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Two Heterodox Economists: Otto Neurath and Karl Polanyi

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This paper is based on the idea that between the 1920s and the mid-1930s in Vienna there were two forms of heterodox economic theory: the Austrian economic school headed by Ludwig von Mises and another interesting form of heterodox economics opposed to the Austrian school (above all politically) and pursued by various social thinkers (Otto Neurath, Karl Polanyi, Otto Bauer, Felix Schaffer, Felix Weil, Jacob Marschak). They were engaged in the debate on the possibilities of a planned economy: Austrian socialist economists proposed a sort of ‘third’ way between pure capitalism (whose Viennese stronghold was the Austrian economic school) and orthodox communism à la Kautzsky (deeply rooted in Germany).
This paper focuses on the affinities between Neurath and Polanyi’s economic thought: despite some major differences between them, they shared a common philosophical background on which they founded their heterodox economic theory. After a brief historical premise, there is a first part, which deals with the debate on a planned economy and a second part, which deals with the influence of Neurath on the Polanyi’s vision of the faults of the neoclassical economic theory: the concepts of “disembedded economy” and of the so-called “economicistic fallacy”.

Neurath and Polanyi in Vienna

Neurath described himself as a ‘social engineer’ who wanted to find a technical approach that would transform economic systems in order to improve the welfare of individuals, not by changing the objective possibilities of increasing the production and the productivity of a country, but by finding which institutions and political intervention can redistribute the conditions of possibility of happiness for people in that country. He studied economic theory with a view to changing the social order on the basis of a rational model for the improvement of the lower classes (Soulez, 1996). As a student of Böhm-Bawerk in Vienna and of Gustav Schmoller in Berlin, he was influenced by the Austrian school and by the historical school. He adopted a mediate position in the long-standing debate on the Methodenstreit, which he considered had been made overcome by a proper definition of the scientific status of economics (Leonard 1998). Neurath’s early economic writings dealt with economic history and conducted methodological inquiries into ancient and modern economic history, and they endeavored to define the ‘economics in kind’ on which Neurath founded his model of a planned economy. His article (1919) on a planned war economy provoked a response from Ludwig von Mises’ (von Mises 1920; von Hayek 1935) and then a debate between von Mises and Polanyi on whether calculation was possible in a socialistic society (Chaloupek 1990; Caldwell 1997, Neurath 2004, Polanyi, 1987; Uebel 1991). During the 1920s, Neurath explained how concepts such as ‘economy-in-kind’ and ‘administrative economy’ were compatible for example with Marx’s central ideas and he was busy suggesting concrete models of socialized economic systems. In the meantime he joined Schlick’s circle (the Wiener Kreis, i.e. philosophical circle founded in 1922 by Moritz Schlick, whose meetings took place every Thursday evening (Feigl
1943, 1968, Menger 1994, Joergensen, 1951)) and became one of its most representative members: he introduced economics and social science among the disciplines to be treated by the new empiricism (the philosophical outlook of the Kreis). During the 1930s his efforts were concentrated on the ideal of formulating a unified science and defining so-called ‘physicalism’ applied to social science (Neurath 1973; 1983; 2004 and Uebel 1991).

Karl Polanyi returned to Vienna (where he was born) after the end of World War I in order to study economics. Polanyi’s Viennese period was fundamental for development of his subsequent economic thought (McRobbie-Polanyi-Levitt, 2000). After 1924, he earned his living as a journalist for *Der Österreichische Volkswirth*, where he was employed as an expert on foreign policy and international economic problems, and where he was considered to be “the ‘Red’ among the editors” (McRobbie-Polanyi-Levitt 2000, p.310). In 1924 he began holding periodic seminars at his home in Vorgartenstrasse 203, and after 1928 he lectured at the *Volkshochschule* on economic history. These meetings were reserved for students and scholars interested in economic theory and the methodology of social sciences; among the participants were Karl Popper, Michael Polanyi, Hans Zeisel, Paul Lazarfeld, Hugh Gaitskell (who in 1932 spent a year in Vienna as a Rockefeller fellow), and Ludwig Wagner. In a letter to Ilona Duczynka (Karl Polanyi’s wife), Felix Schaffer recalled these seminars and mentioned Karl Popper, Hans Zeisel, Paul Lazarfeld and Hugh Gaitskell as “visitors of this salon” (McRobbie, Polanyi-Levitt, 2000). Students and scholars often attended various circles and private seminars (for example Karl Polanyi and Richard Strigl were members of the Ernst Mach Society, the official association for the development and the diffusion of the activities of the *Wiener Kreis* (Stadler 2001). According to Schaffer, “Polanyi’s later work was an organic development of his earlier work in Vienna” (Schaffer 2000, p. 328). In those years, Polanyi’s main concern was “to construct an economic model of a socialistic economy on two tracks: a price-forming exchange economy and an administered “purchasing power economy”. This polarity gave rise to his subsequent distinction between formalism and substantivism in economics and his “thesis of the ‘double-movement’ of the self-protection of society from the disintegrating effects of a ‘self-regulating’ market economy”. For Polanyi, economic theory was, at least in his Viennese period, “a tool which could show how a socialist economy could function within a price system” (ibid p. 332). As Polanyi himself wrote in a private letter: “during these years my ideas on social issues have found passionate expression. The social sciences, activity, but above all the possibility of freedom of thought on social issue”. (ibid, p. 317) The dichotomy between an embedded economy and a disembedded one; the two different meanings of ‘economics’ –formalist and substantivist; the so-called ‘fictitious commodities’; his interpretation of the market from a historical point of view: all these theories were formulated in Vienna, where his job and studies enabled him to witness the great turning point in Western society after World War I – the profound change that some years later he would call *the great transformation*.

**PART I: THE DEBATE ON THE PLANNED ECONOMY**
The debate on the planned economy started after the publication of Neurath’s article appeared in 1919 (Chaloupek, 1990; Caldwell, 1997; Boettke, 2001); Mises’ direct reply to Neurath followed in 1920 (Mises 1920, [1935]); Polanyi’s reply to Mises was published in 1922; Mises’ to Polanyi in 1923; Polanyi’s to Mises in 1924 and finally Neurath’s reply to Mises appeared in 1925.

1. Neurath (1919; 1920)

Neurath’s model of the planned economy (he called “administrative economy”) was based on the concepts of “calculation in-kind” (“Naturlrechnung”) and of “economy in kind” (“Naturlwirtschaft”). Neurath distinguished the calculation in-kind as a scientific method of research in economics from the economy in kind as a particular form of economic organization, a moneyless economy. Production and consumption would be planned in kind, but he did not explain how the plan should be designed (Chaloupek 1990). Neurath used a “weak” in kind calculation (when resources are allocated to the provision of public goods by the state budget and planning is done in non-monetary terms) and a “strong” one (when alternative uses of production goods can be assessed by quantitative in-kind labour and production technology statistics, without using money) (Uebel 2004). Economy in kind featured in two distinct ways in Neurath’s work: in the ancient world there were different kinds of non-monetary economies; but in the socialistic debate on planning Neurath introduced new forms of in-kind economic associations in which monetary units disappeared (O’Neill 2004). The final aim of Neurath was to reach the so-called “total socialization” (“Vollsozialisierung”) in an administrative economy: it requires a comprehensive statistical apparatus on which the plan must be based using a moneyless calculation. In this sense he was in opposition to the other German and Austrian social-democratic thinkers, such as Bauer or Kautsky. According to Bauer a total socialization can be possible only after a slow process of development and transformation of capitalistic economy; according to Kautsky, planning cannot be the starting point of socialization, but only its final results when capitalistic society is become mature enough.

Neurath argued that in times of peace, profit-oriented economic production provoked cyclical periods of overproduction and unemployment. In wartime, by contrast, production was not geared to profit and was always fully utilized, while suppression of the price system (replaced by planned prices) brought greater stability. In a planned economy, in fact, general needs – and not profit-seeking – could objectively determine production and ensure a better allocation of means. Moreover, there was no need in a planned economy for economic computation in traditional form, because any computation of inputs and outputs could be conducted in physical not monetary terms. As war economy had shown the urgency of the substitution of free market economy with a planned one, Neurath stressed that not every planned economy had necessarily to be socialist and defined it

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1 Uebel claimed that Neurath changed back and forth between these two concepts.
2 The debate on total or partial socialization was the internal querelle in the socialistic movement (Chaloupek 1990).
3 Neurath cited the example of Sparta.
as a ‘administrative economy’, i.e. a form of economic organization in a democratic political framework. He wrote: “administrative economy and ‘state socialism’ do not mean the same. We call socialist one who stands for an administrative economy with socialist distribution” (Neurath 1973, p. 136) and “a democratic and socialist administration of the economy as a whole may also bring with it a far-reaching democratization of firms” (Neurath 1973, p. 139). He imagined a productive system ruled by a sort of ‘workers’ council system’ which performed a political role and whose function was to provide guidance for firms. A special office - called the Central Economic Office – “which would look on the total national economy as a single giant concern”, would be responsible for drawing up the national economic plan. It would fix money prices jointly with workers’ associations, which were political institutions. In such a ‘large-scale economy in kind’, money would lose the power that it had had when prices were formed by free-market competition.

In A System of Socialization written in 1920/21, (Neurath 2004b), he again reflected on a planned economy, writing that the Russian revolution had lacked a project for the future: it was the expression of the “bitterness and longing” of the proletariat. Neurath was convinced that there was an urgent need for a planned administrative economy and for calculation in kind, and he envisaged a “global socialization” – which would begin in Germany – configured as a socialistic central order with cooperatives of craftsmen and peasants. He firmly believed that a system of this kind would “pave the way to a future economic tolerance” in a non-capitalist society. Neurath started from a definition of the quality of life (happiness and misery of human beings) as depending upon the conditions of life (housing, food, clothing, education, entertainment, work, and so on) determined, from a social point of view, by an order of life (institutions and types of behaviour)

4. An order of life organized on a socialist basis was called socialization. A process of socialization would replace: the free market (a) with the administrative economy (a1); rule by the masters (b) with rule by the community (b1); economy of masters (c) with a collective economy (c1); and the under-use of resources (d) with the full use of resources (d1). Keeping in mind Tönnies’ well-known dichotomy, Neurath claimed that this socialization process could be realised either in a order of society (e), that worked through payment according to performance, contracts etc., or in an order of community (e1) that adapted performance to the abilities and consumption to the demand formed through custom.

Socialization could be based either on the principle of society (f) or on the principle of community (f1) and it could use existing institutions, after their further development (g), or new institutions after elimination (g1) of the “old-fashioned” ones. Finally, this socialization could be performed peaceably (h) or by force (h1)

5. The aim of socialization was to achieve not only economic

4 Economic theory analyses historical economic orders, and when it concerns itself with how “economic orders may be put into practice”, it becomes “part of social engineering”.  
5 Neurath maintained that there were 256 possible combinations among these various elements. The economic organization was a form of planned collectivism in which the full use of resources could be achieved. At this point the choice was between a societal principle or a communitarian one. If the societal order adopted a societal principle, society achieved socialism (a1, b1, c1, d1, e, f); if it adopted a communitarian principle, it achieved guild-socialism – defined as ‘solidarism’– (a1, b1, c1, d1, e, f1). If the communitarian principle gave rise to a communitarian organization, society achieved communism (a1, b1, c1, d1, e, f1).
efficiency but also equal distribution. It is important to underline that Neurath distinguished between two concepts of efficiency: the concept of “rentabilität” valid only within a market economy, and the concept of “Wirtschaftlichkeit”, valid in the framework of “Naturalrechnung”. As we will see, economic efficiency and equal distribution will be regarded as the final aims of socialization also in Polanyi’s later model.

I.2 Mises (1920) versus Neurath (1919)

In his reaction to Neurath, Mises ([1920] 1935) claimed that a moneyless economy and a planned economy were impossible from a theoretical point of view. He argued that: “money is a universal medium of exchange” (Mises 1935, p. 92) even in a socialist state where all the means of production were the property of the community, and where the political authority “can dispose of them and determines their use in production” (Mises 1935, p. 89). Monetary calculation was possible when all available productive resources were defined by a system of scarcity indexes given by a system of prices: any price (which can be converted into an index of relative scarcity) can only expressed in monetary form. Moreover, these indexes could be formed if any resource was allocated in a free market. In a society where the means of production were state-controlled, “no production-good will ever become the object of exchange [and then] it will be impossible to determine its monetary value” (Mises 1935, p. 92). In a socialist state, money would lose its ‘role’ of determining the value of production-goods, so that calculation becomes impossible. The substitution of monetary calculation with ‘calculation in natura’ (Neurath’s economy in kind) was useless – according to Mises – because “in an economy without exchange, [it] can embrace consumption-goods only” but it fails to determine production-goods, and so “rational production becomes completely impossible” (Mises 1935, p. 104). It is for this reason that in a socialistic society supply “proceed[s] anarchically” and there is conspicuous waste: “there will be hundreds and thousands of factories in operation. Very few of these will be producing wares ready for use; in the majority of cases what will be manufactured will be unfinished goods and production-goods” (Mises 1935, p. 106). On the contrary, Mises claimed that the system of computation by value in an economic system of private ownership of the means of production eliminated waste, because everybody was at the same time consumer and producer. According to Mises, Neurath was wrong when: “he advanced the view that every complete administrative economy is, in the final analysis, a natural economy” (Mises 1935, p. 107); just a static state could probably be regulated by a natural calculation without using money, but such a state was “only conceptually possible”; only in a free market is there a pricing mechanism for a possible calculation.

I.3 Polanyi (1922) versus Mises (1920)

c1, d1, e1, f1) (Neurath 2004, p. 351). Socialism and communism shared the aim of eliminating ownership of the means of production (g1) through violent revolution (h1), contrary to guildism, which preferred the peaceful evolution (g) of the old institutions (h).

6 In the 1930s, Hayek modified Mises’ objections by admitting to the possibility that a price mechanism could be created without a market, but he maintained that such a calculation was too complex, and once the final result was obtained, the initial conditions had certainly changed. (Hayek, 1935).
Neurath’s direct answer to Mises’s criticisms appeared only in 1925 (Neurath 2004). In the meantime, Karl Polanyi’s two papers on socialist computation (Polanyi 1922; 1924) were published. They were explicit replies to Mises’s objections (1920) against Neurath (1919; 1920) and to himself (Mises, 1923). These two articles were cited in the bibliography to the well-known Collectivistic Economic Planning edited by F. von Hayek in 1935, in which von Mises’ articles of the 1920s were translated in English. Polanyi’s first paper (1922) dealt with the possibility of a planned economy in a so-called functionalist society, i.e. a society organized according to the principles of English guildism, a kind of socialism in which the function of the trade unions should not to be restricted to wage bargaining, but they should organize production after all the means of production have been transferred to the state. Polanyi was highly critical of the “moneyless command economy of Neurath”, in which “producers and consumers were not represented in two independent associations [and] decisions on production and consumption were taken by a central authority” (Schaffer 2000, p. 329). Against Neurath and in agreement with Mises, Polanyi rejected the theory of an in-kind economy, or an economy without money, arguing that solution to the problem of socialist computation in an administrative economy was impossible. Polanyi called “dogmatic” both liberal economists and the proponents of an economy without exchange, such as “Kautsky-Neurath-Trockij” (Polanyi 1922). Polanyi was wrong, however, to consider Kautsky as taking up a position close to Neurath’s. Kautsky, in fact, was strongly opposed to the idea of a moneyless economy (Kautsky, 1921). According to Polanyi, the main fault in the theory was that “it is impossible to separate the natural economic cost from the social cost deriving from citizen rights” (Schaffer 2000, p.329). Polanyi argued contrary to Mises that achieving efficiency in production and equality in distribution was only possible in a socialist society. For Polanyi the contrast between socialism and capitalism could no longer reduced to that between an economy without exchange and an economy of exchange; because capitalism was very far from having created a free market, and an economy on a large scale was impossible without a mechanism of exchange. Polanyi then proposed a solution not feasible for all systems of socialism but only for “functionalistic” ones, such as guild socialism based on a sort of market-socialism model where the economy was planned, but not centrally. Polanyi was convinced that there was no ‘socialist positive theory’ because from a scientific point of view the only theoretical doctrine of economics was the marginalist one. This lack of a positive theory of socialistic economics made it difficult to find a solution to the problem of socialist computation. Polanyi defined as ‘socialist’ every economy whose aim is the realization of two exigencies: the maxim productivity in the sphere of production and social rights in the sphere of the distribution; in such an economy the problem of calculation became: how can a model able to express in numbers the relation between maxim production and

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7 According to Polanyi the word “productivity” has two meanings: a technical one (the maximum quantity of output using the minimum amount of labour, i.e. u/l) and a social one (the maxim public utility of goods).

8 By ‘social rights’ Polanyi meant “a principle that leads production in an useful sense for the whole society and an equal distribution of goods”.

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social rights be reached. In a capitalist society productivity fall short of the maximum achievable level (cyclical crises halt production, and monopolies slow it down) and the importance of public goods is not completely realized. By contrast, a socialistic economy is able to guarantee maximum productivity and equal distribution through the correct computation of costs\(^9\). The computation can be performed neither by an administrative economy (Neurath’s model), because prices must be expressed in monetary form nor by a liberal system (Mises’s one), where prices are formed in an unregulated free market where waste and underutilization of resources are frequent. Costs can be correctly computed jointly by the local political authority (the Kommune) and the productive associations. The Kommune owns the means of production; while productive associations have the right to use them. Local productive associations form the regional associations which constitute the central congress for the entire productive system; besides these productive associations there were the associations of consumers represented by the Kommune and by some cooperatives. Political authority, associations of consumers and producers jointly determined prices and quantities: Polanyi’s model of a planned society was very similar to Neurath’s one.

**I.4 Mises (1923) versus Polanyi (1922) and Polanyi’s answer (1924)**

Mises replied to Polanyi’s article (Mises, 1923) claiming that any third form of society between socialism and liberalism could not exist and that the presence of the productive associations was merely an escamotage: in fact, from a political point of view, when the final decision was taken by the Kommune, the form of society was that of an administrative economy – for which not even Polanyi admitted a form of computation; when the final decision was taken by the congress of productive associations, then this was a form of syndicalism. Polanyi claimed that Mises’ mistake was to believe that only one political group took final decisions: at least two legislative groups usually took them, in fact. Mises added that the contraposition between consumers and producers still persisted in a functional society, while in a capitalist society it could be overcome because each single agent was a producer and a consumer at the same time. Polanyi answered that as the single individual stays in equilibrium, so functional associations manage to reach equilibrium (Polanyi, 1924). Polanyi’s second paper on the problem of socialistic computation was not only an answer to von Mises, but to all the liberals and the state socialists (Leichter 1923, Weil 1924) who shared the opinion that the contraposition “market economy versus market-less economy” could only be another expression for capitalism versus; they even agreed on the fact that the only alternative to the capitalist system was collectivist socialism. Against them, Polanyi claimed that there were the ‘positive’ socialists (Polanyi himself, English guildists like Cole, and ‘scientific socialists’ like Heimann and Marschak), who sought to develop a positive theory of socialism able to overcome “the scholastic dispute between orthodox Marxists and their bourgeois enemies”, because only a ‘positive’ socialist theory could fulfil the double exigency of maximizing production and guaranteeing social rights.

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\(^9\) These costs are natural and social: natural costs are those of material production; social costs are those able to guarantee a proper and equal distribution.
I.5 Neurath (1925) versus Mises (1922)

Neurath’s direct reference to Mises’ criticism was in *Wirtschaftsplan und Naturalrechnung*, (Neurath, 2004c [1925]): Mises had claimed that money calculation is the only basis of production. Despite of this fact, talking about monopolized commodities (whose surplus is bound to be lock up or destroyed), he also affirmed a separate concept of wealth in respect of money calculation. Mises considered socialist economy as a “gigantic monopoly economy” and was firmly in the conviction that “without calculation with one unit, an economy is not possible”, as socialism “does not acknowledge calculation with one unit”, it is impossible. On the contrary, according to Neurath, “calculation in kind in the economic plan must be the moneyless basis of the socialist calculation of economic efficiency” (Neurath, 2004c, p. 430). Neurath specified the nature of an economic plan, that has a double role: it is a ‘plan of production’ (in the sense that “it gave information about the way in which resources of raw materials, land work power are to be combined to get a definite result in the conditions of life”), but it is also a ‘plan of consumption’ (“as it shares out parts of the conditions of life after it has been decided what is to be kept in store”) (Neurath, 2004c, p. 425).

Neurath regarded the socialist administrative economy as an alternative to the free trade economy, above all because the former is not based –as the later is – on “commodity” and it did not consider money as a commodity. This critique of money as a commodity as well as the critique of Neurath to the concept of ‘automatic’ market, that “as an ‘external’ power determined costs, profits, etc” (Neurath, 2004c, p. 431) will be taken later by Polanyi in his formulation of the fallacy of “fictitious commodities” (money, labour and land) and of self-regulating market.

PART II: THE FAULTS OF NEOCLASSICAL ECONOMIC THEORY AND THE POSSIBLE SOLUTIONS

One of the aims of Neurath’s and Polanyi’s research in economics was to understand the meaning of economics itself and to define a proper methodology for its treatment as a science. In 1913 Neurath defined economics as a science concerned with the material conditions of human life. He wrote: “by political economy we shall understand a science that investigates wealth in its dependence on human actions or institutions; by wealth we shall understand an amount of pleasure and pain in an individual or a group of individuals; this demarcation of wealth approximately coincides with the concept of real income or of happiness in its widest sense. In a political economy it is possible to disregard all concrete manifestations of pleasure or pain and consider pleasure and pain as such; for instance, in trying to establish how the pleasure and pain of a group of individuals depends on the different ways of price formation” (Neurath 2004, p. 297). Like Neurath, Polanyi was closely influenced by Mach’s epistemology, and he was deeply interested in the methodological debate on the social sciences – as testified by many of his unpublished papers. Karl Popper wrote in a note to *The Open Society* that the distinction between methodological essentialism and methodological nominalism was explained to him by Polanyi in 1925, during an evening meeting at Polanyi’s home: according to Popper, Polanyi suggested that rigorous reform of
the social sciences required the complete abandonment of the essentialism on which they were founded.10

II. 1 The faults: abstractness and fallacy

In *The Conceptual Structure of Economic Theory and its Foundations* (1917) - a review of Wilhelm Wundt’s *Logik* - Neurath analyzed the nature of the social sciences and emphasized the great difficulties that arise when one attempts to construct a taxonomy of the sciences: “the so-called social sciences are particularly difficult to classify. They have not been demarcated by systematic considerations. In Duhem and Poincarè, general considerations are not only exemplified, but the origins of the concepts and of the problems are traced right from the initial observation of facts if at all possible” (Neurath 2004, p. 269). Duhem and Poincarè emphasized that “the origins of the concepts and of the problems” are to be determined “right from the initial observation of facts if at all possible” (Neurath 2004, ibid.). This also applied to economic concepts such as ‘capital’, ‘price’, ‘productivity’, ‘value’, which Neurath considered to be still ambiguously treated in economic theory: in fact, they were too often analysed without proceeding “in conjunction with empirical research” (ibid). In his review Neurath maintained that the traditional strong opposition between “abstract economic theory” and “concrete economics” (ibid. p.271) should be dropped in order to define economics as a science, and he set out his two main criticisms of the economics of his time. First, economics confused the analysis of human action – according to which human actions and patterns of behaviour are not assumed to be consciously goal-directed - with the theory of choice motivation. According to Neurath, the motivations of human action were to be treated as a “a separate question” (p. 276). If economic theory became independent from the inquiry into the motivations for choice, it could resolve the controversy on the role of history and theory at the centre of *Methodenstreit*, whose echoes were still reverberating at that time. The second fault of economics was the “fallacy” of identifying the discipline as a whole with just one historical model (the monetary economy), which it “followed too closely”(ibid., p. 278). Economic theory borrowed from this model a theoretical and conceptual pattern which it considered to be general but which in fact was valid only for *that* particular historical model: “economic theory also followed too closely the example of monetary economics” (p. 278). Neurath wrote that “the thought was lost sight of that money itself is but a means of the technique of organization that might be radically changed or even removed” (p. 278).

The first step toward a scientific economics was the elimination of abstract concepts like “*homo oeconomicus*”11. Neurath stressed that “which human actions condition these changes is a separate

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10 Karl Popper *The Open Society and its Enemies*, London, Routledge & Kegan, 1936. Popper used the term ‘methodological essentialism’ for the theoretical method which assumed that the aim of knowledge-acquisition is the discovery of the real essences of things; and the term ‘methodological nominalism’ for theoretical method which assumed that the aim of knowledge-acquisition was not to discover *what* a thing is, but *how* something functions and if there were any regularities in its functioning. In 1922 L. von Mises argued that this methodological contrast in the social sciences corresponded to the political one between socialist collectivism and individual liberalism.
question”. In fact “economic theory can extend its domain only in this way, but not if it already prejudges what conditions will prevail”. He reformulated the aim of economics as a science as resolving the “question of how one could choose into the combination, given certain conditions”, adding that such a choice “belongs to a currently expanding area of mathematics” (p. 277). As a consequence, economics must investigate the ways in which the “transfers of goods” took place in order to determine “the conditions under which one state can be derived from the other” (p. 276).

Neurath maintained that reconstructing economic science in order to remedy what he called “the lack of an adequate set of theoretical concepts” (Neurath 2004, p. 312) – was functional to the radical change in the economic system that the war had demonstrated was possible. He was convinced that the aim of economic theory was to explain how the material conditions of life are formed by “transfers of goods” and to identify the conditions under which one state can be derived from the other. According to Neurath, this “lack of an adequate set of theoretical concepts was already sensed before the WW, but is felt even more clearly now that the conflict between the market economy and administrative economy becomes ever more evident”. Neurath was deeply interested in investigating concrete alternatives to liberal society. He maintained that it was necessary “to create a structure for an economic theory that is able in principle to provide equal theoretical treatment to all possible forms of economic activity.” (ibid p. 312). This is possible only using an economy-in-kind, that derived, not from the concept of economic efficiency, but from that of “wealth”, i.e. “what one produces and consumes in the widest sense” (p. 340). This concept “is linked to all those scholars who simultaneously treat different forms of economy and to all those who as utopians treat of possible institutions” (ibid). Neurath pointed out that only a small number of economists had been able to do this, most notably Carl Menger and Vilfredo Pareto. He defined ‘economic theory’ as: “the scientific treatment of economies, that is, of orders of life as the conditions of qualities of life”, and he defined “economy” as “the sum total of actions, measures, behaviours, etc, which can be considered as conditions for smaller and greater economic efficiency” (p. 318). He argued that different forms of economy had followed each other, and correct comparison among them (“comparative economic theory”) was necessary in order to understand which of them could guarantee the best qualities of life.

Polanyi entirely agreed with Neurath’s two criticisms of economic theory at the time – abstractness and fallacy – as is evident when reading his masterwork, The Great Transformation (1944), an inquiry into the political and economic origins of Western civilization. The historical thesis with which Polanyi began The Great Transformation was that “nineteenth century civilization has

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11 According to Nemeth 1996, Neurath criticized the concept of homo oeconomicus and he considered the economy in kind as an approach under which the effects of the existing money economy order could be compared with others.

12 According to Amann (1996), on formulating the notion of ‘life conditions’ Neurath had two goals in mind: to give a socio-theoretical explanation for the total life context and to model society in keeping with social planning.
collapsed” (Polanyi 1960, p.3) after the fall of the four institutions on which it was based. The First World War caused their collapse, and the consequences were the economic crisis of the 1920s, the rise of totalitarianism, and the Second World War. Polanyi’s main thesis was that the First World War had resulted from a mechanism whereby society protected itself when it had realized the fallacy of the market society, which transformed man and nature in commodities and divided society into two autonomous spheres, political and economic, which formerly had been united.

According to Polanyi, in every former economic system there had been markets in which goods were exchanged, but during the nineteenth century isolated and regulated markets had been transformed into an artificial self-regulating market “naively imagined as the natural outcome of the spreading of markets” but which on the contrary was “the effect of highly artificial” transformation (p. 37). He defined the market economy as “an economic system controlled, regulated and directed by markets alone; order in production and distribution of goods is entrusted to this self-regulating mechanism” (p.68) In a society of this kind “there are markets for all elements of industry, not only for goods (always including services) but also for labour, land and money, their prices being called respectively commodity price, wages, rest and interest” (p. 69). This was the so-called mercification of fictitious commodities, and this artificial transformation had given rise to a separation between an economic and political sphere in society: “normally, the economic order is merely a function of the social, in which it is contained. Neither under tribal, nor feudal, nor mercantile conditions was there a separate economic system in society” (p.71). The most dangerous consequence of this artificial fallacy-based dichotomy was that “labor and land are no other than the human beings themselves of which every society consists and the natural surroundings in which it exists. To include them in the market mechanism means to subordinate the substance of society itself to the laws of the market” (ibid).

According to Polanyi, during the nineteenth century “the dynamics of modern society was governed by a double movement: the market expanded continuously but this movement was met by a countermovement checking the expansion in definite directions” (p. 130). This ‘countermovement’ was the means by which society protected itself, and the ‘double movement’ was that of two organizing principles in society: “the one was the principle of economic liberalism, aiming at the establishment of a self-regulating market, relying on the support of the trading classes, and using largely laissez-faire and free trade as its method; the other was the principle of social protection aiming at the conservation of man and nature as well as productive organization, relying on the varying support of those most immediately affected by the deleterious action of the market – primarily, but not exclusively, the working and the landed classes – and using protective legislation,

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13 They were: the balance of power among the European states; the gold standard; the idea of a self-regulating market; and political liberalism. Polanyi wrote: “the fount and matrix of the system was the self-regulating market. It was this innovation that gave rise to a specific civilization. The gold standard was merely an attempt to extend the domestic market system to the international field; the balance-of-power system was a superstructure erected upon and, partly, worked through the gold standard; the liberal state was itself a creation of the self-regulating market” (ibid).
restrictive associations, and other instruments of intervention as its methods” (p. 132). This countermovement was a spontaneous reaction against economic liberalism and it sprang from the social tensions generated by two centuries of the liberal system. The Great Crisis was the final breakdown of this old system: it demonstrated that a self-regulating market was a dangerous utopia, an artificial creation that seemed to be natural.

II.2 Neurath’s solution: economics as a part of sociology in the unified science

The Manifesto (1929) treated economics, together with history, as a social science and placed it among the group of five sciences (arithmetic, physics, geometry, biology and psychology, and the social sciences) that were to become the subject-matter of the new positivist philosophy after the “elimination of metaphysical admixtures” still present in them. Neurath defined the scientific features of ‘history’ and ‘political economy’ in his Empirical Sociology (1931), where he maintained that “they set closer together and merged into a single science”, namely ‘sociology’. Neurath thus bridged the gap between history and economic theory about which he had written many years before, claiming that Marxism had demonstrated that the separation between economics and history no longer made sense, “especially in Western Europe” (Neurath 1973, p. 346). In this paper he described the passage from a magical phase of science to the so-called ‘unified science’, Einheitswissenschaft, on which Neurath had worked throughout the 1930s. This ideal of an unified science could be achieved by transferring the language of physics to the other sciences using a neo-empiricist approach: Neurath termed this new scientific language “physicalism”. In Physicalism (1931), he explained that: “at first the Vienna Circle analysed ‘physics’ in a narrower sense almost exclusively; now psychology, biology, sociology. The task of this movement is unified science and nothing less” (Neurath 1983, p. 52). The classification of known objects now comprised concepts of the mind’s experiences and qualities, physical objects, and the objects of the social sciences. All of these were to be included in the so-called unified science because they had constant and quantitative relations to which physicalism was applicable.

The project to unify sciences was accomplished in the Encyclopaedia of Unified Sciences, which was presented at international congresses for the unity of science between 1934 and 1939 (Stadler, 2001). At the Paris congress of 1935, Robert Gibrat (1936) described economics as a complex science that must be expressed in mathematical terms, and in particular by econometric tools able to analyze statistical data (see Becchio-Marchionatti 2005). The importance of statistics for economic analysis was a constant of Neurath’s thought: for him, statistics was the sole tool required by calculation in kind (Neurath 2004, p. 327). In Neurath’s main contribution to the Encyclopaedia, “On foundations of social sciences” ([1944] 1969), he explained how economics had become a science and again proposed a form of economics in kind: “we should treat this whole field of money reckoning anthropologically as a piece of modern ethnology. And from the point of view of social engineering, we might also analyze other institutions comparatively, various money organizations, and – that is important – organizations
which are not based on money and nevertheless cover all kinds of modern technology and communication. … The question is not whether the future society will be based on money, but whether their analysis is scientifically performed in comparing all kinds of societies … We may ask how we can compare the results of a society based on money reckoning with a society based on reckoning in kind (“economy in money” compared with “economy in kind”), i.e., how we can look at their efficiency in terms of living conditions. It may be that the result of such an analysis of a world society, based on reckoning in kind and not in money, would be less efficient in terms of living conditions. The money taboo is so general that even in the Soviet Union the study of money-free societies has been abandoned as a kind of ‘left deviation” (p.13).

In his last paper, published posthumously in 1946 (Neurath 2004), Neurath recalled that many Austrian scholars had continued to work during the difficult years of the Second World War, and he maintained that his “Foundation of social sciences” was an example of the application of ‘Logical Empiricism’ not only to scientific issues but also to everyday problems. Neurath remembered that he had started to study Mach, Avenarius, Duhem and Poincaré “mainly from a scientific point of view, feeling that the traditional self-confidence of ‘scientific absolutism’ did not harmonise with the ‘relativism of scientific practice’”, but he affirmed that “acknowledging a kind of primary ‘pluralism’ in our scientific approach has also its consequences for our daily life”. Because daily life is full of decisions, Neurath’s aim was to determine whether and how it was possible to make predictions concerning either scientific research or daily life. Although he claimed that “unpredictability” was “an essential element of empiricism” and repudiated the use of “historical predictions as the basis of social actions”, he was convinced that is was necessary to construct “a scientific language which serves all our scientific activities” (p. 553). This he called “terminological empiricism” as an approachable to develop a ‘universal jargon’ useful for scientific cooperation and for eliminating all the ‘metaphysical speculations’ which divide human beings. According to Neurath the pluralistic approach of Logical Empiricism prevented the creation of “the rule of one and only one ‘ideal’” and consequently the rise of “any kind of totalitarian outlook” (p. 554).

II.3 Polanyi’s solution: the substantivist meaning of economics

On the basis of Robbins’ definition of economic choice as the logic of rational action grounded on two assumptions – the existence of means and ends, and the norm according to which ‘means shall be allocated to ends’ – Polanyi (1941) argued that a situation in which there are scales of preferences and a scarce amount of goods of definite utility was an economic situation in the ‘formal’ sense. In such a system equilibrium could be reached either in a liberal system (in which “the scales of preference may be given by the needs and wants of an individual – Robinson) or in a collectivist society (in which those scales of preference are determined by the Supreme Economic Council). On this definition of formal economics, Polanyi sought to show that the formal meaning of ‘economic’ is not the unique one (Polanyi 1953). According to Polanyi, ‘economic’ has two meanings: a formal one that derives from the logical character of the means-end relationship; and a
substantive one that derives from man’s dependence for his livelihood upon nature, and that does not involve the necessity of a choice induced by the limiting effect of the scarcity of means. Substantivist economics is: “embedded and enmeshed on a variety of institutions, man’s livelihood is the subject matter of the other social sciences as well, such as sociology, anthropology and, of course, economic history” (ibid. p.1).

Polanyi explicitly asserted the supremacy of the substantive meaning over the formal one: “only the substantive meaning of economic can yield the basic concepts that are required by the social sciences for an investigation of the empirical economies of the past and the present” (p. 2) The formal meaning was in fact historically determined by the special organization of man’s livelihood that had taken shape in Western Europe and North America over the past two centuries, and it “consisted in a system of price-making markets [in which] the rules of choice happened to be singularly applicable” (ibid). The artificial identification of the economy with its market form had given rise to the so-called ‘economistic fallacy’: “from Hume and Spencer to Frank H: Knight and Northrop, social thought suffered from this limitation wherever it touched on the economy. Lionel Robbins’ essay (1932), though useful to economists, fatefuly distorted the problem” (ibid).

According to Polanyi, Menger alone – in his posthumous edition of *Grundsätze* – had been aware of these two meanings of ‘economic’, but “neither he nor Max Weber, not Talcott Parsons after him apprehended the significance of the distinction for sociological analysis” (ibid). Polanyi ([1958] 1971) underlined that Menger produced the second edition of his *Grundsätze* in order to restrict application of the formal meaning of ‘economic’ to the ‘the modern exchange economy’ (*Verkehrswirtschaft*) founded on exchange”. In chapter IV of *Grundsätze* (1923) he writes: “the economy has two ‘elemental directions’, one of which was the economizing direction stemming from the insufficiency of means, while the other was the ‘techno-economic’ direction, as he called it, derived from the physical requirements of production regardless of the sufficiency or insufficiency of means” (p.22). The former kind of economics, called maximizing or economical (okonomisierende), is founded on the postulate of scarcity. The latter, called techno-economical (sparend, or wirtshaftend), is founded on the physical character of production, free from any link with scarcity of means. After the marginalist revolution, economic theory had used the principle of scarcity as its only paradigm, achieving such outstanding results that the substantivist meaning of economics had been abandoned. Knight translated the German word *wirtschaften*, (the substantivist meaning) with the English word *economizing*, which Menger restricted to the formal meaning of “economic”. According to Hayek (1934), Menger’s second edition “remains in the form of voluminous but fragmentary and disordered manuscripts, which only the prolonged and patient efforts of a very skilful editor could make accessible. For the present, at any rate, the results of the work of Menger’s later years must be regarded as lost” (Hayek 1934, p. 416). Frank Knight, editor of the first English translation of *Grundsätze* in 1950, agreed with Hayek. According to Polanyi, after the rise of the marginalist doctrine and “because of the brilliant and formidable achievements
of price theory opened up by Menger, the new *economizing* or formal meaning of economic became *the* meaning” (p. 24), while the “meaning of *materiality*, which was not necessarily scarcity-bound, lost academic status and was eventually forgotten” (ibid).

*Substantive* economics enables construction of a model of the economy “as an instituted process of interaction serving the satisfaction of material wants” (p. 31), - i.e a process that “provide material means in society” (p. 34); it should be understood as consisting of two levels: “the interaction between man and his surroundings and the institutionalisation of that process” (ibid). ‘Interaction’ is undertaken in order to achieve material result in terms of survival by local movements (production, transportation, transaction and dispositions of things) and appropriation movements (“the legal acquisition of property” of material or non-material objects, “administration and circulation of goods, distribution of income, tribute and taxation”). ‘Institutionalisation’ is undertaken in order to find the form of integration between man and nature that involves “the relations of the economic process to the political and cultural spheres of the society at large” (p. 35). Three forms of integration could embed economy in a society as a whole: reciprocity, redistribution and exchange. These could be represented “as diagrams of the patterns made by the movements of goods and person in the economy, whether these movements consist of changes in their location, in their appropriation, or both” (ibid). Reciprocity is a form of integration in which goods and persons move “between corresponding points of symmetrical arrangement”; redistribution is a form of integration in which goods are moved from and to a central point; exchange is a form of integration in which the movement is between two random points of the system. These three forms had usually co-existed in ancient and modern societies, until the advent of the economic system of the nineteenth century. Before the rise of market-society and thanks to these three kinds of integration, the economic sphere had been embedded in society; the rise of market-society had led economy outside the rest of society: it became autonomous, disembedded, with its own laws and rules, and based solely on the supply-demand price mechanism.

The mistakes on which the capitalist economy was based are explained in *The Livelihood of Man* (Polanyi 1977). These errors were: the *economistic fallacy* (a logical mistake according to which human economy in general is identical with one of its particular forms – the market form based on the supply-demand-price mechanism); *economistic transformation* (of isolated markets into a self-regulating *system* of markets, which was the “crucial step” for transformation of labour and land into fictitious commodities); *economic rationalism* (the logical and mental procedures of the human beings that lived and worked in a market society); and *economic solipsism* (the distance between the economic field and the political one). Finally, Polanyi claimed that when economics became a science, “economists felt so safe within the confines of such a purely theoretical market system that they only grudgingly conceded to nations more than a nuisance value” (Polanyi 1968p. 15).

Polanyi’s last efforts were devoted to investigating substantivist anthropology, as a method which
applied his categories to ancient and pre-capitalistic society in order to demonstrate the validity of his thesis of a fallacy in the liberal system.

**CONCLUSIONS**

After this reconstruction of Neurath’s and Polanyi’s economic thought, it is possible to affirm that Neurath exerted a powerful influence on Polanyi, although there were some important differences between their theories. They were both involved in the debate on economic planning against liberal economists, and they engaged in profound inquiry into the methodology of the social sciences and of economics; they were convinced that it was necessary to go beyond the old *Methodenstreit* and mediate the position of those who adopted the opposite view of economics. Neurath’s concept of ‘administrative economy’ (a centralized economical organization in a democratic system) was fundamental for Polanyi’s subsequent notion of an ‘embedded economy’ (a kind of economic system dependent on the political one). Neurath’s ‘economy in-kind’, founded on the notion of ‘wealth’ as “what one produces and consumes in the widest sense” (Neurath 2004, p. 340), influenced Polanyi’s substantivist economy founded on the notion of man’s dependence for his livelihood upon nature.

Although Polanyi openly criticized Neurath’s idea of an economy without money (this being the greatest difference between them), they agreed that it was necessary to construct a new society in which the economy was embodied (or ‘embedded’): they believed that a socialist economy was the only form of organized society able to guarantee political freedom, economic efficiency and equal distribution, and they were sceptical that such aims could be achieved in a soviet model of society (they were both contrary to Marxism). According to Neurath, money had lost its characteristic function in this new form of society, which was why he sought to analyze economics from an in-kind (or moneyless) perspective, rather than from that of price formation under the liberal market model. The development of this method and system of organization was useful not only for socialist society but also for any democratic society standing as an alternative to the liberal one. Neurath’s idea that “whereas in the free market economy a price was determined automatically and not evaluated from a social perspective, a price set by associations under the control of the state is a direct result of power relations and will be perceived as an achievement of the society as a whole” (Neurath 2004 p. 255) was expressed in the same terms by Polanyi.

According to Polanyi and Neurath, the ‘formalistic economy’, on which capitalism is based was an error from a psychological point of view, and it was useless from a sociological one. It should be replaced either by a form of economy based on the fact that man is obliged to interact with nature in order to earn his livelihood (Polanyi’s substantivism) or by a functional economy based on “comprehensive social analysis into the standard of living in order to arrive at a general theory of society” (Neurath 2004, p. 524). Neurath and Polanyi were convinced that the economic process is based on the relation between man and nature, that human behavior is framed by an institutional system, and that society had lapsed into the so-called ‘natural fallacy’ (as Whitehead termed it): it
was theoretically identified with only one of its historical forms, namely the monetary one. Neurath’s formulation of a ‘naturalistic fallacy’ according to which the general meaning of political economy had been replaced by a specific historical model (monetary economy) became the main argument put forward in Polanyi’s *Great Transformation* (printed in 1944, but written, according to his unpublished papers, during the early 1930s: see Becchio 1997).

From a political point of view, Polanyi and Neurath brought the same critique against the political approach of Austrian school (in particular against Hayek’s ideas set out in *Road To Serfdom* (1944)), although they both used the same analytical tools in economics as Austrian school of economics: they accepted the marginalist theory in its Austrian version, rejecting for example the labour-theory, and they were both influenced by Carl Menger (see Neurath [1929], 1973 and Polanyi 1971; 1977).14

They both endorsed the importance of individualism, albeit with some differences. For Neurath, economics was founded on the postulate of maximization of the individual’s utility; nevertheless, economic theory could not be regarded as a isolated discipline because it was a part – together with history – of sociology. For Polanyi, individualism should be reformulated in a new sense after the failure of the self-regulating market. Polanyi sought to explain what he called the ‘moral dilemma’ of economic liberalism: “can the individual be sacrificed to the self-regulating system? or should it be reformulated? By who and according to which principles?”15 Polanyi claimed that the market in liberal society denied the true nature of mankind; on the contrary, Mises ad Hayek maintained that it exalted that true nature. According to Polanyi, a new individualism could arise if socialism was based not on a collectivist vision but a Christian one that guaranteed political democracy and economic equality. According to Neurath, a new society and a new individualism could arise by virtue of a new *Weltaufassung*, or a new scientific conception of the world, which freed individuals and society from metaphysics. In a society of this kind, individuals would be free because they could control their real conditions of life (on Polanyi’s view) or their qualities of life (on Neurath’s view). By contrast, Hayek maintained that the liberal system guarantees freedom by means of the mechanism of competition in a representative democratic system. In his *Planning or Managerial Revolution?*, Neurath agreed with Hayek that there are people who envisage planning as a new means to obtain totalitarian leadership, while there are others who unwittingly support fascism by promoting certain principles of planning. But he did not accept Hayek’s contention that all kinds of planning belonged to this category: “Hayek seems to exaggerate his case by giving only one choice between what he calls the freedom of market competition and the planner’s unlimited totalitarianism. He never think of planning as a co-operative effort, based on compromise. Moreover, in fighting totalitarianism he thinks it is one’s duty to fight planning as well, and to

14 According to Leonard (1998 p. 9), Neurath regarded marginal utility as “metaphysical concept … central to the bourgeois Austrian economic theory of Menger’s father”.
15 Karl Polanyi *The Moral Values underlying social organization in the political, economic and cultural field*, Bennington College, 1941-42, Karl Polanyi Institute of Political Economy, Concordia University, Montreal.
support market competition” (ibid p. 546), and he finally maintained that: “world planning based on co-operation would perhaps give rise to a world-wide feeling of responsibility for other people’s happiness” (ibid p. 547).

Concerning the rise of fascism, it is worth recalling Neurath’s review of Hayek’s *Road to Serfdom* (Neurath 2004 p. 546-8), in which he criticized Hayek’s idea that a planned economy was totalitarian from a political point of view and unscientific from a theoretical one. He rejected these dichotomies and pointed out that Hayek had forgotten that planning is possible within a democracy, and that conceiving just one form of society as the best is a form of ‘pseudo-rationalism’. The conclusion of Neurath’s *Planning for Freedom* (1945) was the same as Polanyi’s *Great Transformation*: democracy and socialism could be united in a form of society, and doing so was the challenge for the future of Western civilization. They shared the same utopian view that the passage to a new socialistic society was inevitable from an historical point of view, and that it would free society from the faults of liberalism. They shared the ideal of finding a third way between capitalism (private ownership of the means of production, free rules for its management, with the inevitable exploitation of the working class, as had happened after the industrial revolutions), and soviet communism (collective ownership of the means of production, central management and planned control of individual incomes by the canalization of consume and savings). According to Polanyi and Neurath, in fact, capitalism and communism were both founded on the primacy of the economy (from an individualist or collectivist point of view) over the rest of society. The third way proposed by Polanyi and Neurath was based on the idea of ‘community’, as opposed to ‘society’, organized thus: collective ownership of the means of production, free management, and freedom of individual economic choices. The model was utopian in many respects. From an economic point of view, how can it be technically feasible to plan production without any control over distribution – is it possible to create waste or shortage if overall demand is too low or too high? From a sociological point of view, why should managers behave any differently from those in a capitalist system? From a philosophical point of view, we cannot rule out that the concept of community may not be the base for the onset of totalitarianism, where is the freedom for those who do not accept the mechanism of communitarian rules? Finally, from a political point of view, to what extent could such a system really guarantee freedom in a complex society? This was the final question of *The Great Transformation*: “is it possible a freedom in a complex society”? According to Polanyi, it is necessary to change the concept of freedom: the challenge of the future would be not only reinstating some sort of embedded economy – which fascism had sought to do with *corporativism* – but above all realizing democracy in the economic field as well. Polanyi probably still had in mind the functionalistic economy that, twenty years earlier, he had conceived as an alternative to liberalism and collectivism. Neurath’s idea of international planning “as a measure against unhappiness” (Neurath 2004, p. 544) would probably have been his answer to Polanyi’s question.
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