

relation to the world. Knowing is creativity; it is the result of our personal creative contribution to the given epistemological situation or circumstances. Tacit components are part of our “virtual” body by which we act during our research and knowing. We are free to determine what to do with them, how to use them. But we are given certain constraints within which we can execute a cognitive action.

Constraints

Now what constraints are there to stake out the playground of our freedom? What prevents us from pure subjectivity? After all you can believe what you like – and altogether knowledge is nothing but belief –, if you understand as you like, and if you have self-set standards for the criteria of the reasonableness of your beliefs. To prevent us from the freedom of daydreaming we have two factors: our cognitive powers *and* our commitments. Just to be clear, these are not meant to be disjunctive components of knowing, but they emphasize different aspects of constraints.

With our normal body and psyche we keep in touch with reality. As it is clear from Polanyi’s analysis of the ascent of our cognitive powers from biological levels to cultural ones, our cognitive powers are primordially evolved and brought about to maintain the closest connection with reality, to help us find our way in the world. The cognitive mechanism is not designed and primarily used to devise subjectivist daydreams. This latter is the derivative function of our cognitive powers requiring explanation and not the former.

The second element of compulsions, namely, commitment is an intentional link to reality. It involves that we are committed to our knowledge claims with universal intent. On making knowledge claims we try to tell other people truths about a reality believed to be existing independently of our knowing it. By claiming truth and concerning reality, all assertions carry universal intent. Universal intent is precisely the factor distinguishing the beliefs we consider knowledge claims from other beliefs having no such aspirations. Our holding a belief with universal intent entails that our belief is held true and concerns reality.

How can commitment delimit our freedom? Being committed involves that our psychological, moral and social existence is at stake. Under normal circumstances we give our name to our assertions signaling that we believe it and we have done our best to find the truth and this is the result. If we prove to speak nonsense too often then it will undermine our psychological self-image (regarding ourselves insane or untalented, etc.) and our moral self-image (being reckless, dishonest, etc.) and our social position (being incompetent, dishonest, etc.). Risking our

psychological, moral and social integrity seems to be the most powerful pressure on us that can be thought of, to make us resolutely strive for truth by using our cognitive powers properly and most effectively.¹ We are impelled to make our personal choice most prudentially within the domain of our free decision involved in knowing. Accepting a commitment is taking on a moral obligation with all the consequences it entails if not fulfilled.

This is not an ultimate guarantee for truth. We are fallible. But it exercises an ongoing pressure on us to improve our knowledge.

To sum up, *we can say that we do not enjoy moral freedom to believe what we like, but we enjoy cognitive freedom to know what we can depending our own cognitive powers*, but then we may stick to it also morally.

Let us not be misled by this formulation of the results. Commitment is just part of our cognitive powers. It is part of someone's personal capacity how far they can stand the pressure of risking their reputation, self-respect, job etc., and how flexibly they can comfort themselves with reassessment of the situation after a fiasco. Some can gamble on their whole private and professional existence even up to a lie or a professional sham while others cannot stand even the uncertainty involved in a normal scientific research project.

Seen from the other side, the factors limiting our freedom are the justifications for personal knowledge in the sense that they are reasons why we claim what we do. Justification is meant to be a guarantee for the cognitive reliability of the outcome of knowing, but it is not supposed to prevent us from false beliefs. If the realist conception of truth and the possibility of the check of correspondence between statements and reality are put aside, than *what better guarantee can we hope for the truth of an assertion than the researcher and the scientific community staking their reputation (and their existence in the long run) while they have done their best?*²

Before accepting a guarantee and thus a justification of this kind, obviously we should also see who is risking his existence and what sort of existence is at stake due to the commitment.

¹ It follows that Polányi supposes that the choice between the proper use of our cognitive powers and daydreaming is intentional. At this point, we are not ultimately, but may be temporally, at the mercy of some Gestalt-play of our psyche.

² „The result may be erroneous, but it is the best that can be done in the circumstances. Since every factual assertion is conceivably mistaken, it is also conceivably corrigible, but a competent judgement cannot be improved by a person who is making it at the moment of making it, since he is already doing his best in making it according to his commitment.” (Polányi 1958, p. 314.) *Mutatis mutandis* the same applies to the scientific community.

Transcendental conditions

Let us turn back to the status of the assumptions above. It is an assumption of Polanyi's philosophy that the idea of reality, the idea of the universality of our claims, etc. are supposed to be shared by all knowers beyond all indeterminacy. Is it not a contradiction? Certainly, it may be interpreted that way; everything is person-relative, how is it possible that these ideas are universal as they stand? But perhaps a more charitable reading would consider these shared ideas as transcendental conditions of knowing at all, i.e. as conditions of the possibility of knowing. "(O)ur acceptance of this framework is the condition for having any knowledge."³

Polányi radicalizes the outlook of Enlightenment.

The Enlightenment taught that man's freedom means that he is driven only by the laws of reason that are virtually the laws of mind and the essence of human nature. Self-realization is nothing but applying our universal reason to our particular situations and experiences, i.e., to our particular finite life. Freedom is based on knowledge, which is in effect based on the universal reason. According to my interpretation of Polányi we can accept this line of thought up to the point that freedom is based on knowledge, but it is not the knowledge of universal reason, rather it is a personal knowledge bearing the marks of the knowing individual. It results in a personal freedom instead of the freedom of universal reason, and "(t)his is ...our liberation from objectivism"⁴. Self-realization, accordingly, means that we grow ourselves according to, and, by means of personal knowledge integrating it into ourselves. Since no universal reason remained for us to trust in the personal responsibility, thus morality emerges already in knowing.

Reference

- Polanyi, M. 1958 *Personal Knowledge*, London: RKP

³ Polanyi 1958, 267. It is not alien to Polányi to take hierarchical structures as transcendental structures in which the higher level structure provides transcendental condition for the lower level structures. As, for instance, our biological setup is a precondition for our mind and social life. Polányi's arguments are also often directed to searching for preconditions. E.g. it is impossible to apply rules by the help of other rules, but we can apply rules therefore we must have a tacit cognitive power to do so.

⁴ Polanyi 1958, 267.

Tibor Frank

COHORTING, NETWORKING, BONDING: MICHAEL POLANYI IN EXILE

Michael Polanyi was nurtured in the “happy peace times” of turn-of-the-century Europe. In a review of F. A. Hayek’s *The Road to Serfdom* for *The Spectator* in 1944 he fondly remembered the “good old days” when

before 1914 you could travel across all the countries of Europe without a passport and settle down in any place you pleased without a permit. The measure of political tolerance which commonly prevailed in those days can be best assessed by remembering local conditions which at the time were considered as exceptionally bad. The domineering and capricious personal régime of Wilhelm II was widely resented, even though it allowed, for example, the popular satirical paper, *Simplicissimus*, regularly to print the most biting cartoons, jokes and verse directed against the Kaiser. Europe shuddered at the horrors of Tsarist oppression, though under it Tolstoy could continue to attack from his country seat in Yasnaya Polyana with complete impunity the Tsar and the Holy Synod, and persistently preach disobedience against the fundamental laws of the State... After less than a generation, say in 1935, we find that all the freedom and tolerance which only a few years earlier had been so confidently taken for granted, has vanished over the main parts of Europe.¹

After World War I the situation fundamentally and dramatically changed, particularly for Polanyi’s generation. New borders were established, cutting across the continent of Europe. Through much of the post-World War I era, Hungarian Jews were repeatedly in trouble. Groups of them were forced to leave their native country after 1919, Germany after 1933, and Europe after 1938, just to mention a few major turning points in European history.

From Budapest to Berlin

Networking, using available contacts and relying on people already established in Germany, was among the most natural methods used to secure a place somewhere

¹ Michael Polanyi, ‘The Socialist Error,’ *The Spectator*, March 31, 1944.

abroad, and particularly in Germany. A lot of people needed help and this induced a veritable “chain reaction.”

The situation became extremely difficult during World War I. When in 1916 Michael Polanyi inquired about his own prospects for a *Habilitation* under Professor G. Bredig at the Institute for Physical Chemistry and Electrical Chemistry of the University of Karlsruhe, he was politely turned down.

We are compelled, now after the War [has started] more than ever before, to take into account the public opinion which urges us to fill in the available places for *Dozenten* by citizens of the *Reich* as much as possible. Even though we like to treat the citizens of our Allies the same way as our own, you must have seen in my Institute that the situation was pushed so strongly in favor of them, that as of now, and more than ever before, I must see to attracting more Imperial Germans.²

A year later, Polanyi tried Munich and turned to Professor K. Fajans in what was then the Chemical Laboratory of the Bavarian State. Though his request was well received there and an offer was made to become an assistant to Dr. Fajans, Polanyi’s German plans did not materialize until after the War.³

An assistant to Georg de Hevesy during the Hungarian Republic of Council—a Bolshevik experiment that lasted through the Summer of 1919—Polanyi left Budapest at the end of 1919 and went to Karlsruhe where he had already studied chemistry from 1913-14.⁴ Identified by many with the grossly failed Hungarian Republic of Councils of 1919, Hungarian Jews were punished in many ways and often forced to leave Hungary. Polányi was searching for a good job in Physical Chemistry. Seeking advice in regard to his future employment in Germany, he turned to Theodore von Kármán, a fellow-Hungarian and a distinguished Professor of Aerodynamics in Aachen, Germany.

Young Michael Polanyi’s questions to Von Kármán were answered politely but with caution. “The mood at the universities is for the moment most unsuitable for foreigners though this may change in some years; also, an individual case should

² G. Bredig to Michael Polanyi, Karlsruhe, February 12, 1917. (German) Michael Polanyi Papers, Box 1, Folder 5, Department of Special Collections, University of Chicago Library, Chicago, Ill.

³ K. Fajans to Michael Polanyi, München, June 26 and October 5, 1918. (German) Michael Polanyi Papers, Box 1, Folder 5, Department of Special Collections, University of Chicago Library, Chicago, Ill.

⁴ *Ibid.*

never be dealt with by the general principles. ... To get an assistantship is in my mind not very difficult and I am happily prepared to eventually intervene on your behalf, as far as my acquaintance with chemists and physical chemists reaches. I ask you therefore to let me know if you hear about any vacancy and I will immediately write in your interest to the gentlemen concerned.”⁵

After the War ended, the prospects for Hungarians in defeated Germany naturally got even worse. From 1920 on, Von Kármán helped a number of Hungarians start their careers in Germany, readily sponsoring friends of his family, often under the most adverse circumstances.⁶ Several years later, in 1923, American visiting scholar Eric R. Jette described the German university scene in remarkably similar terms: “conditions in the universities were very bad, of course, in all places. The same story was heard everywhere, no money, no new professors or docents but laboratories filled with students who had almost nothing to live on. Yet the research goes on and the students still keep at their books.”⁷ In little over a year, however, Jette received better news from Werner Heisenberg who “said that while the university people were not as well off as before the war, they were infinitely better situated than a year ago.”⁸

Nevertheless, Hungarians were difficult to turn down. The future engineering professor Mihály Freund asked for Polanyi’s assistance for a young relative, Tibor Bányai, who had just finished high school in Budapest and wanted to become an engineer at the University of Karlsruhe, where Polanyi had been active for some time. More importantly, in 1922 Polanyi paved the way for several people from Hungary to get a job. The most important cases were those of Leo Szilard and Imre Brody. Szilard tried to get an assistant’s job at the Institute of Physical Chemistry at the University of Frankfurt am Main. Szilard, of course, was well on his way to becoming a scientist in his own right. The degree he just received in Berlin under Max von Laue was the best letter of recommendation he could possibly present. Yet,

⁵ Theodore von Kármán to Michael Polányi, Aachen, March 17, 1920, University of Chicago, Joseph Regenstein Library, Special Collections, Michael Polányi Papers, Box 17.

⁶ Cf. e.g. the case of the son of his brother’s friend Michael Becz, see Elemér Kármán to Theodore von Kármán, Budapest, May 9, 1920 (German), Theodore von Kármán Papers, File 139.1, California Institute of Technology Archives, Pasadena, CA.

⁷ Eric R. Jette to Michael Polanyi, Up[p]sala, February 10, 1923, Michael Polanyi Papers, Box 1, Folder 19, Department of Special Collections, University of Chicago Library, Chicago, Ill.

⁸ Eric R. Jette to Michael Polanyi, Copenhagen, March 28, 1924, Michael Polanyi Papers, Box 2, Folder 1, Department of Special Collections, University of Chicago Library, Chicago, Ill.

under the circumstances, he did need Polanyi's letter to Frankfurt professor B. Lorenz, and Polanyi referred to Szilard as a "wonderfully smart man."⁹

In a letter written to Albert Einstein, Polanyi also supported physicist Imre Brody in 1922. In this important document Polanyi asked Einstein to write to the leaders of Robert Millikan's newly founded institute in Pasadena, CA so that Brody could get a job as an assistant.¹⁰

Of all the Hungarian scientists, however, Theodore von Kármán proved to be the most active and successful contact person whose German and subsequent U.S. correspondence provides a wealth of information on half a century of Hungarian networking. A typical letter from his German period was sent in 1924, by a Hungarian friend in Vienna, asking for his assistance with Hungarian chemical engineering student Pál Acél to continue his studies "in Germany, preferably under you."¹¹ Correspondence on these matters sometimes had to be clandestine: in dangerous years such as 1920, a reply to such mail was more prudent to send to Vienna, rather than Budapest, and picked up there personally.¹²

Students continued to try to study in Germany for several reasons, one of them being the commitment of the German professors to their gifted students and the great deal of time and interest they allotted to young people.

Professor Lipót Fejér asked fellow mathematician Gabor Szegő in Berlin in early 1922: "What does little Johnny Neumann do? Please let me know what impact do you notice so far of his Berlin stay."¹³ In an 1929 interview, Michael Polanyi, since early 1923 a *habilitierter* Berlin professor himself,¹⁴ proudly yet sadly described the essential difference between the contemporary Hungarian and German

⁹ Michael Polanyi to B. Lorenz, October 16, 1922. (German) Michael Polanyi Papers, Box 1, Folder 18, Department of Special Collections, University of Chicago Library, Chicago, Ill.

¹⁰ Michael Polanyi to Albert Einstein, March 14, 1922. (German) Michael Polanyi Papers, Box 1, Folder 17, Department of Special Collections, University of Chicago Library, Chicago, Ill.

¹¹ Elemér Székely to Theodore von Kármán, Wien, April 29, 1924. (Hungarian) Theodore von Kármán Papers, File 29.14, California Institute of Technology Archives, Pasadena, CA.

¹² Mihály Freund to Michael Polanyi, May 4, 1920. (Hungarian) Michael Polanyi Papers, Box 17, Department of Special Collections, University of Chicago Library, Chicago, Ill.

¹³ Gabor Szegő Papers, SC 323, Boxes 85-036, Department of Special Collections and University Archives, Stanford University Libraries, Stanford, CA.

¹⁴ Obersekretär Breuder [?], Technische Hochschule zu Berlin, to Michael Polanyi, Charlottenburg, November 8, 1923. (German) Michael Polanyi Papers, Box 1, Folder 20, Department of Special Collections, University of Chicago Library, Chicago, Ill.

educational scenes declaring that “professors in Germany grab with avid interest the hand of any student considered to be gifted. They are like the art-collector whose utmost passion is to discover talent. This is part of the profession of a university professor.”¹⁵ It is important to note that his generation shared essentially the same experience later in U. S. universities: for *émigré* scholars and scientists, the welcoming atmosphere of German universities was happily rediscovered in, and partly transferred to, the United States.

One of the outstanding qualities of the post-World War I German environment was tolerance – political, religious, professional, and artistic. People, professions, ideas, and artistic products persecuted at home in Hungary were welcome in the open atmosphere of Weimar Germany. Béla Bartók’s pioneering ballet *The Miraculous Mandarin*, rejected and scorned in Hungary, found a sympathetic audience in Cologne, albeit for a single night only, where Hungarian-born Eugen Szenkár performed it for the first time in 1926.¹⁶

Moving to Germany was not only a question of survival in terms of studies, jobs, and promotions: it also meant an opportunity to resume one’s original professional activities or intellectual directions. It was not merely the acquisition of a new address: it led to the reconstruction of spiritual (and often bodily) health, the realization of the self, a restoration of the mind.

‘Incipit Hitler:’¹⁷ Rescue Operations

The international community of scientists and scholars showed a great deal of compassion for those being threatened by Hitler. They supported emigrating colleagues from Germany by providing the necessary organizational framework and material assistance,¹⁸ providing for some 6000 highly qualified professionals to

¹⁵ “Polányi Mihály Nádas Sándorhoz,” *Pesti Futár*, 1929, pp. 37-38.; repr. in *Polanyiana*, I/1, 1991, p. 26.

¹⁶ József Ujfalussy, *Béla Bartók* (Budapest: Corvina, 1971), pp. 237-240; György Kroó, *A Guide to Bartók* (Budapest: Corvina, 1974), pp. 97-105. The ballet was not tolerated even in Cologne, where the conservative mayor of the city, Konrad Adenauer stopped the production.

¹⁷ Stefan Zweig, *Die Welt von Gestern. Erinnerungen eines Europäers* (Fischer Taschenbuch Verlag GmbH, 1994), p. 411.

¹⁸ For a well-written general survey of international efforts to rescue immigrant scientists and scholars from Germany see Laura Fermi, *Illustrious Immigrants. The Intellectual Migration from Europe 1930-1941*. 2nd rev. ed. (Chicago and London: University of Chicago Press, 1971), Chapter IV: The Roads to America, pp. 60-92.

leave Germany in quick succession.¹⁹ A number of parallel initiatives emerged to bring about an effective framework for rescuing the community of German-Jewish scientists. Headquartered in Zürich, Switzerland, the *Notgemeinschaft Deutscher Wissenschaftler im Ausland* [Emergency Society of German Scholars Abroad] was founded largely as a result of the efforts of a Hungarian-born scientist. “Professor Philip Schwartz,” wrote Lord Beveridge in his *A Defence of Free Learning*, “Hungarian by birth but holding a Chair of General Pathology and Pathological Anatomy at Frankfurt-am-Main in Germany, [Schwartz] was an immediate victim of Hitler’s racial persecution and went in March 1933 to Zürich in Switzerland. There he founded at once the *Notgemeinschaft* and directed it for six months. ... For money it had to depend almost wholly on contributions from displaced scholars whom it had helped to re-establish. But by its personal knowledge of the scholars themselves and by using its contacts with universities everywhere, it [the *Notgemeinschaft*] rendered invaluable service,”²⁰ providing a list of nearly 1500 names of dismissed academics in Germany, which was published in 1936 with the assistance of the Rockefeller Foundation.²¹

The first major success of the *Notgemeinschaft* was an agreement with the Turkish government to place 33 German professors at the University of Istanbul. Similar arrangements were discussed with Australian, Indian, South African, Soviet and U. S. authorities as well as with the Committee for Intellectual Cooperation of the League of Nations.

In May 1933, scientists in Great Britain established the *Academic Assistance Council* (first conceived as the International Board of Scientists and Scholars) with Nobel Laureate Lord Rutherford as President and Sir William [later Lord] Beveridge and Professor C. S. Gibson as Secretaries.²² A few weeks later the

¹⁹ Cf. Herbert A. Strauss and Werner Röder, eds., *International Biographical Dictionary of Central European Emigrés 1933-1945*, (München - New York - London - Paris: K.G. Saur, 1983), Vols. I-II/1-2/III, xciv, 1316 p.

²⁰ Lord Beveridge, *A Defence of Free Learning* (London-New York-Toronto: Oxford University Press, 1959), pp. 128-129.

²¹ Laura Fermi, *Illustrious Immigrants. op. cit.*, p. 62.

²² Lord Beveridge, *op. cit.*, p. 2; Leo Szilard to Jacques Errera, London, June 4, 1933 (German), Leo Szilard Papers, Box 7, Folder 22; Benjamin Liebowitz to Ernst P. Boas, London, May 4, 1933, Leo Szilard Papers, Box 12, Folder 4, Mandeville Department of Special Collections, University of California, San Diego Library, La Jolla, CA. — The Council remained in existence until 1966, as the *Society for the Protection of Science and Learning*. Cf. Leo Szilard to unknown, May 14, 1933, Leo Szilard Papers, Box 12, Folder 21, Mandeville Department of Special Collections, University of California, San Diego Library, La Jolla, CA; Robin E. Rider, “Alarm and Opportunity,” *op. cit.*, p. 116.

Emergency Committee in Aid of Displaced German (later Foreign) Scholars was established as the American counterpart of the AAC to provide grants or fellowships to immigrant scientists and scholars.²³ The main contributions to the Emergency Committee funds came from Jewish foundations and individuals.²⁴

Another support committee, the *Comité International pour la Placement des Intellectuels Réfugiés* was formed in Geneva, offering positions to refugee professors from Austria, Germany, and Italy.²⁵

Jewish groups in Europe considered raising funds for a new university based on refugee faculty alone, an idea that originated in the mind of Albert Einstein who envisaged a *Flüchtlingsuniversität*, a refugee or emigrant university somewhere in Europe.²⁶ A longtime and valued colleague, Leo Szilard was able to convince Einstein “that this would not be an easy task,” and that he should “concentrate on one promising effort.”²⁷ This is how Einstein started to support the idea of the Academic Assistance Council. Another suggestion was to raise more money for the Palestine University.²⁸ Immediately after the recession, however, there was not enough money for any of these projects to materialize. Instead, several agencies provided relief of some sort, such as the *Jewish Relief Committee* in Amsterdam.

The academic community in the United States was horrified to learn of what was happening in Germany. German-born Franz Boas was one of the first to receive an authentic report from Benjamin Liebowitz who travelled throughout Europe

²³ Lord Beveridge, *op. cit.*, pp. 126-127; Karl Brandt Circular, New York, February 1, 1934 (German), John Von Neumann Papers, Box 7, “1933: Some very interesting letters to J. v. N.,” Library of Congress, Washington, D.C. — For details on the two institutions see Robin E. Rider, “Alarm and Opportunity: Emigration of Mathematicians and Physicists to Britain and the United States, 1933-1945,” *Historical Studies in the Physical Sciences*, Vol. 15, Part I (1984), pp. 107- 176, esp. pp. 116, 139.

²⁴ Robin Rider, “Alarm and Opportunity,” *op. cit.*, p. 144. Cf. Lord Beveridge, *op. cit.*, pp. 15, 126.

²⁵ Laura Fermi, *Illustrious Immigrants*, *op. cit.*, pp. 62-63.

²⁶ Albert Einstein to Leo Szilard, Le Coq-sur-Mer, April 25 and May 1, 1933; Leo Szilard to Albert Einstein, London, May 4 and 9, 1933 (German), Leo Szilard Papers, Box 7, Folder 27, Mandeville Department of Special Collections, University of California, San Diego Library, La Jolla, CA.

²⁷ Leo Szilard to Sir William Beveridge, Brussels, May 14, 1933, Leo Szilard Papers, Box 11, Folder 18, Mandeville Department of Special Collections, University of California, San Diego Library, La Jolla, CA.

²⁸ Leo Szilard to Sir William Beveridge, London, May 4, 1933, Leo Szilard Papers, Box 4, Folder 30, Mandeville Department of Special Collections, University of California, San Diego Library, La Jolla, CA.