

# Otto Neurath's concepts of socialization and economic calculation and his socialist critics<sup>1</sup>

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Otto Neurath was one of the most active participants in the debate about socialization that developed after the First World War. As far as this part of Neurath's work is concerned, his name is mentioned most prominently in the context of two issues: "total socialization"/"Vollsozialisierung" (as opposed to partial socialization), and "in kind accounting"/"Naturalrechnung". In both respects he is mostly seen as an advocate of strategies and concepts which aimed at changes in the economic system of a much more radical sort than those proposed by the main-stream social-democratic parties in Germany and Austria. Neurath maintained this position despite the early failure of "revolutionary" political experiments in Bavaria and Saxony in his contributions to the socialization debate which he continued to publish until 1925. In the later 1920's, when chances for realization of socialization more or less disappeared, socialization also vanished as a theoretical issue.

This contribution is confined to the debate between Neurath and his critics from the Social Democratic parties of Germany and Austria - to the part of the debate that took place "inside" the socialist movement. It makes only occasional references to contributions from "outside", which are of course much better known nowadays due to the prominence which the interventions of Mises and Schumpeter came to acquire later.<sup>2</sup>

In the following two sections I will not try to summarize Neurath's positions in general, because this would only duplicate a task that has been very aptly done by Thomas Uebel in his introduction to Neurath's newly published "Economic Writings" (2004, pp. 39ff). I will only restate some of the distinctive arguments on which Neurath based his controversial positions, and

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<sup>1</sup> The author expresses his thanks for comments on earlier versions of this contribution to Thomas Uebel and Stephan Schmitz.

otherwise refer to details of the debate in the context of the controversies with his critics. Sections 3, 4, 5 and 7 deal with the critique of Neurath's proposals for central planning, in-kind accounting the role of money, and the problems of incentives and of conflicts of interest. On these issues the main interventions came from Karl Kautsky at that time still the leading theoretician of Social Democracy in Europe; from Helene Bauer, Otto Bauer's wife, who was a frequent contributor to the theoretical periodical of the Austrian Social Democrats "Der Kampf" on economic issues; Otto Leichter, economist with a practical experience as manager in socialized enterprises formed out of former war-time production plants. Section 6 discusses Neurath's treatment of accounting problems in the light of modern accounting concepts that were emerging during the interwar years.

#### 1. Socialization - total or partial?

Weissel (1976, p. 202) makes the observation that inexact or deceptive use of the terms "*Vollsozialisierung*" and "*Teilsozialisierung*" was the cause of much confusion which - also in other respects - characterizes the socialization debate. To make a proposal appear more radical, it was not uncommon to speak about "total" socialization of a branch or even of a company. Neurath's contributions are not free from such ambiguity. "Total" socialization for Neurath does not necessarily mean expropriation and nationalization of all the means of production. For him, nationalization as such does not mean socialization, because "socialization is concerned with the whole, it is always total socialization, however shallow or deep the impact of the overall measures is." (1920/2005, p. 377) To "produce and distribute the final product socialistically" (ibid.), to ensure the full use of productive resources, to eliminate the "waste" of the capitalistic mode of production, etc., "socialism tries to replace the planlessness which springs from the disconnected activities of individual entrepreneurs by an administrative economy according to a plan, by an economic order in which central institutions survey the entire economy in order to participate in decisions on work, production and consumption." (ibidem, p. 381)<sup>3</sup> In this administrative economy "the decisions about production, distribution, wages and prices ... are to be taken by the whole" (p. 382). Whereas Neurath strictly opposes any kind of market socialism, he appears to be willing to allow some degree of independence of small producers in the crafts

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<sup>2</sup> For a survey of the Austrian debate on economic calculation in a socialist economy see Chaloupek 1990.

and in agriculture. "The doctrine that there is a trend towards ever more comprehensive organisations has been confirmed fully, less so the doctrine that small businesses will be replaced by large-scale concerns."(p. 387f) The essential thing is that small producers of various sorts are organized in a multitude of regional and branch organization to ensure that goods and services are produced according to the central plan. (ibid.) In addition, "total" socialization requires a comprehensive statistical apparatus on which the plan must be based. "Even before they begin their work all bodies ... should be required to report to the Central Economic Administration which, in collaboration with the Centre for Statistics ... will fit the individual results into the universal statistics." (p. 389)

## 2. Accounting in kind - with or without money ?

Neurath's proposal to set up a system of "*Naturalrechnung*", i.e. economic accounting in kind, was even more controversial than total socialization. Understood as an encompassing system on which the envisaged comprehensive economic and social planning would have to be based, it was seen at best as a curiosity, and in its most counter-intuitive effect as proof of the economic impossibility of socialism (Ludwig Mises). Starting from his general idea that production as well as consumption would be planned in kind, Neurath never produced more than sketchy illustrations and partial examples of how the plan should be designed, not to speak of implementation. Due to his principal opposition to money, Neurath thought that "in socialism, production can never be based on calculation with one unit of any kind, not even with the help of 'labour vouchers'."(1925/2005, p. 432) But as he goes on to discuss concrete questions of his planning system, he resorted to similar instruments which contradicts the principle stated before: to give sufficient incentives for workers and also to allow for some freedom of choice of consumer goods, provisions the system could provide that "each individual receives the right to take consumer goods from the total pool according to the number of points of his labour vouchers."(ibidem, p. 435) In addition, in order to ensure an economic use of material resources, in case of a shortage "the number of points for their distribution will have to be increased beyond the number representing the work spent on their production."(p. 436) In an earlier version, Neurath had considered the possibility of keeping two accounting systems in parallel: "It does not

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<sup>3</sup> Notice that Neurath uses "soft" formulations (survey, participate), thereby avoiding the impression that it might be necessary to establish central control over production and consumption by command backed by force.

matter .... whether money is still in use as vouchers for goods, or whether vouchers replace money entirely ... or whether money is still used in some capacity as a unit of calculation. This kind of 'monetary calculation' can remain side by side with the 'calculation in kind' of the economic plan; in such a case it is useful to speak of an economy in kind with reckoning in money." (1920/2005, p. 383)

More fundamental from a methodological point of view is Neurath's ambivalence between what Thomas Uebel has called "strong" and "weak in-kind calculability assumption" (Uebel 2004, p. 318). "Weak in-kind calculability" is a common phenomenon in the monetary market economy when resources are allocated to the provision of public goods such as roads or internal and external security, or public services such as hospitals, through the state budget, and planning is done also in non-monetary terms, e.g. kilometres of roads or number of policemen, judges, doctors and nurses, etc. In contrast, the "strong in-kind calculability assumption says that alternative uses of production goods can be assessed as fully as is required for rational decision making by quantitative in-kind labour and production technology statistics - money calculation is not even necessary for rational decision making." (ibidem) It appears that Neurath was not aware of this crucial difference, and that he unconsciously changed back and forth between these two concepts.

### 3. Encompassing central economic planning

To consider an encompassing system of central planning of the whole economy as the essence of socialization - rather than a change in the ownership of the means of production, which was seen as a complementary element in the socialization process - was not Neurath's original insight. Of the multitude of socialization concepts put forward at the end of World War I, several had a special emphasis on overall economic planning. As early as mid-1918, well before the end of the war, Walther Rathenau, president of the famous German company AEG, who had also been in charge of the organization of raw material supplies during the war, in his pamphlet "*Neue Wirtschaft*" ("A new economy") proposed a system of comprehensive planning as a framework for "rationalization" of the whole economy in order to promote the application of the best technologies of production and a more efficient use of resources in private enterprise. This approach was taken up by the German minister for economy Rudolf Wissel whose plan ("*Wissel-*

*Moellendorff-Plan*", 1919) combined overall planning with partial nationalization, e.g. of coal mining.<sup>4</sup>

The idea that an encompassing system of planning should be seen as the essence of socialization was strongly rejected by Karl Kautsky in his book *"Die proletarische Revolution und ihr Programm"* ("The proletarian revolution and its program", 1922). Kautsky's critique was directed not only against Neurath but also against the Wissel-Moellendorff-plan. Kautsky's main argument was that it would be impossible to provide the statistical base on which such a plan would necessarily have to be based. It would take a huge bureaucracy many years "to produce a reasonably reliable set of statistics". Moreover, Kautsky criticizes Neurath for his simplified examples using a few inputs in low stages of the production process, thereby ignoring the complicated flow of goods through numerous intermediate stages to the final product. Kautsky was convinced that "it would be completely impossible to obtain a statistical survey of the infinite variety of all the products from private companies." (Kautsky 1922, p. 198). As an advocate of a socialist economy, Kautsky does not principally deny the necessity of a planned economy, which, however, "cannot be the starting point of socialization, but only its final result." (ibid., p. 202)

On a more fundamental level, Kautsky rejected Neurath's rationalist, constructivist approach to economy and society: "Society is not an edifice which is built according to a definite plan. Rather, it is comparable to an organism which grows and develops." (ibidem, p.181) In Kautsky's view, Neurath's exercises in "social engineering" were an unfortunate example of utopian thinking which had been definitely overcome by Marx's and Engels' scientific socialism. It is consistent with Kautsky's evolutionary approach that the idea of maturity becomes the central concept for the envisaged transformation from capitalism to socialism. Socialization can take place only if the development of the capitalist economy has produced institutions and forms of enterprise which are ripe for socialization. For Kautsky, this is the case only in a few branches such as railways and coal mining. Socialization starts with change of ownership in these branches, to be followed by new forms of organization of the nationalized enterprises. As a

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<sup>4</sup> An implementation of these plans would have resulted in a kind of "mixed economy"-system with indicative planning, as was developed after World War II in some countries. In Austria concepts similar to Rathenau's were put

necessary consequence, socialization is pushed forward step by step, whereas total socialization is impossible and bound to fail. Therefore, the leading social-democratic politicians such as Otto Bauer in Austria, and also most theoreticians of socialization<sup>5</sup> were advocates of "*Teilsozialisierung*" (partial socialization).

Emil Lederer, who served as secretary of the German socialization commission which was headed by Karl Kautsky, argued against Neurath along similar lines. To replace the existing market-coordinated economy with all its enormous complexity by establishing a complete system of planning "with one stroke" would be possible only if "all men wanted such a production system, i.e. if no private interests would stand against it" - a condition which evidently was not fulfilled. (Lederer 1921, p. 161)

In his replies to Kautsky's critique Neurath concentrated on the most controversial part of his own socialization theory, i.e. the role of money. (see section 5) With respect to the specific criticisms referred above, he admitted the enormous effort that would be necessary to produce his "universal statistics". With real prospects for socialization having become extremely dim in 1925, Neurath proposed to start "to prepare a universal statistics ... The automatism of the market order for private entrepreneurs, even for nationalised autonomous economic enterprises in a capitalist order, must be paralleled by an economic plan, by calculation in kind for the socialist society. ... also smaller sections ... can be depicted in this way. We can, for example, show the input and output of fat for the whole country." (Neurath 1925/2005, p. 444) A curious proposal indeed, which ironically seems to foreshadow the growing problem of over weighted people of our present time.

#### 4. Calculation in kind and "*Naturalwirtschaft*" (in-kind economy)

Among Social Democratic politicians and writers, Neurath's idea to organize an economy in its totality on the basis of an accounting system in terms of material inputs and outputs which requires the application of a multitude of different units of measurement was not considered to be a serious proposal for economic policy. The intention behind most of the negative reactions it

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forward by Karl Pribram (1918) and Gustav Stolper (1921). For a survey of these concepts see Chaloupek (1987).

provoked was to counteract the growing tendency in public opinion that the conditions for socialism as an alternative system could never be established. In this sense, Otto Leichter approvingly cites Max Weber's verdict, who considered Neurath's "'blueprints of a planned economy' ('*Planwirtschaftspläne*') a dilettantish, objectively and absolutely irresponsible frivolity without parallel, which might discredit socialism for hundred years." (Leichter 1923, p. 96)<sup>6</sup>

Karl Kautsky, who postulated freedom of choice for consumers and also "most possible freedom for producers" (1922, p. 313) in the socialist economy, argued that this would be impossible if the whole production would be organized in one single factory under central management, which assigns production tasks to each factory, which receives all the products and apportions all means of productions to factories and all consumption goods to households *in natura*. The ideal of such a state of affairs is the prison or the barracks, whose inmates get everything they need *in natura*." (ibid., p. 314) Kautsky's ironic remarks are certainly polemical, but nonetheless they illustrate the principal difficulties which Neurath refused to take seriously. If Kautsky was not able to formulate this kind of argument in general terms, the reason is because the critique would turn against socialism per se.

Compared to Karl Kautsky's criticisms, the arguments against calculation in kind put forward by Helene Bauer and Otto Leichter were of a more theoretical nature. Helene Bauer emphasized that the measurement of the value of all goods in terms of labour hours would be indispensable in a socialist economy for two reasons: (i) goods are distributed to consumers proportional to their work effort; (ii) for decisions about allocation of productive resources, it is necessary to compare the values of the different goods despite the fact they have ceased to be "commodities". (H. Bauer 1923a, pp. 198ff)<sup>7</sup> She also questions Neurath's idea of choosing among a variety of different plans with alternative production plans and alternative sets of conditions of life. "The socialist society ... will not allow a central organ to make experiments with different conditions of life, but will calculate exactly how much labour time the production of each group of goods costs,

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<sup>5</sup> For a survey of the great number of contributions which were published in the years following the war, many of them by "autodidacts", see Weissel 1978, especially pp. 202ff, and also Fischer/Rosner 1987, pp.185ff.

<sup>6</sup> Even more harsh was Karl Renner's reported judgment of Neurath ("Narr"). (Weber 1982, p. 139)

<sup>7</sup> To support her argument, Helene Bauer (p. 200) quotes Engels (1894, p. 335): „Die Nutzenffekte verschiedener Gebrauchsgegenstände, abgewogen untereinander und gegenüber den in ihrer Herstellung nötigen Arbeitsmengen,

starting from raw materials to the finished goods including distribution." (ibidem, p. 200)

A major part of Neurath's articles in "*Der Kampf*" (Neurath 1923a and b), and also of Helene Bauer's reply, were not, or not directly, concerned with matters of substance, but with the question to what extent Neurath's ideas could be reconciled with the writings of Marx and Engels. It was an easy task for Helene Bauer (1923a) to counter Neurath's effort by citing other quotations from *Das Kapital*, from Marx's unpublished marginal notes to the Gotha Program, and from Engels' *Anti-Dühring*.

Otto Leichter, who proposed a socialist accounting system based on the hour of labour as basic unit, criticizes that in a system of in-kind calculation a rational use of resources would be impossible for several reasons. (i) Neurath nowhere shows how the various production units would reckon up their mutual deliveries (Leichter 1923, p.33). (ii) Free choice for consumers is necessary to ensure that production units respond to their needs and preferences, which is not the case if goods are distributed to the final users according to conditions of life defined by the central plan (ibidem, p. 73). (iii) More fundamentally still, Leichter argues against concepts similar to Neurath's developed by the Russian economist Chayanov<sup>8</sup> that the solution of rather simple tasks such as comparisons of economy between alternative methods of production of the same products become impossible. E.g., without a standard unit of accounting it is not possible to decide whether production of a given quantity of electricity is more economical by using coal or water power (ibidem, p. 87). To this latter criticism, Neurath replied that it would be the task of technical engineers to develop the appropriate methods, "as soon as they have understood the nature of the problems, to assess the performance of individual production units". (1923a, p. 156) In return, Leichter (1923, p. 97) denied this emphasizing that, to the contrary, this would be the task of what Neurath called the "social engineers" ("*Gesellschaftstechniker*").

If Helene Bauer and Leichter were convinced that the hour of labour would be the appropriate unit of account in a socialist economy, they found themselves in contradiction with Karl Kautsky

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werden den Plan schließlich bestimmen“. Engels's argument is actually based on a utility theory of value. Engels' argument is actually based on a utility theory of value.



who had denied the viability of such an accounting system. Karl Kautsky (1923, p. 321) argued that, in a capitalist economy, actual market prices were hardly ever identical with “values”, the latter presumably meant in the sense of Marshall’s “normal supply price”, with the market mechanism working as an automatic adjustment process to reduce deviations of prices from values. Since “normal conditions” never prevail in reality, it would never be possible to determine “normal” quantities of labour required for production of each good. “Instead of the futile attempt to measure running water with a sieve” a socialist government “would retain the prices with which it is confronted and which have been formed in the process of history.” Adjustments would have to be made in a pragmatic way, without inflicting hardships on the working class as they do under capitalism.<sup>9</sup>

Karl Kautsky and also Leichter thought that the system of state control of the economy introduced during the war years could not be considered as a forerunner of the planned economy. These kinds of controls eventually would have to resort to coercion and forceful police action "with results which would be as poor as in Russia today". (Kautsky 1922, p. 201) Leichter maintained that it is one of Neurath's fundamental errors to characterize the war economy as in-kind economy. It is "quite ridiculous to speak of in-kind calculation in capitalism wherever calculations are not made in terms of money" - the costs of schools, hospitals, housing units are always calculated in monetary units. (Leichter 1923, p. 95)

It was Benedikt Kautsky, son of Karl Kautsky and head of the statistical department of the Vienna Chamber of Labour, who wrote "the last word" in the in-kind calculation debate. His review of Neurath 1926 was published in Rudolf Hilferding's journal "*Die Gesellschaft*", i.e. at a time when socialization had ceased to be a real issue of political debates. Apart from the aspect of the necessity of money as a common unit of account (see next section) Benedikt Kautsky’s main critique of Neurath’s approach is the latter’s dominant concern with static aspects of the economic process. It is the “questions of socialist production which have to be posed in the first

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<sup>8</sup> Alexander W. Chayanov, 1888-1939, director of the Petowskoje-Rasumowskoje institute of agricultural economics (near Moscow) 1919 till 1930, arrested under the charge of founding a peasants’ opposition party (according to Mánicke-Gyöngyösi 1981, p. 114).

<sup>9</sup> Apart from changes of conditions of demand and production, the proposal to use the hour of labour as common unit of accounting does not stand up against Eugen von Böhm-Bawerk’s objection that labour is not homogeneous. (Böhm-Bawerk 1896/1962)

place, not least with respect to the complex relations of world markets. The issue is not distribution of existing goods, ... but their production and augmentation.” Creating the conditions for enhancement of civilization is primarily “a problem of technology and production policy”. (B. Kautsky 1926, p. 95)

## 5. Money in the socialist economy

Since Neurath’s treatment of money is the subject of a separate contribution by Peter Mooslechner, I will be rather brief on this aspect.

It has been pointed out above that Neurath was not wholly consistent on the issue of the necessity of money as a unit of calculation and as a means of distribution of goods to final consumers. But it appears that Neurath thought money as a common unit of account could be done away with completely at least in an advanced, not necessarily final state, of the socialist economy.

According to Karl Kautsky, Neurath’s fundamental opposition to money was the consequence of a confusion of money as a means of exchange and money as “capital” that has an inherent drive for self augmentation. If for Neurath “the production of surplus value is not the function of capital, but of money as such”, this is “completely erroneous” in Kautsky’s view. (Kautsky 1922, p. 316)<sup>10</sup> In the socialist economy, money would no more be transformed into capital, and would therefore only serve as a means of exchange which would be indispensable to ensure smooth circulation of goods and to give free choice to consumers.

Only a society in which all scarcity of material goods has ceased – the “stage of communism” envisaged by Marx for some distant future – could do entirely without money. But this is a theoretical possibility which Kautsky does not take into consideration seriously since “we can not even surmise today whether we ever get that far.”(ibidem, p. 315) The abolition of money would be a heavy setback for the division of labour and its progress on which modern material and cultural standards are based, it would be “regression into barbarism”, an act of helpless destruction comparable to the destruction of machines by pauperized workers in the early phases

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<sup>10</sup> This argument was reaffirmed in Benedikt Kautsky’s review (1926, p. 94) when he wrote that the use of money as a means of circulation does not lead to the domination of men by money.

of the industrial revolution. (ibidem, p. 324) Kautsky also points to historical example of moneyless societies which were always based “not only on communism of production but also of consumption – with complete absence of freedom of person”. (Ibidem, p. 336)

In his reply, Neurath (1923a, p. 136f) tried to support his position with extensive quotations from Marx’s and Engels’ writings, insisting that in a socialist economy money, even if it is stripped of its capitalist character, would still preserve its inherent structural features.<sup>11</sup> He repeated his contention that a socialist economy would have to reckon not only without profit and loss, but also without money, and that this view was also in accordance with “the fundamental ideas of Marx and Engels.” When Helene Bauer (1923a) had seriously challenged this accordance, Neurath argued that Marxism is not identical with the teachings of Marx himself but that Marxists may criticize Marx and also deviate from his views. (Neurath 1923b, p. 288)

## 6. Misunderstandings and anticipations

In this section I will try to evaluate several of the different arguments put forward by Neurath to support his idea of in kind calculation and the respective counter-arguments of his critics.

Neurath argued that a partial in kind-economy is standard practice in the public sector when capacities of public services such as schools and hospitals are defined in natural terms. In this context, however, he disregards the aspect that all such decisions are subject to a budget constraint. The scale and the quality at which such services are made available must be weighed against the costs of each kind of service and of the total, necessarily calculated in terms of a common unit. No “rational” decision can be made independently of cost considerations. If this was the essence of Helene Bauer’s critique referred to above, Neurath nowhere offered a convincing reply to it.

Otto Leichter was the only one who pointed to an even more fundamental aspect of the issue. There exists always more than one combination of inputs in order to produce a given quantity of

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<sup>11</sup> Literally, Neurath’s wording does not suggest exactly this, when he writes: „Denn es kann kein Zweifel bestehen, die Begriffe der kapitalistischen Ordnung, wenn man sie ihres Geldcharakters entkleidet, enthalten ihn dennoch in ihrer Struktur.“ But judging from the context of the debate, I am convinced that my reformulation conveys much better what Neurath actually intended to say.

output of a certain good (for final consumption, for investment in construction and equipment, for intermediate use, in Leichter's case: electric current). Without the possibility of comparing the total values of alternative input combinations it is not possible to decide which combination is the most effective. Hence, even in the unrealistic case where the plan correctly anticipates final consumption demand, the selection of the most productive processes to satisfy that demand must be based on cost comparisons in money terms, i.e. in terms of a common unit of calculation. It appears that this aspect was never understood by Neurath.

In his essay on socialist utility calculation (Neurath 1925b/2005), Neurath put forward still another argument. "It is possible for an economy to exhibit a constant upward trend in terms of its balance sheets while the production is in permanent decline and the life of everybody becomes ever worse". (ibidem, p. 467)<sup>12</sup> The statement that "production is in permanent decline" necessarily implies that "production" by which nothing else can be meant than an heterogeneous aggregate of a variety of goods can somehow be expressed in aggregate terms to find out whether it is declining (or constant, or increasing). Evidently, this is impossible without calculating values in terms of a common unit. Apart from this unintended but inevitable implication which is inconsistent with Neurath's fundamental views on economic calculation, his statement is correct, but does not at all prove the necessity of in-kind calculation. The problem is solved by calculating the value of production at constant prices, otherwise referred to as "in real terms", as opposed to current prices, also referred to as "in nominal terms". This has become standard practice in the System of National Accounts (SNA) which has been used world wide after 1945 to measure economic performance of nations. If in 1925 no such standard economic accounting system existed, there was a "theory of index numbers" which would have provided the tools for calculation at current and at constant prices<sup>13</sup>. This theory could have been used to explain what appeared as a paradox to Neurath. So much for "weak in-kind calculability assumptions".

As regards Neurath's "strong in-kind calculability thesis", it is difficult to imagine how Neurath came to believe in his "utopian" solution. Even if it were possible to draw up several alternatives

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<sup>12</sup> Neurath made a similar statement in his response to comments to his lecture to the World Social Economic Congress 1931: „If one speaks, in monetary calculation, of the increase of production measured in money terms, then it is unclear whether there is an increase in kind, for the increase in money terms can mean a decrease of production.“ (Neurath 1931b/2005, p. 500)

of complete systems of all inputs and final outputs (thousands of equations), it is impossible to conceive of a decision making process by which a collective choice could be made *uno actu* about alternatives *in toto* for several years (the planning period) in advance. It appears plausible if Thomas Uebel (2004, p. 66) suggests that in his later years Neurath “quietly dropped the advocacy of centrally planned economies in kind” although he somehow tried to save the idea of in-kind accounting.

In one important respect, Neurath's critique of the "capitalist money accounting system" anticipates the critique of the SNA developed during the 1960's and 1970's which became one of the theoretical foundations of the environmentalist movement. In his essays on socialization (1920a and b) Neurath introduces the "quality of life" as a concept which includes not only elements of material wealth such as food, clothing housing, etc. "The ultimate aim of the economic plan, however, is the 'topography of living conditions' which shows the distribution of living conditions (made up of available food, housing, clothing, education, leisure, work, toil, etc.) according to certain types."(1920b/2005, p. 386) Several of these "non-material"<sup>14</sup> factors of well-being are discussed in Neurath's essay on socialist utility calculation (1925b). If the money calculation of the capitalist system "is precise in terms of money sums, ... it tells us nothing of the true wealth of a people, neither about the use made of sources of raw materials more about the distribution of goods produced; it tells us nothing about the rise or fall in the rates of deaths and diseases or about whether people feel better or worse." (ibidem, p.468) Neurath also mentions the exhaustion of coal mines, the karstification of mountains, "entertainment" - which obviously includes leisure time. In a socialist society, all these factors which determine the quality of life of the individual, would have to be taken into consideration and "represented by a figure, that of another by a second figure, such that in the end one would arrive at a sum for society. Than one could determine that in one case the totality of the qualities of life is greater than in another." (ibidem, p. 469)

That the production of goods in the capitalist system also has negative side effects in the form of

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<sup>13</sup> See Diewert 1987 and the literature listed in the appendix of his article; also Klein/Morgan 2001

<sup>14</sup> National income not only includes tangible goods, but - to an ever increasing extent - also services of different kinds. Conventions have been developed to include private and public services in GDP on the basis of imputations which presently account for a large part of it.

negative externalities, and that the distribution of income and material well-being is important for social welfare, had been analyzed systematically by the British economist A.C. Pigou in his "Economics of Welfare" which was first published in 1920. It appears that Neurath did not know about this newly developing branch of economic analysis.

Towards the end of the 20th century, economists tried to develop a comprehensive indicator of economic welfare in order to include some of the factors whose neglect Neurath had criticized. It must be noted, however, that this overall "Measure of Economic Welfare" (MEW) (Nordhaus/Tobin 1972) was arrived at by directly adding or deducting such things as the value of leisure time, the value of consumption of durable consumer goods (e.g. cars), or the imputed money value of the impact of environmental factors ("regrettable necessities, "disamenities") in aggregate form to GDP, rather than calculating these values first at the level of the individual, as demanded by Neurath. However, Nordhaus and Tobin hardly had any followers in the field of research in economics which they had opened more than 30 years ago .

More recently, a new type of "ecological economics" has emerged for which incommensurability of the different components of economic and social welfare as the starting point. With explicit reference to Neurath, the aim of this research program is to "compare alternative decisions on a rational basis, on different scales of value, as in multi-criteria evaluation." (Martinez-Alier 1995, p. 75)

## 7. Conflicts of interest, incentives, democracy and dictatorship

In his tract on the proletarian revolution Karl Kautsky warns against the illusion that socialism would create a society of spontaneous social harmony. Foreseeable conflicts of interest of are seen as a key problem of organization and control in a socialist economy and are therefore discussed at great length. As the most fundamental problem of a socialist economy, Kautsky identifies the conflict of interest between producers and consumers (1922, pp. 149ff). If workers of different branches of production and different professions have special interests, in capitalism the dominant conflict is between capitalists and workers who are united by the existence of a common class enemy. Even so, there is "a constant danger that the solidaristic class

consciousness degenerates into egotism of the professions” (ibidem, p. 226). In a socialist economy, without the unifying bond of a common class enemy, the different groups of workers will develop a stronger tendency to pursue their special interest. In a socialist order, these interests must be carefully balanced against the interest of consumers in order to ensure that production of goods is undertaken for the purpose of consumption. It is in this respect where Kautsky sees the fundamental deficiency of the model of gild socialism which he rejects. Because self government of units of production by workers would give too much economic power to special interests, Kautsky (ibidem, pp. 256f) supports the model of tripartite governance of enterprises proposed by Otto Bauer (1919).

Instead of establishing a new structure of wages and incomes based on objective social and economic principles, Kautsky offers a rather sobering solution for the problem of wage formation under socialism. “The socialist society will be faced with existing conditions of production which prescribe a certain distribution, irrespective of formulas of justice which it must nonetheless implement” (ibidem, pp. 166f). Even if labour has ceased to be a commodity, wage differentials will have to be used as an instrument to allocate labour in accordance with changes in consumption demand. (ibidem, p. 167f)

Kautsky frankly admits that socialism has not yet found a solution for the problem of bureaucracy. If bureaucratic management of big enterprise has become more and more characteristic of modern capitalism, it is essential to understand that “the bureaucracy which capitalism has created for its purposes is entirely different (from state bureaucracy)” (ibidem, p. 209). Socialism can work satisfactorily only with flexible forms of management. Incentives for initiative action will be no less important for socialism to maintain the dynamic innovative character of capitalism (ibidem, pp. 216ff)

If Kautsky does not directly criticize the ways Neurath treats this kind of problems, he certainly shares Emil Lederer’s view that Neurath’s evasive attitude towards conflicts of interest implies a regression into utopian thinking (Lederer 1921, p. 160)

Neurath does not wholly ignore the problems of interest conflicts raised by Kautsky and other

non-utopian realists. With respect to the problem of special interest of factory councils, he writes: “for socialisation the power of workers is decisive not within the factory, but within the people's economy as a whole.” (1920b/2005, p. 390)<sup>15</sup>. Neurath shares Kautsky's critical position vis á vis gild socialism. The solutions he offers are centralist decision making within an encompassing system of economic and social planning where everything is to be decided *uno actu* by the population which can choose between a certain number of alternative overall plans. Experts and social scientists are assigned a crucial role in the preparation of decisions which are greatly facilitated by a general spirit of cooperation, e.g. in the field of wage formation: “The result will be a general system of wages in which all wages and salaries, including those of directors and factory owners, will be agreed according to danger, risk, comfort and exertion of work, locality and manner of work, age, etc.” (ibidem, p. 387)

Neurath's unshattered optimism that the socialist revolution would create a mood of enthusiasm among the masses of workers is sufficient reason for him to hope for solutions where they are not yet available nor conceivable in the early stages of transition. In this respect the politicians and intellectuals with real experience in the labour movement could not follow him. Moreover, with their a strong commitment to parliamentary democracy, German and Austrian social democrats were not prepared to take the risk that revolution would result in a Bolshevistic dictatorship. Kautsky abhorred the terrorist nature of the political system established under the rule of the Bolsheviks, and he was equally critical of the poor economic performance of the command economy held together by brute force<sup>16</sup>. There is no doubt that Neurath did not sympathize with Bolshevism. Somehow, he entertained the hope that, “if there existed a far-reaching tolerance in the economic sphere, a peaceful kind of Bolshevism might develop that could exist together with other orders of life. For that, however, Bolshevism would have to abandon its intolerance.” (Neurath 1920a/2005, p. 352) Kautsky, for that matter, never diluted his uncompromising position towards Bolshevism until his death in 1938<sup>17</sup>.

## 8. Concluding remarks

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<sup>15</sup> Even more pronounced: „Eine Demokratisierung der Betriebe, die so weit geht, dass die technische Leitung durch Arbeiterräte, die Verwaltung ganzer Betriebsgruppen durch Ausschüsse höherer Ordnung erfolgt, bedeutet gesellschaftstechnisch eine Lähmung der Produktion.“ (Neurath 1919, p.246)

<sup>16</sup> Compare the remarks in Kautsky 1922, pp. 165, 185, 234, 267.



Considering the all too obvious deficiencies of Otto Neurath's concepts of socialization and of calculation in particular, the response from socialist critics, despite the many counter-arguments which were brought forward, is not entirely convincing – mainly for the lack of general aspects. With their consequent adherence to the Marxian labour theory of value, socialist economists like Kautsky and Leichter could not solve the problem of changing demand. Their socialization concepts did not provide an allocation mechanism for the socialist system because in their economics utility was not relevant for price formation.<sup>18</sup> In this respect, but also with respect to incentives, economic dynamics, innovation critical arguments against Neurath were not pursued as far as would have been possible – because the arguments could have been turned against socialism itself. With some of his arguments Karl Kautsky comes close to Mises's conclusion of economic impossibility of socialism, the difference being Kautsky's conviction the conditions for transition to socialism would be brought about by the long term evolutionary trends inherent to the capitalist system. Neurath, although he was a socialist, had obviously realized that the labour theory of value was untenable, but he hesitated to say this openly. It was in search of an alternative that he turned to in-kind calculation, which is even less suitable as accounting framework for a socialist economy. Except for Emil Lederer, who was not a Marxist, and a few others, socialist economists were not familiar with what was then modern economic theory, e.g. welfare economics, theory of index numbers, which could have cleared up some of the confusions, especially about accounting.

Finally, I think, a critical discussion of Neurath's concepts of socialization and of calculation demonstrates the insufficiency of his "physicalist" approach to the social sciences. To speak of "physics of society in the same sense as of physics of a machine" (Neurath 1931/1979, p. 198), it does not suffice to have complete knowledge not only of the present, but also of the future "topography of different conditions of life, the flows of raw materials and energy" (1920a/2005, p. 362) . In Neurath's general system of "Lebensboden" (foundations of life), "Lebenslagen" (conditions of life) and "Lebensordnung" (order of life) (1931/1979, p. 200) the social structure in its totality is embedded in a causal sequence of stimulus and response<sup>19</sup> . Even more

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<sup>17</sup> See his book „Bolschewismus in der Sackgasse“ published in 1930.

<sup>18</sup> Rosner/Fischer 1987, p. 192.

<sup>19</sup> "Die gesamte Sozialstruktur einer Gesellschaft, ihre Lebensordnung ist eingebettet in den gesamten Kausalablauf, ist einerseits als Reiz, andererseits als Reaktion anzusehen." (Neurath 1931/1979, p. 206)

specifically, Neurath writes "that we speak of a higher condition of life, if it brings about a higher quality of life, ... If we possessed complete knowledge of the central nervous system we could be able to penetrate into this 'innermost' shell." (1925/2005, p. 418) These formulations are an expression of Neurath's occasional leanings towards materialist behaviourism. On a more general level, Neurath recognized principal unpredictability and rejected epistemological fundamentalism and determinism. (Uebel 2006) Judging from the viewpoint of economics, it appears to be impossible to construct a causally completely determined closed system with no scope for discretionary choice of individual and collective actors.

Neurath rightly pointed to serious flaws of both neoclassical and socialist economics. If most of the alternatives he proposed were neither convincing nor viable, the need for such alternatives has become even more urgent in the face of the dominance of market fundamentalism in economic and political thinking.

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