 we have 83 monographs – including: 37 in English, 21 in Russian, 8 in Italian and Ukrainian, 7 in French, and finally 2 in German.

In point (1), the number of foreign philosophical encyclopedias containing the independent item “Kazimierz Twardowski” was indicated as the criterion of renown. (We would like to point out straight away that accessing such encyclopedias was very difficult.) The existence of such entries was found in 17 encyclopedias/dictionaries – including: 7 English, 4 Russian, 3 German, and also 1 French, Italian, and Spanish. We consider 2018 to be a kind of turning point, when a large selection of Twardowski's works (670 pages!) was included in the Ukrainian publishing series: *The Library of Classical World Scientific Thought* in 2018.

⁷ A kind of *curiosum* is the annotation made in 1996 by Barry Jones that Twardowski was “Austrian, of Polish descent”; cf. [Brown *et al.* (eds.) 1996], p. 792.

4 World Reception of Twardowski's Works

We are inclined to consider RECEPTION an independent factor in determining the rank of a given philosopher in the world. The texts that make up this volume can serve as testimonies of Twardowski's reception; and in particular those written by non-Poles are testimonies of his worldwide reception. Without trying to "parametrize" this reception, let us say briefly: the papers included in this volume give us an idea of which of Twardowski's thoughts have been most deeply assimilated in contemporary Polish and non-Polish philosophy. In Poland, these are: his theory of objects; the actions-products distinction; the defense of the absolute concept of truth; criteria of rational beliefs; the postulate of clarity of thought and speech; arguments in favor of anti-psychologism; formal, informal and pragmatic aspects of logic; his concept of emotions, and finally issues concerning logical education. As far as foreign authors (in our sense) are concerned – the reception of his action-product distinction (there are as many as four texts devoted to this!) is significant, as well as the development of his concept of rational and irrational thinking (prejudices) and making use of his pedagogical experiences in new didactics.

Appendix (B) Bibliography of Works by/on Kazimierz Twardowski in European Languages Other Than Polish

1 Anthologies of Texts (Except Anthologies of Twardowski's Works) to Which There Are References in the Publications Listed Below

- Albertazzi, Liliana (ed.) 2001 *The Dawn of Cognitive Science. Early European Contributors*. Dordrecht: Kluwer.
- Albertazzi, Liliana et al. (eds.) 1966 *The School of Franz Brentano*. Kluwer Academic Publishers.
- Brożek, Anna et al. (eds.) 2016 *Tradition of the Lvov-Warsaw School: Ideas and Continuations*. Leiden: Brill.
- Chrudzinski, Arkadiusz & Łukasiewicz, Dariusz (eds.) 2006 *Actions, Products, and Things. Brentano and Polish Philosophy*. Frankfurt: Ontos Verlag.
- Coniglione, Francesco 1996a *Nel segno della scienza. La filosofia polacca de Novecento*. Milano: Franco Angeli.
- Coniglione, Francesco & Poli, Roberto & Woleński, Jan (eds.) 1993 *Polish Scientific Philosophy: The Lvov-Warsaw School*. Amsterdam: Rodopi.
- Deely, John (ed.). 1985 *Semiotics 1984*. Lanham: University Press of America.
- Findlay, John Niemeyer 1933a *Meinong's Theory of Object and Values*. Oxford 1963: Oxford University Press.

- Fisette, Denis (ed.) 2003 *Aux origines de la phénoménologie: Husserl et le contete des Recherches logiques*. Paris: Vrin.
- Fisette, Denis & Fréchette, Guillaume (eds.), 2007 *A l'école de Brentano. De Würzburg à Vienne*. Paris: Vrin.
- Garrido, Ángel & Wybraniec-Skardowska, Urszula (eds.) 2018 *The Lvov-Warsaw School. Past and Present*. Cham: Springer.
- Hickerson, Ryan 2007a *The History of Intentionality*. New York: Continuum.
- Hintikka, Jaakko & Czarnecki, Tadeusz & Kijania-Placek, Katarzyna (eds.) 2003 *Philosophy and Logic. In Search of the Polish Tradition*. Dordrecht: Kluwer.
- Husserl, Edmund & Twardowski, Kasimir 1993 *Sur les objets intentionnels (1893–1901)*. Paris: Librairie Philosophique – J. Vrin.
- Jadacki, Jacek 2009 *Polish Analytical Philosophy*. Warsaw: Wydawnictwo Naukowe Semper.
- Jadacki, Jacek 2015 *Polish Philosophy of the 19th and 20th Centuries. Heritage Studies*. Warsaw: Wydawnictwo Naukowe Semper.
- Jadacki, Jacek & Paśniczek, Jacek (eds.) 2006 *The Lvov-Warsaw School. New Generation*. Amsterdam: Rodopi.
- Jordan, Zbigniew Antoni 1963a *Philosophy and Ideology. The Development of Philosophy and Marxism-Leninism in Poland Since the Second World War*. Dordrecht: D. Reidel Publishing Company.
- Kijania-Placek, Katarzyna & Woleński, Jan (eds.) 1998 *The Lvov-Warsaw School and Contemporary Philosophy*. Dordrecht: Kluwer.
- Kindinger, Rudolf (ed.) 1965 *Philosophenbriefe: aus der wissenschaftlichen Korrespondenz von Alexius Meinong mit Franz Brentano et al. (1876–1829)*. Graz: Akademische Druck- und Verlagsanstalt.
- Krajewski, Władysław (ed.) 1982 *Polish Essays in the Philosophy of the Natural Science*. Dordrecht: D. Reidel Publishing Company.
- Lapointe, Sandra & Woleński, Jan & Marion, Mathieu (eds.) 2009 *The Golden Age of Polish Philosophy. Kazimierz Twardowski's Philosophical Legacy*. New York: Springer.
- Лебедев, Максим Владимирович et al. (ed.) 2005 *Аналитическая философия*. Москва: Русский гуманитарный Интернет-университет.
- McAlister, Linda López (ed.) 1976 *The Philosophy of Brentano*. Atlantic Highlands (NJ): Humanities Press.
- Meinong Alexius & Twardowski, Kazimierz 2016 *Der Briefwechsel*. Berlin: Walter de Gruyter.
- Modzelewski, Jan & Romerowa, Jadwiga (eds.). 1947 *Pologne 1919–1939*. Vol. III. *Vie intellectuelle et artistique*. Neuchâtel: Edition de la Baconnière.
- Murawski, Roman 2010 *Essays in the Philosophy and History of Logic and Mathematics*. Amsterdam & New York: Rodopi.

- Paśniczek, Jacek (ed.) 1992 *Theories of Objects: Meinong and Twardowski*. Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.
- Pelc, Jerzy (ed.) 1979 *Semiotics in Poland. 1894–1969*. Warszawa & Dordrecht: PWN & D. Reidel Publishing Company.
- Pelikán, Ferdinand & Tvrđý, Josef 1932 *Současná filosofie u Slovaniů*. Praha: Slovanský Ústav & Orbis.
- Poli, Roberto (ed.) 1997 *In itinere. European Cities and the Birth of Modern Scientific Philosophy*. Amsterdam & Atlanta: Rodopi.
- Rollinger, Robin D. 1999 *Husserl's Position in the School of Brentano*. Dordrecht: Kluwer.
- Скалецкий, Михайло 2015 *Етичне та естетичне в людському світовідношенні. Тези Міжнародної наукової конференції „XXVII-мі Читання, присвячені пам'яті засновника Львівсько-Варшавської філософської школи Казимира Твардовського”, 11–12 лютого 2015 року*. Львів: Вид-во Ліга-Прес.
- Skolimowski, Henryk 1967 *Polish Analytical Philosophy. A Survey and a Comparison with British Analytical Philosophy*. London: Routledge & Kegan Paul.
- Smith, Barry 1994 *Austrian Philosophy. The Legacy of Franz Brentano*. Chicago: Open Court.
- Stachowski, Ryszard (ed.) 1993 *Roots of Polish Psychology*. Poznań: Institute of Psychology УАМ.
- Szaniawski, Klemens (ed.) 1989 *The Vienna Circle and the Lvov-Warsaw School*. Dordrecht: Kluwer Academic Publishers.
- Шульга, Елена Николаевна (ed.) 1999 *Философия и логика Львовско-Варшавской школы*. Москва: Российская политическая энциклопедия.
- Szumilewicz-Lachman, Irena 1994a *Zygmunt Zawirski: His Life and Work – With Selected Writings on Time, Logic & the Methodology of Science*. Dordrecht: Kluwer Academic Publishers.
- Textor, Mark (ed.) 2003 *Judgement and Truth in Early Analytic Philosophy and Phenomenology*. Basingstoke: Palgrave Macmillan.
- Ueberweg, Friedrich 1916 *Grundriss der Geschichte der Philosophie*. Vol. IV [11th edition]. Berlin: Ernst Siegfried Mittler und Sohn.
- Ueberweg, Friedrich 1928 *Grundriss der Geschichte der Philosophie: die Philosophie des Auslandes vom Beginn des 19. Jahrhunderts bis auf die Gegenwart*. Berlin: E.S. Mittler.
- Vasyukov, Vladimir Leonovič / Васюков, Владимир Леонидович (ed.) 2006 *Исследования аналитического наследия Львовско-Варшавской Школы*. Vol. 1. Санкт-Петербург: Издательский дом Миръ.
- Woleński, Jan / Воленьски, Ян 1989 *Львовско-варшавская философская школа*. Москва 2004: Российская политическая энциклопедия,
- Woleński, Jan (ed.) 1990 *Kotarbiński: Logic, Semantic and Ontology*. Dordrecht: Kluwer Academic Publishers.

2 Philosophical Works by Twardowski

2.1 *Collected/Selected Works*

1988 *Contenuto oggetto*. Torino: Bollati Boringhieri.

1997 *Логико-философские и психологические исследования*. Москва: Российская политическая энциклопедия.

1999 *On Actions, Products and Other Topics in Philosophy*. Amsterdam: Rodopi.

2014 *On Prejudices, Judgments and Other Topics in Philosophy*. Amsterdam & New York: Brill/Rodopi.

2016 *Der Briefwechsel [mit Alexius Meinong]*. Berlin: Walter de Gruyter.

2017 *Gesammelte deutsche Werke*. Wien: Springer.

2018 *Вибрані твори*. Харків: Фолио (Бібліотека класичної світової наукової думки).

2.2 *Monographs (Basically Earliest Issues Only)*

2.2.1 English

1977 *On the Content and Object of Presentations. A Psychological Investigation* [translation of: *Zur Lehre vom Inhalt und Gegenstand der Vorstellung* (1894)]. The Hague: Martinus Nijhoff.

1979¹ *Actions and Products. Comments on the Border Area of Psychology, Grammar, and Logic* [translation of fragments of: *O czynnościach i wytworach* (1912)]. [In:] [Pelc (ed.) 1979], pp. 13–27.

1979² *Issues in the Logic of Adjectives* [translation of fragments of: *Z logiki przymiotników* (1923)]. [In:] [Pelc (ed.) 1979], pp. 28–30.

1979³ *On Clear and Obscure Styles of Philosophical Writing* [translation of fragments of: *O jasnym i niejasnym stylu filozoficznym* (1919/1920)]. [In:] [Pelc (ed.) 1979], pp. 1–2.

1979⁴ *Symbolomania and Pragmatophobia* [translation of fragments of: *Symbolomania i pragmatofobia* (1921)]. [In:] [Pelc (ed.) 1979], pp. 2–6.

1991 *Remarks on the Relations between Soul and Body* [translation of: *W sprawie klasyfikacji poglądów na wzajemny stosunek duszy do ciała* (1909)]. *Axiomathes* vol. 1, pp. 25–29.

1999¹ *Actions and Products* [translation of: *O czynnościach i wytworach* (1912)]. [In:] [Twardowski 1999]. Amsterdam: Rodopi, pp. 103–132.

1999² *Address at the 25th Anniversary Session of the Polish Philosophical Society* [translation of fragments of: *Przemówienie wygłoszone na obchodzie dwudziestopięcioletnia Polskiego Towarzystwa Filozoficznego* (1929)]. [In:] [Twardowski 1999], pp. 271–276.

1999³ *A priori, or Rational (Deductive) Sciences and a posteriori, or Empirical (Inductive) Sentences* [translation of: *O naukach apriorycznych czyli racjonalnych*

- (dedukcyjnych) i naukach aposteriorycznych czyli empirycznych (indukcyjnych) (1923). [In:] [Twardowski 1999], pp. 171–179.
- 1999⁴ Franz Brentano and the History of Psychology [translation of: Franciszek Brentano a historia filozofii (1895)]. [In:] [Twardowski 1999], pp. 243–253.
- 1999⁵ On Clear and Unclear Philosophical Style [translation of: O jasnym i niejasnym stylu filozoficznym (1920/1921)]. [In:] [Twardowski 1999], pp. 257–259.
- 1999⁶ On Idio- and Allogenic Theories of Judgment [translation of: O idio- o allogenicznym teoriach sądu (1907)]. [In:] [Twardowski 1999], pp. 99–101.
- 1999⁷ On So-Called Relative Truths [translation of: O tak zwanych prawdach względnych (1900)]. [In:] [Twardowski 1999], pp. 147–169.
- 1999⁸ On the Classification of Mental Phenomenon [translation of: W sprawie klasyfikacji zjawisk psychicznych (1898)]. [In:] [Twardowski 1999], pp. 65–72.
- 1999⁹ On the Dignity of University [translation of: O dostojęństwie uniwersytetu (1933)]. [In:] [Twardowski 1999], pp. 277–286.
- 1999¹⁰ On the Logic of Adjectives [translation of: Z logiki przymiotników (1927)]. [In:] [Twardowski 1999], pp. 141–143.
- 1999¹¹ Psychology vs. Physiology and Philosophy [translation of: Psychologia wobec fizjologii i filozofii (1897)]. [In:] [Twardowski 1999], pp. 41–64.
- 1999¹² Self-Portrait [translation of: Autobiografia filozoficzna (1926)]. [In:] [Twardowski 1999], pp. 17–31.
- 1999¹³ Symbolomania nad Pragmatophobia [translation of: Symbolomania i pragmatofobia (1921)]. [In:] [Twardowski 1999], pp. 261–270.
- 1999¹⁴ The Essence of Concepts [translation of: O istocie pojęć (1903)]. [In:] [Twardowski 1999], pp. 73–97.
- 1999¹⁵ The Humanities and Psychology [translation of: Nauki humanistyczne i psychologia (1912)]. [In:] [Twardowski 1999], pp. 133–140.
- 1999¹⁶ Theory of Knowledge. A Lecture Course [translation of: Teoria wiedzy (1925)]. [In:] [Twardowski 1999], pp. 181–239.
- 1999¹⁷ The Historical Conception of Philosophy [translation of: Historyczne pojęcie filozofii (1912)]. [In:] [Twardowski 1999], pp. 255–256.
- 2014¹ Address at the Inauguration of the Polish Philosophical Society in Lvov [translation of: Przemówienie na otwarciu Polskiego Towarzystwa Filozoficznego we Lwowie (1904)]. [In:] [Twardowski 2014], pp. 45–50.
- 2014² Bergson's Oxford Lectures [translation of: Odczyty oksfordzkie Bergsona (1912)]. [In:] [Twardowski 2014], pp. 381–390.
- 2014³ Contemporary Philosophy on the Immortality of the Soul [translation of: Filozofia współczesna o nieśmiertelności duszy (1895)]. [In:] [Twardowski 2014], pp. 187–196.
- 2014⁴ Does Man Always Behave Egoistically [translation of: Czy człowiek zawsze postępuje egoistycznie? (1899)]? [In:] [Twardowski 2014], pp. 323–327.

- 2014⁵ Ethics and the Theory of Evolution [translation of: *Etyka wobec teorii ewolucji* (1895)]. [In:] [Twardowski 2014], pp. 225–235.
- 2014⁶ Ethics, Criminal Law and the Problem of Free Will [translation of: *Etyka i prawo karne wobec zagadnienia wolności woli* (1904–1905)]. [In:] [Twardowski 2014], pp. 287–321.
- 2014⁷ Friedrich Nietzsche [translated of: *Friedrich Nietzsche* (1895)]. [In:] [Twardowski 2014], pp. 369–380.
- 2014⁸ From the Aesthetics of Music [translation of: *Z estetyki muzyki* (1899)]. [In:] [Twardowski 2014], pp. 345–349.
- 2014⁹ How to Study Philosophy [translation of: *Jak studiować filozofię?* (1910)?] [In:] [Twardowski 2014], pp. 53–56.
- 2014¹⁰ Independence of Thinking [translation of: *Niezależność myśli* (1906)]. [In:] [Twardowski 2014], pp. 81–90.
- 2014¹¹ Metaphysics of the Soul [translation of: *Metafizyka duszy* (1895)]. [In:] [Twardowski 2014], pp. 197–209.
- 2014¹² On Ethical Skepticism [translation of: *O sceptycyzmie etycznym* (1923–1924)]. [In:] [Twardowski 2014], pp. 237–286.
- 2014¹³ On Experimental Aesthetics [translation of: *O estetyce eksperymentalnej* (1899)]. [In:] [Twardowski 2014], pp. 335–344.
- 2014¹⁴ On Formal Truth [translation of: *O prawdzie formalnej* (1922)]. [In:] [Twardowski 2014], pp. 181–183.
- 2014¹⁵ On Mistakes of Thinking [translation of: *O błędach w myśleniu* (1900)]. [In:] [Twardowski 2014], pp. 91–120.
- 2014¹⁶ On Prejudices [translation of: *O przesądach* (1906)]. [In:] [Twardowski 2014], pp. 73–80.
- 2014¹⁷ On Scientific Preparation for Philosophy [translation of: *O przygotowaniu naukowym do filozofii* (1909–1910)]. [In:] [Twardowski 2014], pp. 57–59.
- 2014¹⁸ On the Method of Psychology. An Introduction to the Comparative Methodology of Scientific Research [translation of: *O metodzie psychologii. Przyczynek do metodologii porównawczej badań naukowych* (1910)]. [In:] [Twardowski 2014], pp. 61–72.
- 2014¹⁹ On the Notion of Education [translation of: *O pojęciu wychowania* (1911)]. [In:] [Twardowski 2014], pp. 121–129.
- 2014²⁰ Opening Lecture at the Lvov University [translation of: *Wykład wstępny w Uniwersytecie Lwowskim* (1895)]. [In:] [Twardowski 2014], pp. 35–43.
- 2014²¹ Pessimism and Optimism [translation of: *Pesymizm i optymizm* (1899)]. [In:] [Twardowski 2014], pp. 329–332.
- 2014²² Psychology of Thinking [translation of: *Psychologia myślenia* (1908–1919)]. [In:] [Twardowski 2014], pp. 133–159.
- 2014²³ Socrates [translation of: *Sokrates* (1931)]. [In:] [Twardowski 2014], pp. 353–357.

- 2014²⁴ Spencer and Leibniz [translation of: Spencer i Leibniz (1903)]. [In:] [Twardowski 2014], pp. 365–368.
- 2014²⁵ The Theory of Judgments [translation of: Teoria sądów (1902–1903)]. [In:] [Twardowski 2014], pp. 161–180.
- 2014²⁶ Thomas Aquinas [translation of a fragment of: *O filozofii średniowiecznej wykładów sześć* (1910)]. [In:] [Twardowski 2014], pp. 359–364.
- 2014²⁷ Truthfulness as Ethical Obligation [translation of: Prawomówność jako obowiązek etyczny (1906)]. [In:] [Twardowski 2014], pp. 333–334.
- 2014²⁸ What Does “Experiential” Mean [translation of: Co znaczy “doświadczalny”? (1912)]? [In:] [Twardowski 2014], pp. 211–215.
- 2014²⁹ What Does “Physical” Mean [translation of: Co znaczy “fizyczny”? (1919–1920)]? [In:] [Twardowski 2014], pp. 217–222.

2.2.2 French

- 1993 *Sur la théorie du contenu et de l'object des représentations* [translation of: *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen* (1892)]. [In:] [Husserl & Twardowski (1993)], pp. 349–356.
- 2007 Fonctions et formations [translation of: O czynnościach i wytworach (1912)]. [In:] [Fisette & Fréchette (eds.) 2007], pp. 343–385.

2.2.3 German

- 1892 *Idee und Perception. Eine erkenntnis-theoretische Untersuchung aus Descartes*. Wien: Konegan.
- 1894/1983 *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen. Eine psychologische Untersuchung*. Wien: Höfler. Reprinted – Munich 1983: Philosophia Verlag.
- 1902 Über sogenannte relative Wahrheiten. *Archiv für systematische Philosophie* vol. VIII, No. 4, pp. 415–447. [Reprinted in:] [Pearce & Woleński (eds.) 1988], pp. 38–58.
- 1903 Über begriffliche Vorstellungen. [In:] *Wissenschaftliche Beilage zum 16. Jahresberichte der [Philosophischen] Gesellschaft [an der Universität zu Wien]*. Leipzig: Verlag von Johann Ambrosius Barth, pp. 1–28.
- 1965 Brief an Alexius Meinong (11.07.1897). [In:] [Kindinger (ed.) 1965], pp. 143–144.
- 1996 Funktionen und Gebilde. Einige Bemerkungen zum Grenzgebiet der Psychologie, Grammatik und Logik. *Conceptus. Zeitschrift für Philosophie* vol. XXIX, No. 24, pp. 157–180.
- 2009 *Die Unsterblichkeitsfrage* [1895]. Warszawa: Wydawnictwo WFis UW.
- 2016 *Logik* [1894/1895]. Berlin: Walter de Gruyter.

2.2.4 Italian

- 1988¹ *Idea e percezione: una ricerca teoretico-conoscitiva su Descartes* [translation of: *Idee und Perception* (1892)]. [In:] [Twardowski 1988], pp. 25–53.

- 1988² *Sulla dottrina del contenuto e dell'oggetto delle rappresentazioni: una ricerca psicologica* [translation of: *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen* (1894). [In:] [Twardowski 1988], pp. 57–169.
- 1991 *Sulle cosiddette verità relative* [translation of: *O tzw. prawdach względnych* (1900)]. *Discipline Filosofiche* No. 2, pp. 1–31.
- 1998 *Funzioni e prodotti* [translation of: *O czynnościach i wytworach* (1912)]. *Axiomathes* No. 3, pp. 325–359.

2.2.5 Russian

- 1992 *Автобиография* [translation of: *Autobiografia* (1926)]. *Вопросы философии* No. 9, pp. 63–74.
- 1997¹ *Этика наряду с теорией эволюции* [translation of: *Etyka wobec teorii ewolucji* (1895)]. [In:] [Twardowski 1997], pp. 210–222.
- 1997² *Франц Brentано и история философии* [translation of: *Franciszek Brentano a historia filozofii* (1895)]. [In:] [Twardowski 1997], pp. 193–206.
- 1997³ *К учению о содержании и предмете представлений. Психологическое исследование* [translation of: *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen* (1894)]. [In:] [Twardowski 1997], pp. 38–159.
- 1997⁴ *О действиях и результатах. Несколько замечаний о пограничных проблемах психологии, грамматики и логики* ([translation of: *O czynnościach i wytworach* (1912)]. [In:] [Twardowski 1997], pp. 160–192.
- 1999¹ *О ясном и неясном философском стиле* [translation of: *O jasnym i niejasnym stylu filozoficznym* (1919/1920)]. [In:] [Шульга (ed.) 1999], pp. 11–13.
- 1999² *Теория суждений* [translation of: *Teoria sądów* (1902/1903)]. *Логос* No. 7/17, pp. 50–66.
- 1999³ *Вступительная лекция во Львовском университете* [translation of: *Wykład wstępny w Uniwersytecie Lwowskim* (1895)]. *Логос* 1999 No. 7/17, pp. 41–47.
- 2006¹ *Фридрих Ницше* [translation of: *Fryderyk Nietzsche* (1895)]. [In:] [Васюков (ed.) 2006], pp. 223–237.
- 2006² *К вопросу о классификации психических явлений* [translation of: *W sprawie klasyfikacji zjawisk psychicznych* (1898)]. [In:] [Васюков (ed.) 2006], pp. 161–171.
- 2006³ *Образы и понятия* [translation of: *Wyobrażenia i pojęcia (§1–10)* (1898)]. [In:] [Васюков (ed.) 2006], pp. 172–222.
- 2006⁴ *Символомания и прагматофобия* [translation of: *Symbolomania i pragmatofobia* (1921)]. [In:] [Васюков (ed.) 2006], pp. 238–252.
- 2009 *О достоинстве университета* [translation of: *O dostojęństwie uniwersytetu* (1933)]. *Res Cogitans* No. 6, pp. 161–169.

2.2.6 Slovenian

2001 *K nauku o vsebini in predmetu predstav* [translation of: *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen* (1894)]. Ljubljana: Slovenska Matica.

2.2.7 Ukrainian

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3.4 *Shorter Mentions/Remarks on Twardowski*

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