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Moral Integrity During a Difficult Period: Beth and Scholz

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Abstract. In this paper the relation between Evert Willem Beth and the German logician and philosopher Heinrich Scholz is discussed, the similarities in their fields of research and their approaches to the foundations of mathematics are pointed out. The paper focuses, however, on the tensions between science and politics in the 1930s and 1940s, exemplified by an exchange of letters between Beth and Scholz dealing with Scholz's role in the Third Reich.

Résumé. Cet article traite de la relation entre Evert Willem Beth et le logicien et philosophe allemand Heinrich Scholz : on montre les intersections de leurs domaines de recherche et les similitudes de leurs positions sur les fondements des mathématiques. La tension entre science et politique durant la période 1933 à 1945 est au centre de l'article. En particulier, l'échange épistolaire entre Beth et Scholz concerne le rôle joué par ce dernier dans le troisième Reich.

1. Introduction

Evert Willem Beth started his academic career as a philosopher of mathematics in the mid 1930s, and it should be noted that his approach to this subject at the borderline between philosophy and mathematics was more philosophical than mathematical. It was an ambivalent time, but extremely exciting for scientists working in the area. In their recollections logicians of the time have called it the “heroic era”. The era lasted, according to Georg Henrik von Wright [von Wright 1993], from 1879 to 1934. This period was marked by Gottlob Frege’s *Begriffsschrift* [Frege 1879] and the first volume of David Hilbert and Paul Bernays’ *Grundlagen der Mathematik* [Hilbert/Bernays 1934]. It was, on von Wright’s view, followed by an epoch which began with two incidents which themselves were of heroic greatness [von Wright 1993, 26]: Kurt Gödel’s results concerning the incompleteness of formalized languages and Alfred Tarski’s semantic theory of truth. Hans Hermes, on the other hand, considered the period between 1930 and 1937 as a period of transition from the “heroic era” (which had been instigated by Whitehead and Russell’s *Principia Mathematica* [Whitehead/Russell 1910–13]) to a period in which a flood of inventions allowed mathematical logic to become almost a “domesticated” mathematical theory. This transitional period is characterized by the work of Kurt Gödel, Alfred Tarski, Alonzo Church and Alan Turing [Hermes 1986].

However, the dynamic development of the philosophy of mathematics at that time was not an isolated occurrence. It was part of a much broader movement connected with the Neopositivistic thinkers of the Vienna Circle, of its German pendant, the Berlin Society of Scientific Philosophy, and of other similarly minded philosophers, mathematicians and scientists all over the world. These “scientific philosophers” wanted to put an end to the separation of philosophy from science. This separation had been the goal of Hegel and his fellow idealists. It was revived during the “historical era” at the end of the 19th century, and in the minds of subsequent hermeneutic philosophers. The new movement became especially effective when the hardcore empiricists among the early Neopositivists adopted a more tolerant attitude towards the programme of creating a new *scientific* philosophy of which the philosophy of mathematics would become the core. Their major aim was the unity of science. The movement was constituted as an international movement from the very start. After a small introductory conference in Erlangen in 1923 [Thiel 1993], all interested scientists gathered at international congresses which started with the “1. Tagung für Erkenntnislehre der exakten Wissenschaften” (i.e. the first conference on the epistemology of exact sciences) that was held in Prague in 1929. The 9th International Congress of Philosophy organized as “Congrès Descartes” in 1937 in Paris was dominated by scientific

philosophers and became the highlight of the pre-war era. Even today the effects of this movement can be seen: modern philosophy of science has its origins in this movement and even some branches of analytic philosophy.

With the designation of the 1930s as an ambivalent period, reference is made to the political background of the scientific developments mentioned above. After the seizure of power by the National Socialists in 1933, German science and humanities were exploited for political means. Science became ideologically influenced. Scientists of Jewish descent or of deviating political or social attitudes were removed from their positions, later driven out of the country and some finally murdered. The world was inflicted by war, which put a stop to all regular scientific and cultural development. Even before the apocalypse of the 1940s, new tones of scientific argument were emanating from Germany. Lothar G. Tirala's talk on Nordic race and natural science may serve as an example. It was given on the occasion of the opening of the Philipp Lenard Institute in Heidelberg, in December 1935. Here Tirala said:¹

The so-called Vienna Circle, a union of people of mostly foreign race, primarily of Near Eastern and Oriental races, has announced a new logic which thoroughly differs from Arian logic. This "Vienna Circle", to which Einstein was close, maintained that there was no fixed logic. They regarded formalistic calculatory reasoning as primary and logic only as secondary. One can hear the Near Eastern calculating until reality disappears.

It is useful to remember that three weeks before Tirala's creation of Arian logic, Beth defended his *proefschrift* on *Rede en aanschouwing in de wiskunde* [Beth 1935] where he took a very positive attitude to German philosophy as it can be found in Immanuel Kant's critical philosophy. Another fact may also help to reveal the schizophrenia of German culture at that time: At the end of September 1935, Heinrich Scholz, the head of the Münster group of logicians, published a lengthy report on the First International Congress for Scientific Philosophy which had taken place at the Sorbonne in September 1935 [cf. Scholz 1935]. He wrote that metaphysical and ethical topics were not treated at the congress. This one-sidedness, he remarked, should not be confused with putative monotony. Scholz referred in detail to Hans Reichenbach's lecture on induction as a method of establishing scientific knowledge, presenting in a favourable way the same logic of induction and probability which Tirala had described as "thoroughly differing from Arian logic." Whereas Tirala only needed to mention the name of the

¹My translation of [Tirala, 1936, 29]; quoted in [Hoffmann 1994, 30].

pacifist Albert Einstein to defame the Vienna Circle, Scholz closed his report by mentioning the impressive statement of the British pacifist Bertrand Russell in favour of “our German master Gottlob Frege.” “For us Germans,” Scholz wrote, “it was an edifying moment.”

The tensions between science and politics in the 1930s and 1940s are the topics of the following paper. These tensions can be exemplified by the relation between Evert Willem Beth and Heinrich Scholz (1884–1956). Most noteworthy is an exchange of letters that took place in the period July–October 1946, dealing with Scholz’s role in the Third Reich. First of all, however, some biographical information about Heinrich Scholz will be presented, followed by a discussion of some similarities between Beth’s and Scholz’s philosophies of mathematics.

2. Beth and Scholz

Heinrich Scholz was born on 17 December 1884 in Berlin as the son of a protestant parson.² He studied theology with the famous Adolf von Harnack at Berlin, achieved his *Habilitation* for the Philosophy of Religion and Systematic Theology in 1911, and obtained an additional doctoral degree in philosophy in Erlangen in 1913. In 1917 he was made full professor of the Philosophy of Religion at the University of Breslau.³ Four years later, in 1921, he was called to the chair of Philosophy in Kiel, before he finally accepted a call to Münster in 1928, where he served as a full professor first of Philosophy, and then for Mathematical Logic and Foundations.

Scholz’s student and successor to his chair at Münster Hans Hermes tells the story of how Scholz discovered his love for mathematical logic by accidentally coming across Whitehead and Russell’s *Principia Mathematica* [Whitehead/Russell 1910–13]. According to Hermes [Hermes 1958] this incident made Scholz realize that

- (1) theoretical sciences presuppose logic (they are the more rigorous the more they are founded on logic),
- (2) traditional logic is too imprecise to handle all the demands derived from its claim to constitute a fixed and unshakable base of reasoning.

²On Scholz’s biography and his work see [Wernick 1944], [Hermes 1958], [Riter/Hermes/Kambartel 1961], [Meschkowski 1984], [Molendijk 1991] (on Molendijk’s book see [Peckhaus 1993]).

³On Scholz’s philosophy of religion cf. [Ratschow 1958], [Stock 1987], [Molendijk 1991].

According to Scholz this lack of precision of traditional logic was due to its being based on natural language. Consequently he called for the use of formalized, i.e. mathematical languages which he called “Leibniz languages.”⁴

Whitehead and Russell’s *Principia Mathematica* convinced Scholz of the importance of mathematics, although he had no deeper knowledge of this subject. Though already a full professor of philosophy, he decided to begin formal university studies of mathematics and theoretical physics. After having moved to Münster, Scholz concentrated on mathematical logic and foundations. He particularly worked on the borderline between mathematics and philosophy, motivated by the problem of distinguishing *logical* calculi from general calculi. He rejected the reduction of logic to a mere game with signs and demanded the primacy of semantics. As far as Scholz was concerned, the calculus had to be *legitimized* as a logical calculus, and he saw this legitimization in a presupposed ontology. On the other hand, the “logical precision language”, the Leibniz language, can be used to formulate this “scientific metaphysics” (as Scholz called his formal ontology), presented in his book *Metaphysik als strenge Wissenschaft* [Scholz 1941]. This combination of ontologically founded logic and logically reformulated ontology resulted in a (non-Hegelian) identification of logic and metaphysics. “Our metaphysics,” he wrote, “is indeed logic when applied to the real world” [1941, 151].

However, Scholz’s most important contributions should not be looked for in the systematic development of logic. Indeed, he was one of the most distinguished historians of logic of his time, who stressed the importance of Leibniz and Bolzano for the emergence of modern logic. He carefully studied Frege’s work and promoted David Hilbert’s metamathematics. He was able to secure Frege’s literary estate for the University of Münster in 1935. Later he added the papers of the German algebraist of logic, Ernst Schröder, to his collection. It is one of the tragic events of the Second World War that Frege’s and Schröder’s papers were, in all probability, destroyed during the bomb attacks on Münster in March 1945 [cf. Peckhaus 1988].

Scholz was also effective in a pragmatic way. He gathered the “Gruppe von Münster” and helped a number of his students to obtain academic positions. Among his students were Friedrich Bachmann, Hans Hermes, Gisbert Hasenjaeger, Karl Schröter, Hermann Schweitzer and Walter Kinder. They

⁴On Leibniz languages see, e.g., Scholz’s paper “Was ist Philosophie?” [Scholz 1939/40], i.e., [Scholz 1961, esp. 373–377].

obtained important results in metamathematics, semantics and abstraction theory. In the beginning of the 1930s Münster still stood in the shadow of Göttingen and Berlin, but when Gerhard Gentzen was enrolled in 1939 and the Berlin logicians either lost their positions (Kurt Grelling, Leopold Löwenheim), or were forced into emigration (Hans Reichenbach, Carl Gustav Hempel and Kurt Grelling),⁵ only Münster survived as a centre for logical research in Germany. Most importantly, however, in 1938 Scholz was able to obtain a full professorship for mathematical logic and foundational research. It was only then that the long process of the institutionalization of mathematical logic in Germany was completed [cf. Peckhaus 1992].

These comments may already be sufficient to indicate some of the similarities between Beth and Scholz. Like Scholz, the young Beth approached logic and the foundations of mathematics from the point of view of philosophy, especially from a Kantian position. Beth later characterized his 1935 *proefschrift* approach as follows [Beth 1959, ix]:

In this thesis an attempt was made to test Kant's critical philosophy by confronting it with modern developments in mathematical thought and, conversely, to interpret contemporary conceptions about the foundations of mathematics.

Beth's interests lay in theoretical semantics, another coincidence he had in common with Scholz, and in a field which is now called knowledge representation and empirical knowledge. Else Barth has hinted at three further important aspects of Beth's philosophy of logic [Barth 1990, 6]:

1. his analysis of the history of philosophy and systematical surroundings of the so-called method of exposition concerning Aristotelian syllogistics;
2. of the Platonic-Aristotelian cognitive Principle of the Absolute;
3. of the Postulate of Self-Evidence ("het evidentiepostulaat").

Although Beth became, in the course of time, increasingly sceptical about Kant's critical philosophy, he continued to maintain, like Scholz, that logic is more than a game of symbols. He had held this position in *Rede en aanschouwing in de wiskunde* in connection with a discussion on the philosophy of the Vienna Circle [Beth 1935]. Beth called the Neopositivists' antimetaphysical endeavour "belangrijk en sympathiek", deploring, however, that this endeavour was connected with serious one-sidedness. As an example he noted that the

⁵On the effects of this policy see [Thiel 1984]; also the catalogue of the exhibition "Terror and Exile" at the Berlin Technical University, August 1998 [Brüning/Ferus/Siegmund-Schultze 1998].

foundational problems connected to the notion of evidence were simply ignored. As a consequence, he said, the Vienna Circle held an unsatisfactory conception of logic and mathematics. Beth referred to the opinion derived from Wittgenstein's *Tractatus* in combination with Whitehead and Russell's logicism that logic and mathematics consist only of tautologies, i.e. of judgements which are valid only because of their form and not because of any process of verification. According to this view, logic and mathematics have no independent relationship with "reality" for they deal with "scientific numbers". Beth called this "onjuist", erroneous. In his search for a justification of the evidence of logic and mathematics, he regarded Scholz as a like-minded fellow, although he realized the differences in their specific approaches. In his *Inleiding tot de wijsbegeerte der wiskunde* of 1940, he distinguished two forms of logicism, both questioning intuitive evidence and therefore the independence of mathematics and logic. The first direction opposes all philosophy in the classical sense. Rudolf Carnap can be regarded as an exponent. The second links the logicistic foundation of mathematics with a form of chiefly Platonistic metaphysics. This approach is represented by Heinrich Scholz [Beth 1940, 13]. Beth seems to lean in Scholz's direction. Textual evidence for this assessment can be found in his scepticism towards over-estimation of the relativity of logic, especially towards Carnap's tolerance principle which states that each individual may construct his own logic, i.e. his own language formalism [cf. Carnap 1934, 44–45]. In his *Geschiedenis der logica* Beth joins Scholz in showing preference for Tarski's logical semantics as opposed to the relativistic tolerance principle [Beth 1944, 84].

It is unknown when Beth and Scholz first met. Their correspondence began in 1934. An intense exchange of letters took place between October and December 1936.⁶ Beth had submitted a paper on Frege's assertion symbol, "Signifische en syntactische beschouwingen over het assertie-symbol", to the series *Forschungen zur Logik und zur Grundlegung der exakten Wissenschaften*, which was edited by Scholz. Scholz rejected this paper, arguing that Beth's considerations concerning problems in Frege's logic connected with the introduction of the assertion symbol did not convince him. He regretted being unable to suggest an alternative journal. He didn't know of an appropriate German journal and even *Erkenntnis*, the main forum of the Neopositivistic movement, was not open for relevant research of this

⁶Scholz to Beth, 28 October 1936; assessment; undated draft of a letter from Beth to Scholz (21 November 1936); Scholz to Beth, 15 December 1936; Evert Willem Beth Papers, Rijksarchief in Noord-Holland, Haarlem, General Correspondence, inv. nr. 24. Cf. [Velthuys-Bechtold 1995, 192–193].

nature. "It is still a very limited fortune," he wrote, "to be a logicist in this world." Nevertheless, he remembered to encourage the younger colleague. "The few logicists which exist are so spread around the world, that they have to stick together as closely as possible." Beth accepted Scholz's criticism and withdrew his paper, a fact which impressed Scholz very much. To my knowledge it has never been published.⁷

Scholz and Beth met personally at least at the Congrès Descartes which took place in Paris in the first week of August 1937. This was the 9th International Congress of Philosophy, commemorating the 300th anniversary of the publication of Descartes's *Discours de la méthode*. Three of the six sections of the congress were devoted to scientific philosophy, in particular to the unity of science (section 2), to logic and mathematics (section 3) and to causality and determinism (section 4). Again there were several coincidental aspects to be observed between Beth and Scholz. Both were active participants.⁸ Both wrote extensive reports on the sections of scientific philosophy, Beth for the *Algemeen Nederlands Tijdschrift voor Wijsbegeerte en Psychologie* [Beth 1937/38] and Scholz for the *Kölnische Zeitung* [Scholz 1937b]. Finally both seemed to feel a similar high esteem for Alfred Tarski who opened the section on logic on the first day of the congress. Tarski's lecture "led immediately to the top," as Scholz wrote, and Beth took the opportunity in his report to discuss Tarski's semantic theory of truth in an extensive manner.

3. The Correspondence of 1946

Almost 9 years later, between July and October 1946, three new letters were written. This exchange was obviously triggered off by a letter from Scholz dated 15 July 1946. This initial letter has not been preserved.⁹ According to Beth's answer, dated 28 July 1946, it is clear that Scholz had attempted to reestablish their contact by means of a report on the state of affairs in Münster, about Gerhard

⁷The paper may have contained the text of a lecture of Beth's with the same title given at a meeting of the Wiskundig Genootschap on 28 November 1936. See *the Inventory of the Evert Willem Beth Papers*, [Velthuys-Bechtold 1995, 299]. A discussion of the assertion symbol can be found in Beth's *Inleiding tot de wijsbegeerte der wiskunde* [Beth 1940].

⁸The papers were published in the proceedings: [Beth 1937a], [Scholz 1937a].

⁹This letter may be assumed to have been similar in form and content to a letter written on 15 July 1946, to Herman Justus Meyer, a copy of which can be found among the correspondence between Meyer and Beth in the Evert Willem Beth Papers, Rijksarchief in Noord-Holland, Haarlem, General Correspondence, inv. nr. 16, 53.

Gentzen's tragic death¹⁰ and about the fact that he was able to help save the Polish logician and philosopher Jan Łukasiewicz and his wife. Beth wrote in his response:

As a friend, I would now like to put forward a question which may be unpleasant, but which I cannot suppress. In my country you have always been acknowledged as a friend of the Netherlands and as an opponent of Nazism. I and others were, however, painfully hurt to find articles from your hand in "Das Reich". The articles as such were blameless, one cannot grasp, however, how a respectable man could work for this journal edited by Mr Goebbels. You will no doubt understand that we have become extraordinarily sensitive after all the evil we have had to suffer under the Germans. I would like to mention only a few facts: I myself had to hide for six months in order to escape the arrest decreed by Mr Seyß-Inquart. Several of my Jewish friends didn't return from deportation. Therefore I would very much appreciate if you could forward convincing information about further particulars of your collaboration with "The Reich."

Beth's honest words forced his German friend to reveal the motives for his supposed collaboration with the Nazi regime. Scholz accepted the question and answered on 24 August 1946 that he had never become a member of the Nazi party or any of its divisions, "but had had to associate with the 'Reich' in order (1) to save our research on foundations, and (2) to help the suffering Polish friends in the way I did."

3.1 Scholz's Fight Against "German Mathematics"

In sum, Scholz published eight papers and reviews in the journal *Das Reich*¹¹ edited by the German Minister of Propaganda, Josef Goebbels. This journal was intended for an audience with superior cultural tastes. Scholz's contributions concerned the ethos of doing science, and some of them are reviews of books on theoretical physics by Carl Friedrich von Weizsäcker and Louis de Broglie. In arguing for the first of his two points, Scholz referred to his struggle with some representatives of "German mathematics",¹² some sort of junior partner of the "German physics" as propagated by two German Nobel laureates, Philipp Lenard (1905) and Heinrich Stark (1916). One of the "German mathematicians", Max Steck from the Technical University in Munich, had published a book on the

¹⁰Cf. the report on Gentzen's imprisonment in Prague, [Vihan 1995].

¹¹Cf. the bibliography of Scholz's writings in [Kambartel 1961], and the addition in [Peckhaus 1993, 103, n. 6].

¹²On "German mathematics" see [Lindner 1980], [Peckhaus 1984].

“main problem” in mathematics, *Das Hauptproblem der Mathematik* [Steck 1942]. Scholz wrote to Beth on 24 August 1946:

In this book Hilbert and all the formalized foundational research inspired by him was held responsible in a most shameless way for the “decadence” of the mathematical spirit in the German area. I myself and my school are attacked in this botched book in the same manner.

In particular Steck had claimed that Hilbert’s formalism represented a mental one-sidedness, “which is simply catastrophic. *Viewed from intellectual history this standpoint is ‘decadence’, a decadence that could not possibly be pursued in a more consistent way*” [Steck 1942, 205].

Steck’s attack was not the only one. As early as 1941, Scholz’s paper “Was ist Philosophie?” [Scholz 1939/40] was the target of heavy polemic from the Munich philosopher Kurt Schilling, who criticized Scholz’s attempt to present the new logic and foundational research as philosophy in the Platonic spirit.¹³ Schilling ends his discussion as follows [Schilling 1941, 48]:

Even though Scholz does show a certain courage in recommending to the German people, in the middle of the war, a single philosophy as the only possible one whose leading representatives (mentioned by Scholz himself) today are only Poles, Englishmen, emigrants, and Americans, and in openly expressing that he organized his teaching as a German Ordinarius Professor “according to the Warsaw model [...]” it seems to me that his courage should have a better concern.

In his letter to Beth, Scholz argued that he was afraid that the regime would survive the war. This would have ended his efforts to institutionalize mathematical logic and foundations studies in Germany. Given a similar situation, he said, he would again have reconsidered his association with *Das Reich*.

In order to achieve his aims Scholz masterfully employed the propaganda means of his time. Besides his contributions for *Das Reich*, Scholz even employed the organ of the “Deutsche Mathematik” movement entitled *Deutsche Mathematik* to place his polemic against the “German mathematicians” Max Steck and others. In the paper “Was will die formalisierte Grundlagenforschung?” published in the same journal [Scholz 1943] he hinted at the eminent logical and semantical contributions of the Polish Jew Alfred Tarski, simply playing on the ignorance of his opponents. Scholz called provocations like this, formulated in

¹³On Schilling’s role in National Socialist philosophy and the difficulties of a coherent assessment see [Schorcht 1990, 189–196, 344–353].

such a way that they could still be printed, “Igelchen”, little hedgehogs [cf. von Weizsäcker 1986, 14]. His rhetoric shows that he knew how to fool the regime.¹⁴

Scholz’s engagement is understandable if one considers just what he had to lose: the fruits of his efforts to create an institutionalized base for mathematical logic and foundational studies at a German university. Although Ernst Zermelo had the first official lectureship for mathematical logic as early as 1908,¹⁵ the subject was not well established in Germany. No professorships or institutes were dedicated to it. Thus, the German situation differed considerably from that in other countries, e.g. in the United States of America and particularly in Poland. Scholz succeeded in altering this situation. In 1936 his professorship for Philosophy was linked to a lectureship in Mathematical Logic and Foundational Research. Two years later, in 1938, his professorship was altered into a professorship for “Philosophy of Mathematics and Natural Sciences with Special Reference to the New Mathematical Logic and Foundational Research”. At the same time the Logistic Section of the Philosophical Seminar was renamed “Logistic Seminar”. The denomination of Scholz’s professorship was changed to “Mathematical Logic and Foundational Research” in 1943. The Logistic Seminar became an institute of its own only in 1950: the Institute for Mathematical Logic and Foundational Research, which still exists today. The preparatory steps took place at the culmination of Scholz’s controversy with the “German mathematicians.” Scholz’s aide-mémoires of the time show that he used the nationalistic tone, opportune in German political discourse of the period, in order to achieve his aims. His line of argument can be illustrated with a quote from a “Denkschrift über die neue mathematische Logik und Grundlagenforschung,” dated 15 January 1938 and addressed to the Ministry of Cultural Affairs.¹⁶ “Today mathematical logic and foundational research exist,” Scholz began apodictically. He then continued:

It is in a concise sense a creation of the German genius. *Leibniz* demanded it in a most insistent manner, and it was created admirably by Gottlob *Frege* (1848–1925), the greatest German logician besides *Leibniz*, made the object of deep consideration by *Hilbert*, following *Bertrand Russell*’s pioneering transformation of *Frege*’s creation, who aimed at the proof of the consistency of classical logic, and of classical mathematics which is profoundly connected to the former.

¹⁴This is the assessment of Carl Friedrich von Weizsäcker [1986, 13].

¹⁵Cf. [Peckhaus 1990a, 106–122], [Peckhaus 1990b].

¹⁶Behmann papers; at present to be found in the Institute for Philosophy at the University Erlangen-Nürnberg.

The subject, he argued, had emerged as a science of its own, being already established in several foreign countries. He stressed that there were four full professorships and two extraordinary professorships in Poland. In the United States it had become so generally accepted that in 1936 an Association of Symbolic Logic was founded, responsible for the *Journal of Symbolic Logic*, a journal of international importance. Scholz deplored the fact that Germany had not taken part in this development, demanding the establishment of an institutional base for this field in Germany as well.

Although arguing from a nationalistic position, Scholz was of course aware of the international character of logic. In 1938 he travelled to Warsaw in order to confer the honorary doctorate of the University of Münster on Jan Łukasiewicz on the occasion of his 60th birthday. Ten months later Germany advanced on Poland, later (physically) extinguishing a considerable part of Poland's intelligentsia.

3.2 Scholz's Engagement on the Part of his Polish Friends

In respect to Scholz's second argument, his assistance for his Polish friends, Scholz wrote to Beth that he helped Jan and Regina Łukasiewicz leave Poland for Germany. Until the end of the War they were kept in hiding near Münster. He also mentioned that he mediated contact between Alfred Tarski in the USA, and his wife who had stayed in Warsaw with their two children. With Scholz's help they were able to get passports to leave Poland. Scholz wrote the following about the case of Jan Salamucha:

I finally rescued one of Mr Łukasiewicz's best theological disciples, Mr Salamucha, from the concentration camp, before the worst could happen. It is a misfortune which I will never forget, that this excellent man was murdered during the battle of Warsaw in August 1943 [he added in a handwritten note: "not by the Germans!"]. I corresponded with my friends in Warsaw and Cracow although this was strictly forbidden. I will not tell you what I risked. But you will allow me to say that the Gestapo came to my home three times, and that after Salamucha's release from the concentration camp our Minister let me know that in the case of a repetition he would begin disciplinary procedures against me aimed at my dismissal.¹⁷ I soon had only the choice of stopping these activities or to build up a protected position which could become so strong that I could continue my underground efforts without fearing the worst. I decided on

¹⁷This letter, dated 2 October, 1940, can be found in Scholz's personal files in the University Archives, Münster.

the strengthened position, and, under the same circumstances, I would decide in the same way again.

The story of Polish logic and its fate during World War II has not yet been written, although a lot of research has been and is being done. It is of value here to remember, e.g., the historical work of Jan Woleński on the history of the Lvov-Warsaw school (1989, 1995), Andrzej Bolewski and Henryk Pierzchala's comprehensive study on the fate of Polish scientists during 1939–1945 and the loss of lives,¹⁸ and Peter Schreiber's paper on the relationship between Heinrich Scholz and Polish logicians.¹⁹ The Salamucha case is treated in these works. Here are some further remarks.

Given Scholz's affinity to Polish logic and his deep and friendly contact to Polish logicians, Germany's invasion of Poland must have shocked him, especially when it became clear that German occupation politics aimed at extinguishing the Polish intelligentsia. On 6 November 1939, 183 scientists of the Collegium Novum of the famous Jagiellonian University in Cracow were imprisoned, of whom 172 were transferred to the concentration camp at Sachsenhausen. On 8 February 1940, 103 older professors were released. Most of the younger ones, however, were deported to the concentration camp at Dachau. The last of these deportees left the camps only at the beginning of 1941. In sum, 20 scientists lost their lives [cf. Bolewski/Pierzchala 1989, 696]. This action caused a storm of international indignation, but of the German scientists only a few protested. They had to fear personal threats [ibid.]. Scholz devoted himself to the fate of Jan Salamucha, a catholic priest and historian of scholastic logic,²⁰ and that of the younger Jewish logician Joachim Metallmann, who was later murdered. The physicist and philosopher Carl Friedrich von Weizsäcker remembered that it was the Salamucha case that led to his personal acquaintance with Scholz. He reported [von Weizsäcker 1986, 12] that at the end of 1939 he received a letter from his teacher Werner Heisenberg, containing a letter from Scholz to Heisenberg. The Dutch mathematician Bartel Leendert van der Waerden, then teaching at the

¹⁸[Bolewski/Pierzchala 1989, in Polish with a German summary, *ibid.*, 694–698]. Polish science lost by death due to war and occupation 440 scientists, among them 245 professors. 169 scientists were murdered in concentration camps or otherwise.

¹⁹Peter Schreiber's paper "Über Beziehungen zwischen Heinrich Scholz und polnischen Logikern" was published in Polish [Schreiber 1995a] and in German [Schreiber 1998].

²⁰An example of Salamucha's modern reconstruction of scholastic arguments can be found in his "The Proof 'Ex Motu' for the Existence of God: Logical Analysis of St. Thomas' Arguments" [Salamucha 1958], Polish original [Salamucha 1934].

University of Leipzig, had been imprisoned when the war broke out and Heisenberg was able to have him released within two days. Scholz therefore asked Heisenberg for help in the case of two Poles. Heisenberg wrote to von Weizsäcker saying that he could not do anything, but asked him to help. Carl Friedrich von Weizsäcker gave Scholz's letter to his father Ernst von Weizsäcker, then Undersecretary of State in the German Foreign Office. Some time later Salamucha was freed (but not the other Pole as well, as von Weizsäcker thought). "I do not know," he continued, "whether my father gave any orders, or how it otherwise worked; my father probably took certain steps." He did indeed, as becomes clear from Scholz's assessment written for the benefit of Ernst von Weizsäcker after the latter had been charged as a high official of the Foreign Office in the Nuremberg trials.²¹ In this document Scholz wrote that Ernst von Weizsäcker had shown and paved the way that Scholz took so that he was able to help Salamucha. Bolewski and Pierzchala published two letters of Scholz from April and May 1940 directed to the Department of Cultural Affairs of the Foreign Office concerning Jan Salamucha²² which show that Scholz stuck to his rhetorical principles. He wrote that Jan Salamucha was one of the best experts in late medieval logic, which he had investigated by means of the exact methods of the new mathematized logic. This mathematized logic was, Scholz argued, fundamentally a creation of German genius. It could be traced back to the great German master Gottlob Frege, a man for whom the world envied Germany. From this follows, Scholz wrote [Bolewski/Pierzchala 1989, 633],

that path-breaking work done with the help of this tool, serves at the same time and in a pregnant sense, the honour of German genius. It follows furthermore, that for years I, as the only accepted representative of mathematized logic at a Great German university, have had a lively exchange of ideas by correspondence with Mr S.

This last remark shows how strongly Scholz counted on the respect for his authority which had therefore to be preserved at all costs if he wanted to achieve his goals and help his endangered friends. In the end Salamucha did not survive the German occupation of Poland, although Scholz seems to be in error about the

²¹ See Scholz's written assessment on Ernst von Weizsäcker, dated 2 April 1948, Scholz Archive, Institut für mathematische Logik und Grundlagenforschung, Münster.

²² Archive of the Foreign Office, Pol. V, AHP; Pol. V, 4790, AHP; Pol. V, 5370, AHP. Published by [Bolewski and Pierzchala 1989, 630–632]. These letters, dated 16 April 1940, and 16 May 1940, are also published in [Jadacki/Świetorzecka 1997, 24–25, note 22].

particulars of his death. Salamucha obviously died during the Warsaw revolt of 1944. Boleslaw Sobociński tells the tale [Sobociński 1958, 328]:

On the first day of the Warsaw revolt, the first of August 1944, Fr[at]er Salamucha volunteered as a chaplain to an insurgent unit to take place of another priest who was unable to come. This unit, fighting in the sector of Warsaw called Ochota, soon became separated from the main insurgent forces and was destroyed by tanks on August 9th. All the wounded and a great number of civilians were murdered by the Germans. Fr. Salamucha, who decided to stay with the wounded, rather than withdraw with the rest of the unit, was also murdered. His body was found some months later and buried properly in a clergy section of Powazki Cemetery in Warsaw.

What was Beth's reaction? In his response on 19 October 1946 he remained critical of Scholz's first point. He wrote that in the Netherlands such arguments were unacceptable in analogous cases, both for the authorities and in public opinion. He admitted, however, a great difference. The collaboration of a Dutchman by, e.g., writing for a National Socialist newspaper, meant that he had renounced his national position in favour of the position of the enemy. But this was not true for Scholz, of course. Beth accepted, however, the second point as completely convincing. "I'm sure", he wrote, "it will be pleasant for you—as it was pleasant for me—to hear what Mr Bocheński has written to me: 'M. Scholz ... s'est comporté d'une manière très noble pendant la guerre'." Beth admitted that Scholz did an inestimable service not only for science and humanity, but also for the German people. A similar assessment can be found in the obituary which Beth wrote after Scholz's death [Beth 1956/57]. There Beth noted that Scholz, despite his strong national feelings, remained not only unfriendly towards National Socialism but also assisted his Polish colleagues and their families, with great danger for himself. A number of them, he stressed, owed their lives to Scholz.

3.3 Ideology and Significs

A last topic dealt with in Beth's letter (of 19 October 1946) needs to be considered. Via Hendrik Josephus Pos, Beth had received Scholz's booklet *Zwischen den Zeiten* (1946). In this pamphlet Scholz claimed that it would be an expression of the love of truth if Germans accepted collective responsibility for the crimes done in their names. He claimed that the German people had not had the power to rid themselves of their demonic leaders, although they should have realized their characters early enough (11). Scholz emphasized that accepting this collective responsibility would not mean to act against German honour.

Beth criticized the use of the language of arrogant nationalism at several places in the booklet. Among the phrases criticized were—they must be quoted in German—“das mehr oder weniger empfindliche nationale Selbstgefühl”, “die Ehre des deutschen Geistes” or “Ehre, deren der Tapfere würdig ist.”²³ As standing close to Mannoury’s Signific Circle,²⁴ Beth considered this language inappropriate. The content of the speech is unimportant, however, simply its use evokes memories which should no longer be evoked. Beth even demanded that German newspapers should create an “Index verborum prohibitorum” containing words like “völkisch”, “Volksgenosse”, “Blut” and “Ehre”. This would not only protect the reader, but also force writers to be more careful when expressing themselves.

It is doubtful whether Scholz was able to appreciate these arguments. In his booklet he suggested a return to the ideals of the German classics, to Schiller and Goethe, and he used the language of the classical period. Of course Scholz knew that language could be used as a weapon, but he was convinced that it could also be used as a counter weapon. He proved that honest nationalism could be utilized against National Socialist ideology. Strict “political correctness” would not have helped in these situations. The existence of a *lingua tertii imperii* does not eliminate the fact that several of its terms and phrases had innocent meanings in former times. It should be possible within the dynamic development of a language to return to these former meanings. To remove all the abused terms and phrases from the opportune language could be read as a belated prostration before ideology.

4. Conclusion

This last subject allows us to conclude with a quotation from Barth’s paper “In the Service of Human Society” which contains a discussion of Evert Willem Beth’s philosophy. The exchange of letters reported on above corroborates her judgement concerning Beth’s scientific ethos. She writes [1990, 8]:

Beth was—and remained throughout his whole life—extraordinarily preoccupied with the terrors of World War II and its cultural roots, the rise and effects of fascism and other totalitarian modes of thought. He did not, as is usual, relegate his reactions to them to a secluded part of his brain that was closed off from his professional work, or vice-versa.

²³This last phrase can be found on p. 18, line 8. Beth mentions, however, p. 18, line 18, which does not follow his line of criticism. There Scholz writes: “Wir werden den Popanz um *Nietzsche* abbauen müssen, abbauen müssen bis auf den Grund, wenn wir uns ehrlich wieder herstellen wollen” (line 17–19).

²⁴For a collection of papers on the Signific Circle see [Heijerman/Schmitz (ed.) 1991].

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