

# MICHAEL POLANYI

## SCIENTIST, ECONOMIST, PHILOSOPHER

### 1. 1891-1935: FROM HUNGARY TO ENGLAND

Michael Polanyi (Polányi Mihály, in the Hungarian style) was born in Vienna on March 11th 1891, the fourth child of Michael and Cecilia Pollacsek, liberal Jews from, respectively, Ungvár (then in Hungary, but now known as Uzhgorod and in the Ukraine) and Vilnius in Lithuania. The family soon moved to Budapest where their surname was Magyarised to Polányi. Michael Polanyi, the elder, built much of the Hungarian railway system but lost a lot of money in 1899 and died in 1905. Cecilia Polanyi established a *salon* in their home and continued to run it until her death in 1939.

The young Michael grew up in a rapidly expanding city and at the centre of several artistic, intellectual and political circles. Supporting political reform, he rejected Socialism and all comprehensive schemes of radical change. In 1909 he entered Budapest University to read medicine, perhaps because as a Jew it was easier to obtain employment as a doctor than in some other professions. But his interests were primarily in chemical research, and so, after graduating, he went to the Technische Hochschule in Karlsruhe. When war broke out in August 1914 he returned to serve in the Austro-Hungarian army as a medical officer and was sent to the Serbian front. On sick-leave in 1916, he wrote his Ph.D. thesis (in chemistry). In October 1918, Karolyi established the independent Hungarian Republic, and Polanyi became Secretary to the Minister of Health. At this time he published two articles on politics (in SEP: see below). In March 1919 Karolyi ceded power to Béla Kun and the Communists, and Polanyi moved to the Medical Faculty in the University. When, after a few months, Kun and the Hungarian Soviet were overthrown, Polanyi, although the only one in his department to refuse to serve in the Red Army, incurred, as Jew and because of his Liberal past, the disfavour of the new régime under Admiral Horthy. Along with many others, Michael Polanyi chose emigration and returned to Karlsruhe, from where he moved in 1920 to the Kaiser Wilhelm Institute for Fibre Research in Berlin. In 1923 he moved to the Max Planck Institute in Berlin-Dahlem, and in 1926 became a full Professor in physical chemistry. He was then at the height of the scientific profession in Germany. Because the great inflation and rising unemployment posed threats to political freedom, he began to study economics. When Hitler came to power and began to remove Jews from public positions, Polanyi tried without success to organize a protest among his fellow scientists. Thereupon he accepted the offer, which he had previously refused, of the Chair in Physical Chemistry at the University of Manchester.

### 2. 1935-1950 THE DEFENCE OF FREEDOM

According to his own account (in SFS) it was on one of his visits to the USSR, to give lectures for the Ministry of Heavy Industry, that his wider interests began to revive. Bukharin told him that the distinction between pure and applied science was false and that in the new socialist harmony scientists would follow their interests freely yet would be led inevitably to work that would fit in with the Five Year Plan. The subsequent persecution of Soviet scientists and demands in Britain for the planning of science led Polanyi to revive his interests in politics and economics. He found that the usual sceptical (that we should be free to think and do as we like because no system can be shown to be true) and utilitarian defences of science and of freedom in general, undercut what they were invoked to defend. Hence in order to defend the freedom of science, he had to defend freedom in general, and that also meant providing an alternative to collectivist schemes for the economy which were being proposed as the cure for unemployment.

In 1940 he published *The Contempt of Freedom* (1940), which contained his principal economic and political articles. After the war, other articles were republished in *The Logic of Liberty* (1951). Starting as he would continue to do, with the example of science, Polanyi demonstrates the limits of planning and the far greater possibilities of the spontaneous adjustment of polycentric efforts (individual and corporate) in science, law, the economy and other areas of human life. His idea of freedom, he makes clear, is not the merely 'negative' one of private liberties, as usual among Liberals, but the more 'positive' one of public liberties for self-dedication to transcendent ideals. In *Full Employment and Free Trade* (1945, 1948) he set out his own account of the role of the money supply in the economy and of how monetary policy can reduce the heights of boom and the depths of slump by economically neutral means, contrary to most interpretations of Keynes.

But, as is shown in *Science, Faith and Society* (1946), his thinking about freedom was taking him beyond politics altogether. Again science provides the model for a reassertion of the roles of authority and faith in life in general, as he begins to formulate a fiduciary philosophy of methods that cannot be reduced to explicit and exact rules, and of truth that can be known even though it cannot be demonstrated.

### 3. 1951-1972 PHILOSOPHY

These deeper and more specifically philosophical interests eventually overtook his scientific work altogether (from 1910 to 1949 he published 218 scientific papers). He was invited to give the Gifford Lectures in 1951-2 at Aberdeen, and a special chair in Social Studies was created for him at Manchester in 1948 so that he could concentrate on this work. The revised version of the Gifford Lectures was published in 1958 as *Personal Knowledge*, his *magnum opus*, a profound, powerful and wide-ranging book. His previous work feeds into it, and from its central theme of tacit integration, emanate virtually all his subsequent publications.

The target of *Personal Knowledge* is what Polanyi called 'Objectivism': the assumption that genuine knowledge can result only from an impersonal operation of exact and explicit rules upon data and a thorough testing of each stage, and that such knowledge is actually achieved in physics and chemistry, to which all other

forms of knowledge should be assimilated. Whatever the individual himself puts into these processes must render the product 'subjective'. The scepticism and reductionism embodied in and following from these assumptions have corrupted, Polanyi argued in several articles, our views of knowing, ourselves and the world, and have made it very difficult explicitly to uphold the intellectual, moral and political ideals of human civilization. Hence his aim is to show that

'into every act of knowing there enters a passionate contribution of the person knowing what is being known, and that this coefficient is no mere imperfection but a vital component of his knowledge' (PK p. Viii); and to 'restore to us once more the power for the deliberate holding of unproven beliefs'. (PK p. 268)

He seeks to do this by showing that natural science itself, which he knew from the inside, does not and cannot meet the Objectivist ideal, for its rules and methods cannot be explicitly articulated and thus it necessarily requires the personal engagement and judgment of the scientist himself. Scientific research is an art, the deployment of skills, and so too are all our acts and forms of knowing. In the pivotal Chapter 4 of *Personal Knowledge*, he demonstrates that skills are tacit integrations of subsidiary details into comprehensive and focal wholes, in which we attend *from* the latter and *to* the former. For the most part, we do not know the details in themselves but only as we *use* them to know the focal objects of our attention or to perform what we intend to do. Nor do we know *how* we integrate the details into the focal whole or complex performance. These tacit dimensions of all our knowing and action, he illustrates with homely examples, episodes from the history of science, and the findings of empirical psychology. It follows that we can never completely test our knowledge, for in doing so we *acritically* rely upon our personal judgment and skills. Hence, instead of the critical philosophy that has been dominant from Descartes onwards, Polanyi concludes that only a post-critical and fiduciary philosophy is self-coherent.

The ramifications, in many areas of life and thought, of the philosophy of tacit integration are explored and developed in the subsequent chapters of *Personal Knowledge* and in most of his later books and articles, beginning with its extended application to the human sphere in *The Study of Man* (1959). In place of the one-level universe of scientific reductionism, which distorts natural science along with everything else, he offers a picture of a many-levelled world in which the boundary conditions of each lower level are determined by the autonomous operational principles of the next higher level, culminating in the judgments and decisions of persons.

Polanyi retired from Manchester in 1958, and became a Senior Research Fellow at Merton College, Oxford, but found more of an audience in America where he gave several courses of lectures, expounding and developing his philosophy of tacit integration, one of which was published as *The Tacit Dimension* (1966). Other essays from this period were collected and published as *Knowing Being* (1969). A final extension of tacit integration, a course of lectures on *Meaning* (published in 1974), was edited by Harry Prosch because Polanyi was unable to concentrate. Polanyi's memory continued to deteriorate and he died in February 1976.

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