INTERVIEW WITH GÁBOR ISTVÁN BÍRÓ

[Editor's Note: Gábor István Bíró recently completed his Ph. D. in the Philosophy and History of Science Department (HPS doctoral program) at Budapest University of Technology and Economics (BUTE). BUTE has long been affiliated with the Michael Polanyi Liberal Philosophical Association (MPLPA) and graduate students in HPS at BUTE often undertake some study of Polanyi's writings. The MPLPA is a central European Polanyi group similar to the Polanyi Society; *TAD* periodically reports on MPLPA activities and BUTE events. Bíró's recent dissertation is a careful, historically-oriented study of Polanyi's fifteen years of work on economic literacy and his diagrammatic film *Unemployment and Money: The Principles Involved* (1940). His work, like some other things recently published in *TAD*, suggests the rewards of examining more closely Polanyi's early ideas. He is interviewed by Phil Mullins, editor emeritus of *Tradition & Discovery* and current president of the Polanyi Society. This interview invites Bíró to summarize topics explored in his dissertation.]

Abstract

This interview with Gábor István Bíró reviews topics explored in his 2017 Budapest University of Technology and Economics dissertation on Polanyi's work in economics education and on his diagrammatic film.

Mullins: *Your recent dissertation has a provocative title,* "Projecting the Light of Democracy: Michael Polanyi's Efforts to Save Liberalism via an Economics Film, 1933-1948." *Your abstract identifies your research as "historical micro-analysis" which focuses on what you call Polanyi's early "sociotechnical" vision which is manifested in his effort to make his economics education film. Please unpack all of this for us.*

Bíró: I feel particularly lucky to get involved with not only one but two Polanyi groups (the Polanyi Society and the MPLPA) from the first days of my Ph.D. I can recall one of our early discussions in 2014 about Polanyi and economics which reinforced my interest in the topic by suggesting that this is a little-studied area with a lot to discover. Scholars at BUTE affiliated with the MPLPA, particularly Márta Fehér, Tihamér Margitay, and my thesis supervisor, Gábor Zemplén, were very influential for me in

shaping how to approach the topic and in how to read and review what has been already mined from the archival Michael Polanyi Papers (MPP) from the 1970s. I was also fortunate enough to get very early Hungarian and German fragments, some related to Polanyi's graduate years in Budapest, from scholars cultivating a historical interest in Polanyi's physical chemistry.

My initial aim was, due to my background in economics and history of economic thought, to study barely known or unknown Polanyi materials related to economic matters and economics. Then, as I delved into the ten thousand pages of the Michael Polanyi Papers, mostly into his published and unpublished writings, correspondence, and lecture notes of the studied decades, I realized that my research can reveal something even more interesting for those not so much interested in Polanyi, but very much interested in the entanglements of knowledge, power, democracy, and visual (re)presentation. These topics converge around what I call Polanyi's sociotechnical vision of "democracy by enlightenment through the film" (Polanyi 1935b, 1) which summarizes his efforts to save liberalism and Western civilization through centres of economics education (using his film) in the thirties and forties. This succinct phrase "democracy by enlightenment through the film" (ibid) was used by Polanyi himself in a letter of 1935 to John Grierson who seems to have been a collaborator who immediately grasped the social objective of Polanyi's film project.

The focus of my research was less on how the grand-scale economic, social, and political events (e.g., the Great Depression, World War II) of the era influenced Polanyi's thought, and more on how Polanyi intended to reform liberalism and launch a campaign for the epistemic empowerment of the masses through certain visual and verbal practices. I gave a special emphasis to Polanyi's visual method and made a detailed comparison with the visualizations and the imagined societal effects of similar projects to educate the general public in the 1930-40s.

Mullins: *You are very interested in the literature of the contemporary interdisciplinary area called science and technology studies (STS). Some of Polanyi's work in the forties and fifties influenced the development of STS, according to figures like Nye. What your dissertation does is deftly employ certain interesting concepts in recent STS discussions (e.g., "boundary crossing," "boundary object," and "sociotechnical imaginary") to conceptualize Polanyi's work over 15 years on economics education and his film, as well as his own transition from a research chemist to an economist and social philosopher. Please comment on these STS concepts and outline how they can be used to understand Polanyi's early work as someone intensely interested in improving economic literacy.*

Bíró: Imre Lakatos wrote that "history of science without philosophy of science is blind, philosophy of science without history of science is empty" (Lakatos 1970, 1). I did not want to write blind history of science so to speak and I decided to get my

eyes crafted through the lenses (or with the blood) of science and technology studies. I specialized in STS during my doctoral program since I thought that its interdisciplinarity and the multiplicity of approaches STS scholars cultivate makes it an appropriate niche for my research. By writing a couple of reviews on recently published STS books, I also realized that there is a growing interest in STS circles in the three defining pillars of my research: social sciences, visual (re)presentation and the relation between science, technology and democracy.

The fourth edition of *The Handbook of Science and Technology Studies* (2016) defined STS as a field exploring the "transformative power of science and technology to arrange and rearrange contemporary societies"(1). Polanyi was tinkering with such transformative power as he sought to rearrange, in a sense, society through economics education based on his film and economics. But this similarity was not the only reason.

I sought to show Polanyi's sociotechnical vision in these two decades from different angles. I wanted to show how the different pieces, which could be grasped by different STS concepts, can be made to fit together in a thorough, fine-grained historical analysis. I hoped that by doing this my work could bridge some gaps in the STS literature. I argued that Polanyi's disciplinary shift from physical chemistry towards social sciences is not to be separated from his vision of "democracy by enlightenment through the film" or his unique way of rendering Keynesian economics visible. Changing his discipline was not unrelated to his efforts to change what economists do and how they do it, or to change the common practices of seeing and knowing the economy. I relied on certain STS concepts (boundary work, boundary shifter, etc.) to explain what Polanyi was doing and how. Other concepts (boundary object) helped me to understand how others saw his efforts and how this perception affected the realization of his agenda. Jasanoff's "sociotechnical imaginaries" (Jasanoff and Kim, 2015) is an insightful concept which offered a well-suited framework to set some of these strands together and to show how elements from different micro-social worlds were entangled to make societal macroeffects together. Jasanoff's concept was particularly helpful for explaining the evolution of Polanyi's film project and for analyzing why it failed to produce the large-scale social impacts Polanyi envisioned.

Mullins: *Part of your research focuses on how Polanyi very creatively rendered Keynesian liberal economics visible with his film, which is recognized in film studies as an early "diagrammatic" film. You compare what Polanyi did with visuals with similar projects which aimed to make economic processes visible for non-economists in the 1930 and 1940s. You also show how Polanyi's illustrations draw on laboratory experience in physical chemistry. Please sketch for us what you think was particularly innovative about Polanyi's effort to make a diagrammatic film which would, to paraphrase some of Polanyi's writing, eliminate common fallacies about economics and render Keynesian ideas a matter of common sense.*

Bíró: In studying archival materials, I discovered that Polanyi was aware of at least three similar projects focusing on visualizing economic phenomena for non-experts: Norman Angell's *The Money Game. How to Play It. A New Instrument of Economic Education* (1928), Otto Neurath's ISOTYPE (1936), and James D. Mooney's (president of General Motors Overseas between 1922 and 1940) patents for apparatuses illustrating economic laws with physical analogies (1934-1949). Polanyi was informed about the Nobel Peace Prize (1933) winning economist, Angell's game by Oscar Jaszi (Polanyi 1935a), a Hungarian liberal social thinker and politician who, like Polanyi, fled from continental Europe due to the rise of dictatorial regimes. Neurath's method was widely known as well as his related efforts to induce social reform through the *Mundaneum Institutes*. In January 1937, Charles V. Sale, an official of the Rockefeller Foundation, sent Polanyi a letter he had received from James D. Mooney which contained a status report on Mooney's project and his further plans about making a moving picture on the working of his physical apparatuses illustrating economic laws (Polanyi 1937). Quite unexpectedly, on the back of a page of Sale's letter, I discovered a sketch by Polanyi which is probably the first visualization of his film plan with economic factors and a formula. He was probably prompted to make the diagram by what he had just read in Mooney's account. It must be noted here that there is clear evidence that Polanyi had already been tinkering with his film project since 1929, so these letters might have influenced him in the years of development, but he did not borrow the very idea of making an economic film from these contemporary efforts.

Polanyi's visual method had similarities with, as well as differences from, the visualizations of Angell, Neurath, and Mooney. Cartoonish style and fluid-like motions were common traits in these four visual regimes. What made Polanyi's method unique was the shifting symbols and the multi-level learner-centered unfolding of the visual argument. Both were driven by educational considerations. Polanyi used shifting symbols to promote a kind of visual and economics literacy. He used different representations or symbols for the same represented element; this was not present in Angell's and Mooney's visualizations, and was explicitly forbidden in Neurath's method. How symbols followed each other is even more interesting than the multiplicity of symbols. It was not simply that Polanyi stopped using the first and started using another. He portrayed a process of revisualization, a liquid-like shifting of the first symbol into another before the eye of the viewer, usually accompanied by an audible explanation. Polanyi gradually replaced the cartoonish and common representations (based on the visual similarity between the representation and that which was represented) with abstract ones (based on a recently learned relation between the representation and that which was represented) to help his viewers understand the material. Probably the same considerations led him to rotate between micro-, meso-, and macro-pespectives, emphasizing what an individual economic agent does and why in certain parts of his

film, and explaining how the whole monetary sphere of a national economy works in others.

My dissertation argued that the essence of Polanyi's visual regime was not that he forged ISOTYPE and moving picture technology together, and not the way he portrayed fluid-like economic realms. Polanyi's approach focused on the central role of transitions—and transitions had already played an important role in many of his chemistry illustrations (e.g., on potential energy surfaces). This interest in transitions can be seen in several decades of his work when he was crossing borders, topics, fields, and disciplines. It was a key to his genuine technical virtuosity to solve research problems in the laboratory of the Kaiser Wilhelm Institutes in the twenties, and was also the key to his sociotechnical imagining which aimed to save liberalism and Western civilization through economics education in England in the 1930-40s.

Mullins: *You suggest that Polanyi was particularly wary about and careful in his work on economics literacy in UK during and just after World War II. He was a foreigner who had arrived from Germany in 1933. He believed that he should not be perceived as a policy advocate; however, a program to improve economic literacy was likely to be generally inoffensive to lifelong British citizens.*

Bíró: Polanyi knew that he was a stranger from illiberal soil in the eyes of the British public, and knew that he should adapt to this perception in his efforts to realize his sociotechnical vision of "democracy by enlightenment through the film" (Polanyi 1935b, 1). In a letter of 1942, he wrote that "I must be very careful not to appear to intervene in public affairs. During a crisis of this kind the nation's family feelings are stronger than ever and they are anxious to listen undisturbed to the voice of their own tradition" (Polanyi 1942a, 2). Polanyi did not want to be seen as an outsider intervening in public affairs, but he did want to realize his sociotechnical vision.

His solution can be unpacked from another letter of 1942. In this letter, Polanyi emphasized the dichotomy of thought and action (he even underlined the two words to emphasize them); he described what he meant by both words and how he thought these were likely perceived by the English: "No contributions to thought are resented by our English friends, however widely they may roam; but I think our friends would resent any contributions by us to public action, unless these are demanded by strict professional responsibility" (Polanyi 1942b, 1-2). He thought that the English would receive gladly the outsiders' intellectual efforts, even those related to "the most decisive questions of international and economic life," but would be hostile to "a comparatively small active participation in public life" (ibid). Polanyi thought that opposing the government would likely be perceived as an intrusion. He could have easily packaged his economic ideas as a set of interrelated economic policies, but decided to "keep to the abstract fields of thought" instead (Polanyi 1942a, 2).

Mullins: *In his Manchester years, Polanyi became a sophisticated but maverick economist. Although he had great admiration for Keynes, he did not agree with many Keynesians, but he fervently desired to explain basic Keynesian insights. Nevertheless, he maintained good relations with figures like Hayek and was a charter member of the Mont Pelerin Society. Polanyi also apparently wished to reform the way in which academic economists worked and thought about their profession. Can you shed further light on what seems Polanyi's odd stance as an economist in the thirties and forties?*

Bíró: Polanyi was among the few who managed to maintain good relations with members of both the laissez-faire and the Keynesian camp. He corresponded with John Maynard Keynes, Friedrich von Hayek, Lionel Robbins, Joan Robinson, Richard Hicks, Gottfried Haberler, and a few other leading economists. Interestingly, Polanyi did not achieve this by being overly laudatory or unreflective. He was indeed a maverick very critical of orthodox economic liberalism and yet he did not embrace "standard" Keynesianism either. This posture was risky—especially for someone who wanted to launch a large-scale social reform based on Keynesian ideas. Polanyi drew boundaries between his Keynesian-inspired economic thought, socialist planning and extreme liberalism; he heightened the contrast between them. Polanyi thought that during economic hardship the outcome of the disciplinary rivalry will be primarily decided by which camp's responses are more plausible for the masses in relation to one defining question: how can we end the economic downturn without inducing collateral damage to freedom and democracy?

Polanyi knew that what works for experts does not necessarily work for the "common layman" and he needed to reach out to the latter. He urged economists to change their sophisticated disciplinary practices; he accused them of carrying "a [chess] board [of economics] in their heads" while the public "watches [their] admirable feat[s] with puzzled in-attention" (Polanyi 1936, 2). Instead, according to Polanyi, their task would be to present economic phenomena and economics comprehensibly. In *Full Employment and Free Trade*, Polanyi emphasized that he "is not concerned with elaborating the Keynesian theory further, but with its conversion into a matter of common sense" (Polanyi 1948, v). He drew a parallel to the atomic theory of chemistry of John Dalton (1809) and the work of Cannizzaro (1858) who "set out the whole matter once again—without any important addition—in a new, more straightforward fashion" (ibid). He sought to become the Cannizzaro of Keynesian economics through his film project and economics book. Unfortunately, Keynes was too busy to embrace his parallel Cannizzaro. One could only imagine how Polanyi's sociotechnical vision of "democracy by enlightenment through the film" would have transformed the public realms of Western civilization if Keynes had supported his initiative.

REFERENCES

Bíró, G. I. 2017. Projecting the Light of Democracy: Michael Polanyi's Efforts to Save Liberalism via an Economics Film, 1933-1948, Doctoral Dissertation, Doctoral School in History and Philosophy of Science, Budapest University of Technology and Economics.

Felt, U., Fouché, R., Miller, C. A., Smith-Doerr, L. 2016. *The Handbook of Science and Technology Studies* 4th ed., Cambridge, MA: The MIT Press.

Jasanoff, S. and Kim, S. 2015. *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*. Chicago: The University of Chicago Press.

Lakatos, I. 1970. "History of Science and Its Rational Reconstructions." *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association*, 91–136.

Neurath, O. 1936. *International Picture Language: The First Rules of ISOTYPE*. London: Kegan Paul, Trench, Trubner & Co. Ltd.

Polanyi, M. 1935a. Jaszi to Polanyi, 24 November 1935. Box 3 Folder 5, MPP, Special Collections, University of Chicago Library.

_____. 1935b. Polanyi to Grierson, 13 December 1935. Box 3 Folder 5, MPP, Special Collections, University of Chicago Library.

_____. 1936. Notes on a Film. Box 25, Folder 10, MPP, Special Collections, University of Chicago Library.

_____. 1937. Sale to Polanyi, 21 January 1937. Box 3 Folder 8, MPP, Special Collections, University of Chicago Library.

_____. 1942a. Polanyi to Stolper, 6 May 1942. Box 4, Folder 8, MPP, Special Collections, University of Chicago Library.

_____. 1942b. Polanyi to Born, 9 July 1942. Box 4, Folder 8, MPP, Special Collections, University of Chicago Library.

_____. 1948. *Full Employment and Free Trade*, Cambridge University Press: Cambridge.