

“political economy” and “economics”, although the latter are still used (see ECONOMICS — POLITICAL ECONOMY). This change was initiated primarily by Alfred Marshall (1842-1924), who understood “political economy” as the practical application of economics and therefore deliberately restricted its meaning, which originally covered both theory and application (*Principles of Economics*, . . . , p.43).

This distinction is closely connected on the one hand with the development of economic theory and on the other hand with the methodological discussion which took place at the turn of this century. As a result of these developments, “political economy” is now used in at least four different meanings (cf. Frey, *Die ökonomische Theorie der Politik oder die neue politische Ökonomie*, . . . ): (1) as a synonym for the concepts “economic theory” and “economics”, with no clear distinction being made between economic theory and its political applications, i.e. essentially in the classical sense; (2) in the narrower sense of Marxist political economy (as a consequence of the frequent substitution of “political economy” by the more neutral terms “economics” or “economic theory”, terms which have been accepted by most “bourgeois” economists but not by Marxist economists); (3) in order to stress the social, political and institutional aspects of economic activity (cf. Liefmann-Keil, *Einführung in die politische Ökonomie*, . . . ); and (4) with reference to the study of interactions between the political and the economic sub-systems within “bourgeois” or non-Marxist social science (also termed “economic theory of politics”).

In the following we shall use the first meaning (i.e. assuming approximate synonymy between economic theory and political economy), not only in order to maintain a loose comparability between bourgeois and Marxist economics but also for the historical reason that the above-mentioned debate on these terms proved to be fairly sterile.

Although economists of most schools of thought generally agree on the problems to be dealt with in economic theory, there exists no commonly accepted definition. Hence it is perhaps advisable to follow the tautological definition attributed to Blaug or Viner: “Economics is what economists do”. In view of the common agreement on most practical problems, the need for a universal definition becomes less pressing. Hidden behind the different terms and definitions are not so much disagreements on the separation from other fields of scientific research, especially in the social sciences, or from other branches of economics, but rather fundamental differences in the scientific approach to the conception of economic interrelationship as a theoretical problem. This becomes particularly apparent if one compares classical and Marxian conceptions with those of neo-classical economists.

The different definitions of economic theory refer either to the listing of various branches or to general concepts obtained by postulating specific economic laws, or to the emphasis of particular methodological

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### A. Definition of the Concept and Relationship to Other Social Sciences

#### I. TERMINOLOGY

“Economic theory” has been up to now a concept discussed solely among social scientists in Western countries and it has only recently been applied in the socialist countries. Not until the 20th century did “economic theory” begin to take the place of the terms

aspects (e.g. the relationship between means and ends). To exemplify these possibilities it is expedient to mention some well-known definitions. Thus, for example, Adam Smith speaks of "an inquiry into the nature and causes of the wealth of nations" (1776), while David Ricardo is chiefly concerned with the investigation of the "laws governing distribution" in his *Principles of Political Economy and Taxation* (1817). Friedrich Engels defines political economy in a positive way as "the science of the laws governing the production and exchange of the material means of subsistence in human society" (Engels, *Anti-Dühring*, . . . , p. 204). Karl Marx, on the other hand, gives a negative connotation, distinguishing clearly between political economy and an ahistorical, technological view of economics: "... political economy is not technology" (Marx, Introduction . . . , p. 266). Economic theory experiences a definite restriction in its meaning when the instrumental side of economic activity is overemphasized and economic behaviour is generalized as a specific kind of behaviour characterized by rationality of means and ends (Max Weber's "Zweckrationalität"); overemphasis of this kind was initiated above all by Lionel Robbins (1932). This "praxiological limitation" and, at the same time, generalization of economics (cf. Lange, *Political Economy*, . . . , vol. 1, chap. 5) determines most of the more recent definitions of economics, such as Paul Samuelson's (*Economics*, . . . , p. 4):

"Economics is the study of how men and society end up choosing, with or without the use of money, to employ scarce productive resources which could have alternative uses, to produce various commodities and distribute them for consumption, now or in the future, among various people and groups in the society".

Erich Preiser defines economics by giving an account of its most important fields: the problem of regulating an economy with division of labour (by markets, central planning or a combination of both), the question of distribution of national income, and finally the investigation of the conditions of steady growth (cf. Preiser, *Nationalökonomie heute*, . . . , p. 16-21). A similar but more concise definition is given by Oscar Lange (*op. cit.*, vol. 1, p. 1):

"Political economy, or social economy, is the study of the social laws governing the production and distribution of the material means of satisfying human needs".

As far as a conceptual clarification of economic theory (or, generally, of economics) is possible by definition, the two latter notions seem to be most useful; they are, therefore, taken as a general basis for the following exposition.

## II. POSSIBILITIES OF CLASSIFICATION

A classification of economic theory (economics) is possible and usual according to various criteria. Only the most important types of classification can be enumerated here; an appropriate discussion of the preconditions and the consequences of certain classifica-

tions would require—similar to a definition of economics—a clarification of questions concerning philosophy and the sociology of knowledge.

Classification into single branches of economics (e.g. business economics, agricultural economics, economics of finance, etc.), is hardly controversial. On the other hand, classification of political economy according to the respective "mode of production" (q.v.) is basically a Marxist line of approach: according to Marxist theory the political economy of capitalism (q.v.) has to be distinguished from a political economy of socialism (q.v.), which has its own categories and laws. The most important methodological problem concerns the treatment of categories and laws that are common to both (or all) social formations and should therefore be largely neutral with respect to different historical and social systems (e.g. the most efficient allocation of resources or the best satisfaction of human needs within a society). Even though the concrete forms of the solution reached depend heavily on the underlying social relations of production (see PRODUCTION RELATIONS) and on the respective state of productive forces (q.v.), significant common (or even universal) features can be found from the scientific point of view. The methodological problem of the relations between general concepts (e.g. economics) and specific historical manifestations (e.g. capitalism and socialism) has not been sufficiently reflected on as yet.

If one accepts the possibility of objective and generally valid knowledge, further classifications can be construed. Following the usage in the natural sciences "pure" economics can be distinguished from "applied" economics. Whereas the notion of pure economics relates to thinking in models, the forms of applied economics are very different and hardly comparable. If application means, for example, empirical examination of theoretical derivations by statistical and econometric methods, this kind of application differs basically from a practical use of economic theory for economic policy. Depending on its practical consequences predictive application of economic theory belongs more to the first or the second of the two above-mentioned forms of application. While econometric application serves the examination of the possible empirical content of economic theories by posing hypothetical sets of figures (the "counterfactual" approach) and, therefore, does not normally directly influence economic reality, the application of economic theory to practical policy measures is aimed at a direct change of economic reality (see SOCIAL AND ECONOMIC POLICY).

The classification of economic propositions into "positive" and "normative" statements and the consequent separation between "positive" and "normative" economics is even more problematic. This distinction is based on the postulate of "freedom from value-judgments" (*Werturteilsfreiheit*) stipulated by Max Weber and today maintained in a modified manner by the neo-positivist school of thought, i.e. the assertion that it is possible and necessary to separate the scientific

ic analysis of objective reality from its subjective evaluation. A similar idea underlies the distinction between descriptive and prescriptive economic theory. Finally, it is also possible to classify according to the methods applied.

Concepts like "perceptive economics" (Werner Sombart's "verstehende Nationalökonomie") which refer to the economist's subjective and sympathetic understanding of the investigated problem or epoch are probably obsolete. On the other hand, it is commonly recognized today that mathematical methods and models are useful and necessary for analyses, prognoses and applications of economic theory to economic policy. Accordingly the notions "mathematical economics" and "mathematical economic theory" only indicate that the application of mathematical methods and models is particularly extensive and sophisticated.

### III. ECONOMICS AND SOCIAL SCIENCE

The fundamental conflict between bourgeois and Marxist economics becomes most evident in the determination of its place in the general system of sciences. Marxist political economy occupies a central position in the dialectical-materialist conception of science. By analysing the genesis, function and decay of different modes of production it is, so to speak, the key to an understanding of science and society as a whole. This evaluation appears very clearly in the debate between Eugen Dühring and Friedrich Engels. Thus in his *Anti-Dühring* (1877-78; Eng. ed.: M., 1959) Engels states that "the economic structure of society" determines all other social spheres (*ibid.*, p. 41). However, neither Marx nor Engels denies the interdependence and interactions of the various factors, but the overthrow of economic circumstances appear as the mightiest motivating force of the entire development, since "the whole vast process goes on in the form of interaction — though of very unequal forces, the economic movement being by far the strongest, most primordial, most decisive" (Marx, K., and Engels, F., *Selected Correspondence*, M., [1955], p. 507).

According to the bourgeois view of science, on the other hand, economic theory is a specific science within the framework of the social sciences. This classification remains formal, however, and it involves at least two important and, as yet, unsolved problems: (1) the relationship between social and natural science, or, to use Windelband's terms, between idiographic and nomothetic sciences; (2) the interrelationship of the different spheres of social science, particularly the relations between the economy and the society (economics versus sociology) and between the economy and the state (economics versus political science).

Frequently an intermediate position is attributed to economics (cf. Albert, 1964; Topitsch, 1966; Habermas, 1970), for it tries on the one hand to formulate abstract and universal laws, the validity of which depends on the other hand essentially on concrete social

conditions. This dualistic structure of economic laws constitutes the main subject of the methodological discussion in economics ever since Quesnay (1758) and the physiocrats.

The various aspects of these basic methodological questions will be illustrated in the following by a brief sketch of the historical development of economic theory.

## B. Historical Outline

### I. PRE-CLASSICAL AND CLASSICAL ECONOMICS

The genesis of a specific economic science as distinguished from theology and philosophy is historically and thematically connected with the decay of the feudal system and the rise of capitalism. The restricted micro-economic and isolated views of cameralism and mercantilism were directed towards the fiscal interests of the territorial sovereigns in the age of absolutism, thereby neglecting the interrelationships and effects in the economy as a whole; this partial point of view was supplemented and modified in the course of the 18th century by the idea of economic interdependence — an idea fundamental to economic theory.

The actual prime of classical bourgeois economics starts with *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), the major work of the Scottish economist and moral philosopher Adam Smith. The most important principles of the capitalist economic system — private property, freedom of contract, liberty of trade, individual self-interest and the connection of division of labour with the exchange of goods on (free) markets — are developed in his work partly from abstract theoretical reasoning, partly from consideration of moral philosophy and finally also from immediate practical considerations. In accordance with the historically progressive rôle of the bourgeoisie in opposition to the systems of feudalism and mercantilism, Smith conceives a functioning capitalist competitive system as an actually obtainable "natural order" (whereas the physiocratic "ordre naturel" represented an essentially unobtainable theoretical ideal), but he does not consider the possible historical limitations of capitalism as a methodological problem. Nevertheless, Smith already sees the negative side-effects and consequences of the capitalist economic order conceived by him as "natural"; thus, for example, in view of the lacking qualifications of workers in the capitalist factory system, he observes that "the man whose whole life is spent in performing a few simple operations... generally becomes as stupid and ignorant as it is possible for a human creature to become" (Smith, *An Inquiry*..., vol. 2, p. 284).

Technically, Smith lags behind Quesnay's interpretation of economic circulation (see CIRCULAR FLOW) and he neglects in his theory of reproduction the idea of constant capital (q.v.), as well as the division of value added into variable capital and surplus value. On the

other hand, he substantiates the largely formal idea of the interdependence of circular flows by the observation that the co-operation and the adjustment of the countless decisions made individually and independently of each other on different markets lead under certain conditions with the help of an "invisible hand", as it were, to a "natural order" of stable equilibrium. Both the inexact distinction between theoretical, practical and normative foundations in his arguments and the internal deficiencies of his economic theory give rise to frequent contradictions:

"Adam Smith's contradictions are of significance because they contain problems which it is true he does not solve, but which he reveals by contradicting himself" (Marx, *Theories of Surplus Value*, . . . , p. 146).

According to Marx the epoch of classical economics ends with David Ricardo (1772-1832), whose major work *Principles of Political Economy and Taxation* (1817) centres on the investigation of the "laws governing distribution". Contrary to Smith, Ricardo emphasizes strict model analysis, but nevertheless tries to use the conclusions derived from his models for practical economic policy. The labour theory of value, only partially supported by Smith, is further developed by Ricardo; but the distinction (later on basic for Marx) between values (determined by the respective amounts of labour) and (production) prices (determined by the tendency of equalization of the rate of profit) is also obliterated by Ricardo. Already in Ricardo's lifetime economic theory, which hitherto had been undivided in spite of many differences in detail, was split into at least three different streams:

1. The "vulgar economists", so called by Marx, beginning with Thomas Robert Malthus, Jean-Baptiste Say and John Stuart Mill. Marx characterized this school of thought --- no doubt one-sidedly, but probably in principle correctly --- as follows:

"Once for all I may here state, that by classical Political Economy, I understand that economy which, since the time of W. Petty, has investigated the real relations of production in bourgeois society, in contradistinction to vulgar economy, which deals with appearances only, ruminates without ceasing on the materials long since provided by scientific economy, and there seeks plausible explanations of the most obtrusive phenomena, for bourgeois daily use, but for the rest, confines itself to systematising in a pedantic way, and proclaiming for everlasting truths, the trite ideas held by the self-complacent bourgeoisie with regard to their own world, to them the best of all possible worlds" (Marx, *Capital*, . . . , vol. I, p. 81, footnote).

Nevertheless, not only the classical economists (particularly Smith and Ricardo) but also the best representatives of "vulgar economics" (especially Say and Mill) influenced Marxian economic thought.

2. The left Ricardians (Thompson, Hodgskin, Ravenstone and others), who derived from the Ricardian labour theory of value egalitarian consequences and practical political aims such as the right of labour to its full return.

3. Whereas these two lines of thought emphasized certain aspects of classical economics, the elder his-

torical school of economic thought in Germany (with Wilhelm Roscher as leading representative) evolved as a strong counter-reaction against Ricardian model-thinking with its possibly troublesome political consequences. This school of thought replaced the theoretical assessment of economic interrelations by a historical description of various phenomena, as did the later "younger historical school" of economic thought with Gustav Schmoller as its chief exponent.

Apart from these three main lines of economic thought in the middle of the 19th century, the beginnings of mathematical abstractions --- which originated also from Ricardo --- were further developed only in a sporadic manner and mostly in a more speculative form (e.g. the beginnings of a subjective theory of value to be found in Nassau Senior, Dupuit and Gossen). Here the theoretical work of the German economist Johann Heinrich von Thünen (1783-1850) is an important exception: in his major work *Der isolierte Staat in Beziehung auf Landwirtschaft u. Nationalökonomie* (Vol. I, 1826) he applies with remarkable skill the method of abstraction and isolation and uses calculus to examine the interrelations between agrarian production and urban markets.

## II. MARX'S CRITIQUE OF POLITICAL ECONOMY

The most important principles of Marx's theory are as follows:

1. Bourgeois economic theory suffers --- according to Marx --- from a fundamental methodological error: it tends to take the specific laws of a certain social formation (i.e. capitalism) to be universal laws of nature.

"Economists express the relations of bourgeois production, the division of labour, credit, money, etc., as fixed immutable, eternal categories... Economists explain how production takes place in the above-mentioned relations, but what they do not explain is how these relations themselves are produced, that is, the historical movement which gave them birth" (Marx, *The Poverty of Philosophy*, . . . , p. 104).

The resulting mystification of the capitalist mode of production as an almost natural or perpetual mode of production is investigated and demonstrated by Marx on different levels.

2. On the methodological level this mistake appears --- according to Marx --- in appropriate abstractions, concepts and categories. Marx illustrates this in his *Introduction to the Critique of Political Economy* (1859) by the example of production being on the one hand a universal technical process and on the other hand a specific social one. The confusion of the technical aspect of production with the social conditions determining production at any given time constitutes for Marx the fundamental error of bourgeois economics:

"Production by isolated individuals outside of society... is as great an absurdity as the idea of the development of language without individuals living together and talking to one another. . . . Whenever we speak, therefore, of production,

we always have in mind production at a certain stage of social development, or production by social individuals. ... *Production in general* is an abstraction, but it is a rational abstraction, in so far as it singles out and fixes the common features, thereby saving us repetition" (Marx, Introduction..., p. 268 f.).

The decisive point of Marx's methodological criticism is the impossibility of a "rational abstraction" which abstracts from the specific social conditions and thus, in Marx's opinion, from the essential characteristic of human labour. He exemplifies this in analogy to human language:

"Yet these general or common features discovered by comparison constitute something very complex, whose constituent elements have different destinations. Some of these elements belong to all epochs, others are common to a few. Some of them are common to the most modern as well as to the most ancient epochs. No production is conceivable without them; but while even the most completely developed languages have laws and conditions in common with the least developed ones, what is characteristic of their development are the points of departure from the general and common. The conditions which generally govern production must be differentiated in order that the essential points of difference be not lost sight of in view of the general uniformity which is due to the fact that the subject, mankind, and the object, nature, remain the same. The failure to remember this one fact is the source of all the wisdom of modern economists who are trying to prove the eternal nature and harmony of existing social conditions" (*ibid.*, p. 269).

The conceptual consequences of this confusion of technology — the state of productive forces (q.v.) with society — the social relations of production (see PRODUCTION RELATIONS) — are quite obvious. Marx illustrates them by equating the material instruments of production with the social category of capital:

"Thus they say, e.g., that no production is possible without some instrument of production, let that instrument be only the hand; that none is possible without past accumulated labor, even if that labor consist of mere skill which has been accumulated and concentrated in the hand of the savage by repeated exercise. Capital is, among other things, also an instrument of production, also past impersonal labor. Hence capital is a universal, eternal natural phenomenon; which is true if we disregarded the specific properties which turn an 'instrument of production' and 'stored up labor' into capital. ... If there is no production in general, there is also no general production. Production is always some special branch of production or an aggregate, as, e.g., agriculture, stock raising, manufactures, etc. But political economy is not technology" (*ibid.*, p. 269 f.).

3. Hence the methodological basis of Marx's critique of political economy is his precise distinction between historical (i.e. specifically social) and suprahistorical (universal) categories and their further specification into qualitative and quantitative aspects. Therefore, the production of goods in general has to be distinguished from the production of commodities for exchange on markets: within commodity production as a whole capitalist commodity production based on concentrated private ownership of the means of production forms a separate mode of production, as analysed by Marx. Therefore, the personal relations between the "free" wage-earner (free from legal restrictions, but also free from private property) and the capitalist who owns the means of production appears as an objective relation of products (exchanged equivalently in equilibrium)

on the market. Marx tries to surmount this fetishistic character of commodities: by distinguishing between the use-value of a commodity (i.e. its ability to satisfy human needs) and the (exchange-) value of a commodity determined by the labour time socially necessary for its production, he is able to discover behind the veil of equivalent exchange (exchange of equal values) the basic power structure characterized by exploitation (q.v.); for the capitalist appropriates the use-value of labour in the process of production, and the worker receives (theoretically) the exchange value of his labour power. Hence the total amount of labour time is divided into the labour time necessary for the worker's reproduction and the surplus labour time appropriated by the capitalist. With regard to the category of (exchange-) value the quantitative aspect has to be distinguished from the qualitative aspect. Value as a *qualitative* category serves to characterize commodity-producing societies: its division into constant capital, variable capital and surplus value presupposes a specific division of society (into capitalists and wage-earners). The *quantitative* aspect of (exchange-) value — its magnitude — characterizes the respective state of the productive forces (measured by the socially necessary labour time), and the quantitative distribution of the "value added" between variable capital and surplus-value marks the respective state of class conflict (struggle for distribution).

4. The distinction with regard to method and content between historical and suprahistorical categories and laws which Marx explains in his combination of historical and analytical investigation by means of pairs of concepts such as productive forces — social relations of production, production of goods — production of commodities, use-value — exchange-value, forms the starting-point of Marx's critique of political economy in the three volumes of *Capital*. It implies at the same time the penetration of surface phenomena, through the veil of commodities, and the analysis of the fundamental laws of motion of bourgeois society. The basic principles of the functioning of capitalism can be conceived — according to Marx — only within the framework of a general theory of rise and decline of historical modes of production. For that reason Marxian economics is understandable only on the basis of historical materialism (q.v.). Economic analysis does not only mean for Marx revealing the power structure of a given society, but also its origin and final decay: in this connection the socio-economic foundations of different forms of domination (see SOCIAL FORMATIONS) have to be investigated and understood in relation to the development of productive forces and with regard to their forms of mediation (e.g. by commodity relations or by direct rule). This point has decisive consequences not only for Marx's methodology but also for his choice and elaboration of concepts: the categories applied have to serve not only the analytical organization but also — at least potentially — the description of historical developments. The notion of

"simple reproduction", for example, characterizes the analytical model of a commodity-economy in which all producers are owners of their means of production, and it characterizes also the situation of independent handicraft and agricultural productive before the period of mercantilism and particularly before the capitalist factory system.

5. This way of thinking means a decisive break with classical bourgeois economics, because the latter "investigated [only] the real relations of production in bourgeois society" (Marx, *Capital*, ..., vol. 1, p. 81, footnote) and considered the social relations of production simply as given data in its investigation. This approach remains essentially superficial according to Marx, because the specific character of capitalist production is neglected (see above: A, II). Bourgeois economics starts out from "the habit of everyday life" (Marx, *A Contribution*, ..., p. 30) and it is unable due to its unhistorical procedure to gain essential abstractions for the study of capitalism, it is unable to comprehend its true "nature". Thus bourgeois economics remains basically unscientific, because it takes the phenomena of capitalism — e.g. profit, interest and rent — as its essential character. But "all science would be superfluous if the outward appearance and the essence of things directly coincided" (Marx, *Capital*, ..., vol. 3, p. 797). The basic categories of Marx — commodity and value (q.v.) — and the concepts of commodity fetishism and surplus value derived therefrom, serve to explain the principles of functioning of capitalism on an abstract level. The de-mystification of capitalist production relations by means of these categories forms in a way the guiding principle of the systematic development of Marx's critique of political economy in *Capital*, which can be seen to progress through decreasing levels of abstraction: starting with production of value and surplus value in the first volume, via its realization by sale (in the second volume), Marx finally tries to demonstrate in the third volume its distribution and in this connection the transformation of values into prices (q.v.), of surplus value into profit (q.v.), and the distribution of profit between the different classes of owners of means of production (entrepreneurs, landlords, rentiers, etc.). Only on this very concrete level does Marx arrive at the economic categories which are presupposed by bourgeois economics (cf. Dobias, *Zur Struktur des Marxschen Systems*, ...). Therefore it is wrong to take Marx's definition of the magnitude of value as an immediate explanation of price-relations in developed competitive capitalism (a mistake made also by dogmatic Marxists); and it is also incorrect to posit a fundamental contradiction between the theory of value in the first volume and the theory of (production) prices in the third volume of *Capital*, as Böhm-Bawerk and Blaug, among others, did. Rather, Marx uses here "a way of thinking by which the concrete is grasped and is reproduced in our mind as concrete" (Marx, *Introduction*, ..., p. 294), i.e. he moves from the abstract categories of value and

surplus value to the concrete phenomena of price and profit. By transforming the magnitude of value into prices and by demonstrating "the domination of prices and price movement by the law of value" (Marx, *Capital*, ..., vol. 3, p. 174), Marx also vindicates subsequently the analytically necessary abstraction from prices in the first two volumes of *Capital*, which have as their subject the origin and the realization of surplus value but not yet its distribution.

6. Relative to the methodological aspects of Marx's economics, which are placed in the foreground here, the postulated "laws of motion" and "tendencies", such as the falling tendency of the rate of profit, the laws of increasing impoverishment of the working class and of aggravation of economic crises, and the problem of insufficient effective demand, etc., are of secondary importance. Whereas some of the postulated tendencies held true — such as the increasing concentration and centralization of capital — other laws of motion (such as the law of a rate of profit falling in the long run) could hardly be observed. This non-appearance of certain predicted developments, however, cannot be taken as a refutation of Marx's theory; rather, it shows the difficulties of translating abstract basic structures into empirically relevant statements, and it signifies the fact that the gain obtained by abstraction in Marx's economic theory (i.e. the discovery of the basic powerstructure) corresponds to a loss of concreteness. This appears also in the difficulties of transforming abstract values into concrete (market or even monopoly) prices (cf. Sherman, *The Marxist Theory of Value Revisited*, ...). In determining and predicting real prices and connected phenomena, bourgeois economics certainly has the up-erhand due to its greater concreteness of approach.

### III. NEO-CLASSICAL AND KEYNESIAN ECONOMIC THEORY

The development of bourgeois economic theory after Marx is not immediately determined by the scientific discussion of his "critique of political economy", although one might interpret the orientation of the schools of Vienna, Cambridge and Lausanne towards the theory of subjective value at least partly as an immunization of economic theory against Marx's theory of objective (labour) value. While the various schools of marginal utility relied methodologically to a large extent on classical economics, their selection of issues is strongly determined by what Marx called "vulgar economy": instead of production relations, the problems of "the subjective relation of the purchaser and seller to the goods bought or disposed of began to come to the fore" (Lange, *Political Economy*, ..., vol. 1, p. 231).

While Carl Menger and W. S. Jevons interpreted the relationship between commodity and consumer in a psychological sense, namely as a source of satisfaction of needs (and analogously the supply of labour power as a source of dissatisfaction or disutility of labour),

the utility theory served Léon Walras, and the Lausanne school founded by him, as a theoretical explanation of demand in his static model of general economic equilibrium (q.v.). In an analogous function it appears in the Cambridge school of partial equilibrium, above all in the work of Alfred Marshall.

Along with the increasing formalization of neo-classical economic theory especially in Great Britain and the United States — and during a period of relatively rapid development of the capitalist countries until about 1930 — classical theory and particularly Marxian economists were increasingly forgotten and even fell into disrepute. Liberalist and vulgar economic conceptions like Say's law of equilibrium demand, the understanding of crisis as necessary processes of adjustment and catharsis and the transplantation of the economic calculations of entrepreneurs into the private households by Vilfredo Pareto's theory of choice (*Cours d'économie politique*, . . ., 1896-99), dominated the economic thinking of this period. As Joan Robinson wrote in her *Essay on Marxian Economics*, this was a period of complete ignorance of Marxian economics, "broken only by an occasional mocking footnote" (p.V). Similar to Smith, many leading economists of that time believed in a more or less automatic process of self-regulation of the entire economy on all markets. The rôle of the government was to be restricted to minor adjustments, especially the protection of (free) competition against steadily strengthening concentration (q.v.) and monopolization.

This situation was altered drastically by the economic, political and ideological changes brought about by the Great Depression of 1929-34. The problems of macro-economic disequilibrium dealt with by Marx as manifestations of basic social contradictions were again included in economic research. The undeniable similarity of the Marxian analysis, especially in Volumes 2 and 3 of *Capital*, with the theories of fluctuation and employment of John Maynard Keynes, Michal Kalecki, Joan Robinson and others led to a new discussion of Marx's economic theory. This discussion remained nevertheless limited to some (surface) phenomena, such as the behaviour of macro-economic aggregates like consumption, investment, production, national product (qq.v.), etc. Together with the "dynamization" of Keynesian theory by Roy Harrod (1939, 1948) and Evsey Domar (1946, 1957), the problem of "expanded reproduction" previously treated by Marx was soon taken up again (see also CIRCULAR FLOW, B. VI).

In opposition to the predominance of Keynesian and post-Keynesian ideas in economic theory and economic policy, two important counter-movements evolved. In the Anglo-Saxon world the so-called "neo-neoclassical school" or "neo-classical approach" emerged, centred at the Massachusetts Institute of Technology, with Paul A. Samuelson and Robert M. Solow as leading representatives. Referring to the "old neo-classics" Marshall and Walras, the (neo-) neo-classical economists stressed the flexibility of the capitalist market economy based

on price adjustments and substitution processes in micro-economic relations as opposed to the rigidities of (post-) Keynesian macro-economics. Hence, in their view, substitution and price adjustment constitute the most important element of (self-) regulation. The construct of macro-economic production function with capital, labour, land and various forms of technological progress (q.v.) as independent factors of production which was first postulated by the neo-classics, however, is now being criticized for theoretical and practical reasons and for its contradictions ("reswitching" phenomena, aggregation problems of micro-economic quantities, etc.) (cf. Bhaduri, *On the Significance of Recent Controversies in Capital Theory*, . . .). On the other hand, models of general (micro-economic) equilibrium are of increasing significance (cf., for example, Arrow, Hahn, *General Competitive Analysis*, . . .). The "mystification of the capitalist mode of production" (Marx, *Capital*, . . ., vol. 3, p. 809) by the various forms of macro-economic theories of factors of production, which was already stipulated by Marx, has since been confirmed in an impressive manner by the modern discussions on capital theory which demonstrate the logical difficulties and even contradictions of these approaches (cf. Harcourt, *Some Cambridge Controversies in the Theory of Capital*, . . .; Bhaduri, *op. cit.*). At the same time, however, also the classical and especially Walrasian idea of the interdependence of micro-economic processes has become more and more important in modern theory of equilibrium and capital (cf. von Weizsäcker, *Steady State Capital Theory*, . . .). Nevertheless, the largely static or pseudo-dynamic ("steady state") character of these theories and their lack of connection with reality are still a considerable obstacle to the fruitful further development of neo-classical theory: the dynamic nature of the capitalist mode of production — emphasized but not sufficiently elaborated by Marx — and his "essential laws of motion" are as yet not appropriately integrated with economic theory (cf. Grossmann, *Marx, die klassische Nationalökonomie u. das Problem der Dynamik*, . . .).

#### IV. FURTHER DEVELOPMENT OF MARX'S POLITICAL ECONOMY

The development of Marxian political economy (or economic theory, in our sense) and its critique since Marx is characterized by a splitting up of his work into separate topics (theories of crisis, of imperialism and colonialism, of concentration, etc.) and by the under-rating of the methodological aspect and the systematic character of Marxian economics. Thus the different directions and applications of Marxian economics have seldom reached a level comparable to Marx's own standard. A great number of contributions deal only with a "simple reproduction" of single theses and theories often torn out of context, with interpretational disputes on the "real" content: for example, defences of Marx's real or supposed position against criticism from

bourgeois economists or from "revisionists", or unproductive attempts at immunizing or dogmatizing Marxian theory. At the same time, most attempts at a revision of Marx's theory fall far short of the theory they criticize, even though some of them were prompted by justified efforts to revise Marx's theory with a view to adapting it to the changed conditions of 20th-century capitalism. A good survey of such undertakings is given by Paul M. Sweezy in his *Theory of Capitalist Development* (1942).

Very simply, three main trends in the Marxist critique of bourgeois economics can be distinguished, the approaches and methods of which are of more than passing interest. They are:

(1) The further development of Marx's approaches to the theory of imperialism and colonialism by Rosa Luxemburg, N. I. Bukharin, Rudolf Hilferding, Otto Bauer, V. I. Lenin and, more recently, A. G. Frank, Paul Baran, Tom Kemp and Christian Palloix. The fruitfulness of the Marxian approach, namely its linking of economic, sociological and historical analysis, is revealed in its application to the problems of colonial and imperialist domination and exploitation of the so-called underdeveloped nations; on the other hand, the fact that some of the essential questions -- especially the mediation between economic and political forms of exploitation (cf. Boris, 1966) and the relationship between the problems of realization and of accumulation -- have up to now defied solution means that one cannot speak of a consistent Marxist theory of imperialism.

(2) The second line of Marxist economics attempts to take into account the modifications of Marxian analysis motivated by the transition from competitive to monopoly capitalism. Particularly Lenin relates this process with the imperialist expansion of the developed capitalist countries, which was later recognized also by Paul Baran, Paul Sweezy and others; at the same time it is useful to give separate attention to this development as it appears in the different capitalist countries. The first attempt at an analysis of the limitations of free competition conditioned by the expansion of a monopolistic system of money and credit (q.v.) is to be found in Rudolf Hilferding's *Finanzkapital* (1907). Later this development is positively interpreted (among others by Hilferding himself) as a movement towards an "organized capitalism" in the common interest, i.e. a capitalist order organizable by the state and by social groups (e.g. trade unions, co-operative societies, etc.). Recently Baran and Sweezy have tried to furnish a consistent Marxist analysis of "monopoly capitalism" (q.v.) in their monograph of this title (Baran, Sweezy, *Monopoly Capital*, . . .); but their inquiry differs considerably from the Marxian procedure as to method and degree of abstraction, since it basically starts out from the sphere of circulation, i.e. from the problems of realization of production, while neglecting the basic conditions of production. The theories of state monopoly capitalism (see STATE CAPITALISM, STATE MONOP-

OLY CAPITALISM) maintained in the countries of the Eastern bloc are largely determined by the traditional Leninist critique of imperialism and contribute very little to the analytical illumination of present-day capitalism. They have a more descriptive, in part even speculative character.

(3) The methodological aspect of Marx's critique of political economy, decisive for Marx himself, has received relatively little attention, even from the majority of Marxist economists. Important exceptions are Franz Petry (*Der soziale Gehalt der Marxschen Werttheorie*, . . ., 1916), Henryk Grossmann (*Das Akkumulationsgesetz*, . . .; and *Marx*, . . .), Maurice Dobb (*Political Economy and Capitalism*, . . ., 1937), Adolph Lowe (*Mr. Dobb and Marx's Theory of Value*, . . ., 1938) and Paul Sweezy (*The Theory of Capitalist Development*, . . ., 1942) among others. Significant elements of Marxian thinking are also found in some well-known bourgeois economists, for instance Werner Sombart and Joseph A. Schumpeter (see below: C). Only recently has the methodological significance of Marxian economic theory for modern economic theory been recognized (cf. Meek, *Economics and Ideology*, . . .). The present-day methodological discussion of Marx's system attempts on the one hand to relate Marxian economics to his entire work and on the other to clarify the relation and respective spheres of validity of Marxist and bourgeois economic theory; important contributions to this problem have come especially from Dobb, Lange (*Marxian Economics and Modern Economic Theory*, . . .; also *Political Economy*, . . .) and Piero Sraffa (*Production of Commodities by Means of Commodities*, . . .).

### C. The Political Economy of Socialism

Even more unsatisfactory than the further development of Marxian political economy of capitalism (see above: B, III) are the present-day approaches to a political economy of socialism based on Marxian thought. The lack of a sound methodological basis and its defective empirical foundation has various causes which are hard to assess as to their respective effects. Besides a voluntaristic underestimation of objective economic laws in the transitional period by leading Marxist theoreticians (Bukharin, 1920; Preobrazhenskii, 1926; and, more recently, especially Guevara, 1968) and the political suppression of economic discussion particularly in the Stalinist era, one has to look for the origin of this phenomenon in Marx's theory itself. The central theme of the economic analysis of Marx and Engels was the critique of bourgeois economics and society, and not the immediate construction of concrete contents of the economics of socialism, which according to Marx and Engels "utopian socialists" -- in contrast to their own "scientific socialism" -- erroneously try to do. Of course, there can be found in Marx's and Engels's writings, scattered in different theoretical and political contexts and on various levels of abstraction, isolated hints for the principles of func-



tioning of a socialist society. But these outlines are not elaborated in a systematic context (unlike Marx's analysis of capitalism) and they often only serve to contrast sharply the features of a future socialist society with the existing capitalist society, emphasizing the negation of the relevant characteristics of capitalism. The most elaborate remarks on this questions are furnished by Marx in his *Critique of the Gotha Programme* (1875). Here he differentiates between a "first phase of communist society" (in other places also called "socialism") emerging after "prolonged birth pangs" from capitalist society and still bearing the "birth marks of the old society" and, on the other hand, the "higher phase of communist society", the true communism. Only in this last phase can the communist principles such as "From each according to his ability, to each according to his needs" (in *Marx, Engels SW*, vol. 2, p. 23f.) be fully practised.

The material demarcation of the tripartition sketched here ("birth pangs"; first phase - socialism; second phase - communism) is just as controversial as the determination of their factual or foreseeable duration and the question of their respective independence, especially the problem of the validity of specific laws in these phases. This stems primarily from the fact that there is no clear characterization of these phases by Marx and Engels and, secondly, because the answer to these questions immediately touches on the political practice of the formerly capitalist countries. Based on the historical experience of the Soviet Union and the other socialist countries, there emerges a general agreement that the transitional period until fully developed communism is relatively independent, is of considerable duration and is determined by specific economic laws. However, almost all concrete attempts to characterize this transitional period are highly controversial. Two central issues dominate present-day discussion: (1) the question of the applicability of Marxian categories, such as commodity, value, surplus value, law of value, which Marx had developed for the investigation of capitalism, and their possible meaning in socialism; and (2) the relation between on the one hand the quantitatively and praxiologically orientated theory of planning and operations research, which at least formally shows some basic similarity with the respective developments in Western economic, and on the other hand the more qualitative political economy of socialism, and in connection with this, the relation between economic theory and Marxist economics.

Since even among the Marxist participants in the discussion of these questions there is no common basis of methodological premises and even less of concepts to be used, only some of the important contributions can be listed here. The beginning of the scientific debate on the economics of socialism -- besides some contributions of bourgeois theoreticians as to the applicability of economic theory to socialist societies (cf. especially Barone, *Principi di economia politica...*) -- lies in the period of construction of socialism in

the Soviet Union after 1917 (see, above all, Dobb, *Soviet Economic Development since 1917...*; and Erlich, *The Soviet Industrialization Debate, 1924-28...*). As early as 1922 N. I. Bukharin (q.v.) stated in his book on "The Economics of the Transitional Period" the economic laws posited by him for the transitional period, which he and many others regarded as short-lived; on the other hand, Preobrazhensky attempted in his "The New Economics" (1926), which was more concretely orientated towards the actual problems of the Soviet economy, to transplant the Marxian notion of "so-called primitive capitalist accumulation" (*Capital...*, vol. I, chap. 24) to the Soviet construction of industry, which in his opinion (and in later practice) should be possible with the help of a "primitive socialist accumulation" from agriculture.

The second phase of discussion started after the establishment of the socialist camp, with its countries of different levels of economic development, and especially after the death of Stalin in 1953. Economists of the more advanced socialist countries (Poland, East Germany, Czechoslovakia) demanded a modification of the centralized planning system taken over from the Soviet Union by the introduction of "socialist market relations" (Brus, 1957, 1961; Behrens, 1957; et al.); the theoretical basis of these propositions was the postulation of an "intensive period", characterized by the minimization of inputs, after the "extensive period" which was merely orientated towards maximization of output and created the material basis for the higher state of productive forces in the subsequent "intensive period" (cf. Altwater, *Rationalisierung u. Demokratisierung...*). But ever since the famous (though theoretically less important) article on "The Plan, Profits and Bonuses" by E. G. Liberman (Plan -- pribyl' -- premii. In *Pravda*, Sept. 9, 1962), substantial elements of the propositions of Brus and Behrens were put into practice at an increasing rate (in East Germany after the introduction of the "new economic system of planning and conducting the economy" [NÖSPL] in 1963 and its successors [ÖSS, etc.]; see also ENTERPRISE, Part I. B). The relaxation of the central planning system, the introduction of market and co-operative relations and especially the application of economic incentives such as prices, interest, bonuses, credit, etc., finally led to a discussion about the compatibility of these measures with the principles of socialism formulated by Marx, Engels and Lenin and about the socio-economic content of these and other categories (especially of commodity, value and the validity of the law of value). The debate is still being carried on. Outstanding representatives of the "leftist critique" of these measures are especially Charles Bettelheim and Ernest Mandel. Bettelheim, moreover, tries to create the foundations of a Marxist critique of the political economy of socialism and of a theory of transitional societies by a further elaboration of Marxian conceptions (Bettelheim, *Calcul économique et formes de propriété...*). Against this criticism it has been emphasized, particu-

larly by East European economists, that the socio-economic content of commodity production has also changed fundamentally on the basis of the changed (socialist) relations of production and also that, in connection with this, the categories and laws related to socialist commodity production have changed (Ulbricht, 1967; Breuer, 1971). A final assessment of this debate is at the moment not possible, the more so as the foundations and presuppositions of this discussion are just as little clarified as the relation between qualitative and quantitative analysis in the political economy of socialism and, even more generally, the relations between economic theory and Marxist economics.

The concrete needs of planning socialist economies (see PLANNING) and the related problems of efficient allocation of resources, the latter being largely independent of the concrete economic order, both led to sophisticated mathematical theory of the optimal functioning of a socialist economy. The theory proves to be at least formally very similar to modern Western economic theory, especially with regard to the methods applied (linear, non-linear and dynamic programming, input-output analysis, econometric and statistical techniques, etc.), but partly also with respect to the results obtained. In some fields even the Soviet economists were leading (cf. Kantorovich, *Mathematical Methods of Organizing and Planning Production*, . . . 1939), while in many other fields of praxiology the techniques and results of bourgeois economic theory were adopted — in some cases without much reflection (cf. Nemchinov, ed., *Primenenie matematiki* . . .). The consequence of this is a peculiar theoretical ambiguity especially among those economists who have a good knowledge of Marxian theory and also of the modern methods in mathematical economics: the jump from political economy to “pure” model theory is hardly dialectical, and mostly both kind of theories remain unrelated to each other. The argument often mentioned in this connection that such categories of economics as utility, scarcity and efficiency gain their operational significance only in socialism, and should therefore be used as a basis for a theory of socialist economy, does not appear to be sufficient. Serious contributions to the methodological and material clarification of the connection between model analysis and general political economy were furnished by Włodzimierz Brus (1961), V. V. Novozhilov (1967) and Oscar Lange (*Political Economy*, . . .), who in this respect matched up to Marxian standards.

In the current discussion on the theory of optimal functioning of the socialist economy, the question of the applicability and concretization of the category of social utility for the determination of planning prices and planning quantities plays a considerable rôle (cf. Shatalin, *Nekotorye problemy teorii optimal'nogo funktsionirovaniia sotsialisticheskoi ekonomiki*, . . .). The traditional widespread misconception of the Marxian labour theory of value as an immediate

calculation-scheme for socialism among Soviet economists (and the resulting attempts at the computation of socially necessary labour time) is increasingly recognized. Already in his *Poverty of Philosophy* (1847) Marx had pointed out that “in a future society, in which class antagonism will have ceased . . . the time of production devoted to different articles will be determined by the degree of their social utility” (Marx, *The Poverty of Philosophy*, . . . p. 63). The assumption of an exchange of equivalent labour-values is for Marx only an analytical abstraction for his model of competitive capitalism, an abstract equilibrium analysis for which the use-value of commodities (i.e. their ability to satisfy human needs) is explicitly presupposed (cf. *Capital*, . . . vol. I, chap. 1). In his *Anti-Dühring* Engels elucidates the significance of use-value for socialism by stating that the distribution of socially necessary labour has to be brought about by the systematic comparison of the “useful effects of the various articles of consumption . . . with one another and with the quantities of labour required for their production” (Engels, *Anti-Dühring*, . . . p. 427). Hence also in the Marxist view a consideration of use-value (or, in bourgeois economic terms, demand) becomes necessary for planning.

## D. Comparative Aspects

### I. ECONOMICS AND IDEOLOGY

A problem decisive for the determination of content and method of economics is the problem of ideology, or of objectivity of economic theory. This does not only refer to the possibility or impossibility of “objective” knowledge in social science, but also to the place of social science in relation to natural science and to the arts, and to the place of economic theory within social science. While there is a high degree of consensus about methods and the fields of research of economic theory between Marxist and bourgeois economists, fundamental divergencies with respect to ideology and, in connection with this, in the central aspects and laws of economics exist.

Almost all non-Marxist definitions of ideology in this context are based on the explicit or implicit postulate of pure or objective economics as a real (not only theoretical) alternative to ideological (and therefore presumably “unscientific”) conceptions, in spite of all differences in detail within the various schools of thought. The reproach of ideology (q. v.) refers here to the false comprehension of objective reality and/or to internal contradictions within the theoretical model. According to Herbert Giersch ideologies are “. . . ideals whose internal consistency cannot be maintained, since they are based on a distorted representation of the socio-economic reality. This representation of reality may be obsolete or based on naive prejudices or certain preferences of philosophy of life or definite interests” (Giersch, *Allgemeine Wirtschaftspolitik*, . . . , Bd 1, p. 135).

A more exact and systematic, though hardly operational concept of ideology is held by the neo-positivistic line of thought in economic theory. Following Max Weber, this line of thought maintains a separation of scientific propositions and theories into positive propositions or theories, which describe or analyse objective reality, and into normative (evaluating) propositions or theories. Positive scientific propositions are characterized by the possibility of empirical examination at least in principle, in particular of their falsification in terms of Popper's criterion of falsifiability. The confusion of positive and normative propositions is consequently interpreted as an ideology: "Certain theoretical approaches which promise the realization of desired goals are preferred, become dogmas on real-world events, become *ideologies*..." (Richter, *Methodologie aus der Sicht des Wirtschaftstheoretikers*, . . . , p. 259).

In the case of an ideology we are dealing with a specific mixture of value system and positive theory. But even if one accepts such a distinction between positive and normative statements (theories) as meaningful and possible, a decisive difficulty arises in social science and particularly in economics from the strongly restricted validity or applicability of the theories: they are formulated under the assumption of a constancy of the environmental conditions (the so-called *ceteris paribus* proviso) whose control is generally not (or as some bourgeois social scientists hope: not yet) ensured. Therefore the criterion of falsifiability can only apply in a very limited sense: strictly speaking, there are no "positive theories" at all. If in addition to this there prevails a tendency to immunize the theories against empirical testing by a restrictive choice of underlying assumptions (as in some branches of economic theory, particularly the theory of consumer behaviour), then the propositions that are claimed to be positive come near to ideological interpretations of reality even according to the neo-positivist position. Hans Albert (*Der logische Charakter der theoretischen Nationalökonomie*, . . . ) illuminates this ideological tendency of immunization in economic theory by the illustrative concept of "Model Platonism".

Marx, on the other hand, bases his economic analysis on a completely different concept of science and ideology. His critique of bourgeois science and society is not determined by the problem of distinguishing between "positive" and "normative" or "objective" and "ideological" statements, but by that of elaborating the socio-economic basis of the ruling ideas and ideologies in bourgeois society and by their systematic criticism from the point of view of scientific socialism. The connection between the basic socio-economic structures and the ideologies based on them are nevertheless seen as mutual but still essentially determined by the socio-economic basis, in spite of some misleading simplifying propositions in the *Communist Manifesto* (1848) and in his *Contribution to the Critique of Political Economy* (1859). Contrary to a widely held view, the relationship

between "basis" and "superstructure" is not decisive for Marx's critique of ideology, but rather the demystification of the social relations in bourgeois society which are obscured by commodity fetishism in theory as well as in practice. Only from this point of view can the content and result of Marx's analysis of value in *Capital* be fully understood.

According to the Marxist view of knowledge (q.v.) ideas can only be interpreted in the frame of and in connection with their social and historical background and an absolute, generally valid knowledge abstracted from socio-economic reality is impossible: for this reason the criterion of scientific knowledge is social practice: "Social life is essentially *practical*. All mysteries which mislead theory to mysticism find their rational solution in human practice and in the comprehension of this practice" (Theses on Feuerbach. In *Marx, Engels SW*, vol. 2, p. 405).

In terms of this general meaning of ideas depending on underlying socio-economic conditions the scientific socialism founded by Marx and Engels is, of course, an ideology itself according to the Marxist understanding of knowledge, but it claims to be the first ideology of a majority which is still exploited in capitalism against earlier forms of ideology of ruling minorities which are based on and serve to conceal the specific conditions of domination. In this sense scientific socialism claims to be historically progressive and therefore scientific: "The proletariat is able to produce a correct, scientific consciousness of its position and its historical task. Scientific socialism is not an ideology in the traditional sense. Rather, the socialist ideology is a scientifically founded ideology" (Hahn, *Marxismus u. Ideologie*, . . . , p. 1188).

Important representatives of traditional economic theory have also dealt with the question of how far economics is ideologically, biased by a systematic distortion in the construction of its concepts, in the selection of problems to be dealt with and in the choice of the applied methods resulting from the general tendency to accept the respectively given conditions without question and to take them as a standard of possible knowledge. Schumpeter attempts to solve this problem of ideology by distinguishing methodologically orientated "economic analysis", with its claim of general validity, from the historical forms of economic thought influenced by the prevailing ideologies, such as political economy. His *History of Economic Analysis* (1954) is therefore devoted to the demonstration of a long tradition of positive methodology in the history of economic theory; in so doing he tries to extract from the works of important economists their lasting contribution to economic analysis. Schumpeter's monograph furnishes illustrative examples of the *relative* independence of economic science from the prevailing historical and social conditions, not dissimilar to Marx's *Theories of Surplus Value*.

A similar position has been maintained by Gunnar Myrdal in the first edition of his *The Political Element*

in *the Development of Economic Theory* (1930), where he on the one hand exposes a large number of hidden valuations but on the other hand believes that after the elimination of such ideological elements in economic theory there will remain a positive system of facts and functional relationships as a base for value-judgments which have to be introduced separately. In later editions of this book and in his *Value in Social Theory* (1958) Myrdal claims that such a separation is not yet practically possible, since

"every choice [of facts for the construction of models] involves valuations. One does not escape valuations by restricting research to the discovery of 'facts'. The very attempt, so prevalent in recent years, to avoid valuations by doing research that is simply factual and without use for practical or political efforts involves in itself a valuation. . . . The full statement of a problem, including the decision of scope, direction, hypothesis, principles of classification, and the definition of all terms used, renders explicit the valuations necessary in fact-finding research" (Myrdal, *Value in Social Theory*, . . . , p. 155).

From this standpoint Myrdal criticizes systematically the positivist and neo-positivist conception of the problem of value-judgments. Similar to him, Joan Robinson considers economic theory to be "partly a vehicle for the ruling ideology of each period as well as partly a method of scientific investigation" (*Economic Philosophy*, . . . , p. 1). Although she recognizes, too, the impossibility of a practical separation between ideology and economics, she considers it to be the economist's task to distinguish as sharply as possible ideology from positive knowledge. Myrdal's and Robinson's concept of ideology comes in some respects close to the Marxian conception, but is especially distinguished from it in two points: they use a great number of equally decisive factors for explaining ideological bias (besides the social relations of production, also cultural, religious or subjective factors), and, with respect to ideology, they place Marxism on the same level as bourgeois theories. A significant contribution to the clarification of the concept of ideology in this context has been furnished recently by Ronald Meek (*Economics and Ideology*, . . .).

## II. ECONOMIC MODELS

The question of feasible forms and methods of constructing economic models is closely connected with the problems of ideology and value-judgment. The model as a simplified theoretical representation of reality can be comprehended as a generalized form of measuring, as a mapping of things and of relations of things onto a logical structure. The underlying process of abstraction can be understood as a generalized form of measuring, as a one-to-one mapping preserving the relation of things ( $d_1, d_2, \dots$ ) to elements of the model ( $d'_1, d'_2, \dots$ ) and of relations ( $r_1, r_2, \dots$ ) to relations of a mathematical theory ( $r'_1, r'_2, \dots$ ). Relations are thereby thought of subjects of the Cartesian product of two sets; these relations are further specified by additional conditions (e.g. as equivalent relations or as functions). This general concept of model (or theory) is applicable

both to Marxist economics and economic theory; yet it does not suffice for a complete characterization of economic theories or of the process of forming theories. The decisive differences between Marxist and bourgeois economics are to be seen in the question of evaluation and selection of essential elements and relations of reality to economics and, related to this, the question of applicability of the dialectical method (see DIALECTICS and DIALECTICAL MATERIALISM).

The relation between dialectics and traditional logic should not be regarded as an antagonistic contradiction. The Marxian dialectical method contains on the contrary the classical principles of logical derivation as essential (but not exclusive) precondition, or, as Engels states, as "limiting case". Therefore, the controversy proper refers to the question of whether it is allowed to supplement or to relativize the forms of logical deduction by dialectical procedure orientated to the respective contents (cf. Bloch, *Subjekt-Objekt*, . . .).

The traditional logical deduction is characterized by the application of an explanation (*explanans*) which contains the specific initial conditions and the general hypothesis of the model, to the phenomenon to be explained (*explanandum*). A scientific explanation is claimed when the *explanans* is empirically substantial and hence principally observable and examinable by experiment. Such scientific derivations are also called "meaningful theorems" (Samuelson, *Economic Theory and Mathematics*, . . .) in economics. According to Karl Popper a theory is falsifiable, if its hypotheses exclude certain phenomena. The refutation of a proposition outweighs its empirical verification, because conformity between theoretical derivations in economics (and more generally in social sciences) and certain phenomena of the real world does not imply its correctness, but only its possible compatibility with reality and for this reason, therefore, it does not necessarily exclude other theoretical hypotheses. To attain essential abstractions of the complex real economic and social interrelations is therefore to be seen as the decisive problem of the construction of economic models and theories: this means that the definitions, functional relations and other simplifications of the real world which enter into the model must help to reach a better understanding of the complex reality by means of model analysis and its application to empirical problems through subsequently increasing concreteness. With regard to this, there does not exist any difference between Marxist and bourgeois economics. Hence, abstractions and models of economic reality are only seemingly arbitrary, they are not an end in itself.

Marx illustrates in his *Grundrisse* (Rohentwurf) of 1857-58 the purpose of economic model-building: the amorphous immediate experience of economic reality is first of all "a chaotic conception of the whole" (Marx, K., *The Grundrisse*, Ed.: D. McLellan, Ldn, N. Y., 1971, p. 34). Thus, to begin with, "the complete conception passes into an abstract definition": then "the abstract definitions lead to the reproduction of the

concrete subject in the course of reasoning" (*ibid.*, p. 34f.).

Only then can reality be comprehended as a structured "aggregate of many determinations and relations" (*ibid.*, p. 34). Against this commonly accepted purpose of knowledge through economic models, there arise essential difficulties. On the side of techniques and methods, a significant difficulty consists in compromising between operationality and calculability of models (with the resultant danger of oversimplification) and the claim to include as many aspects of reality as possible in the model (with the danger of overcomplication and of constructing intractable models): "It follows that the Scientist, like the Pilgrim, must wend a straight and narrow path between the Pitfalls of Oversimplification and the Morass of Overcomplication" (Bellman, *Dynamic Programming*, . . . , p. X). Since therefore for technical reasons reality can never be totally comprehended in an adequate model, certain modifications (i. e. factors of influence at first not taken into account) must subsequently be introduced, if one wishes to apply the model to phenomena of the real world. But the substantial difficulty arising from this lies in the fact that the possibility of further concretion is influenced by the form and the extent of the initial abstraction (models). For this reason the actual purpose of the investigation must be considered already when setting up the models; the model building is hence also determined by the questions under consideration. Obviously a single model does not allow all phenomena of the real world to be explained, even if it is subsequently modified. Therefore various methods and models may and must coexist in various fields and/or levels of abstraction. For this reason Marxist economics and traditional economic theory are not to be regarded as mutually contradictory.

A false consequence from this scientific structure of economics would be to presume an arbitrary pluralism of models and methods. More important is to work out the respective sphere of validity for single methods and models and, above all, their interrelations. Because of its lower level of abstraction, bourgeois economics can be fully applied and interpreted only in the framework of a general abstract theory of social development. On the other hand, the general theory Marxist economics needs concretion and modification by special theories of social subsystems (as, in part, economic theory does). If one accepts neo-positivist terminology, the relation between Marxian and bourgeois economics can be seen — in a very simplified manner — essentially as the relation between a meta-theory of the conditions of constructing economic theories and of social development on the one hand and a special theory of economical use of scarce means on the other. This global characterization does not mean that economic theory is a necessary concretion of Marxist theory nor that the latter becomes a necessary meta-theory of economic theory. The classification of economic models with regard to models of explanation, verification and

decision-making has only secondary importance, because these models do not differ in their structure but only in the different types of data entering into the basic construction of the model (cf. Angermann, *Industrielle Planungsrechnung*, . . .). Whereas explanatory models are characterized by a purely logical derivation from model hypotheses for the purpose of a rational explanation of real processes, verificatory models use historical (statistical) data for testing theoretical hypotheses and deductions which may be obtained, for example, from explanatory models. Finally, decision-making models are directly orientated to a concrete application in business management or economic planning and forecasting. "If one looks at the connection of models of explanation, models of verification and models of decision-making it becomes evident that they form a coherent complex of investigation. The causal-logical connection of these three types of models results from the regular succession of steps immanent in the scientific process of thinking: cognition, demonstration, application" (Angermann, *op. cit.*, p. 18). Distinguishing model types according to the methods applied (e. g. ideal model, programming model, etc.) or according to their form of representation (e. g. model of analogy, eidetical model) can cover only some superficial features and cannot provide a deeper explanation, unlike the classification mentioned above.

### III. VALUE-JUDGMENTS AND PRAXIOLOGY

The postulate of freedom from value-judgment put forward by Max Weber (The Meaning of "Ethical Neutrality" in Sociology and Economics, . . . ; also "Objectivity" in Social Science and Social Policy, . . .) has been central to the theoretical and ideological discussion between Marxist and bourgeois economists, and also within the different schools of traditional economic theory. Its operational meaning consists in the demand for a strict separation between scientific analysis and description of social phenomena and, on the other hand, their evaluation derived from extra-scientific criteria. Taken only as a methodological warning against subjectivist, unfounded and even unfoundable opinions put forward as scientific ones, this postulate surely would have been generally accepted. The Marxist and partly also non-Marxist criticism of this refers rather to two related positivist consequences of the postulate: the explicit or implicit negation of the social and historical limitations of social theories (problems of ideology; see above: D. I) and the reduction of economic research to the relations between means and ends (praxiology). The separation between positive (= "value-free") and normative (= "evaluating") theories based on this postulate of freedom from value-judgments served in economic theory to narrow the field of research down to the aspect of rationality between means and ends and with this to reduce economic theory instrumentally to the inquiry

into the relationship between (objectively given) means and (evaluating and therefore in principle arbitrarily introduceable) ends. While positive economics according to this conception was supposed to serve the description and formalization of possible relations between means and ends, the main task for normative economics (especially welfare economics) was to supply or to select the goals to be aimed at (cf. Boulding, 1952; Mishan, 1960).

The ideological character of this seemingly "value-free" position is best demonstrated by Gunnar Myrdal in his *Value in Social Theory*. The connection between "freedom from value-judgments", and the instrumentalization of economic theory derived from it, and the practical needs of bourgeois society is not only seen in the concrete results of the praxiological theories (such as operations research, application of economic theories for economic policy) but also in the presupposed conception of economic knowledge: This way of thinking tends to take the variables of the social and economic system in classical and especially Marxian economics as externally given data (parameters) from the marginal sphere of economic research, or even to put them entirely outside, which implies the negation of society as a problem of economic theory. In contrast (and in direct opposition) to Marx's position, which states that rational economic abstraction is possible only by consideration of social and historical factors (see above: B, II 2), it is here maintained that value-neutral science demands abstraction from these factors. The basic separation of objective relations between means and ends from the evaluation of goals is thereby exaggerated, as Myrdal points out. Even the selection of feasible means — and not only the choice of ends — presupposes a value-judgment. In addition, unintended or even unwanted side-effects may arise by applying the models or theories to reality, so that different means cannot be regarded as equivalent; thus an evaluation of the complementary effects becomes necessary too. In principle, the acceptance of a narrow instrumental conception of economic, which has recently also become manifest in the political economy of socialism (see above: B, IV 2), means essentially at least the implicit acceptance of the concretely or theoretically given situation and hence a hidden value-judgment (e.g. for the *status quo*).

These justified arguments against the instrumental misconception of economic theory are not directed against the principle of rationality *per se*, but against its partial and unreflected application. Praxiology as a general science of action determines the theory and practice not only of bourgeois economics but also of socialist economics (cf. Lange, *Znaczenie prakseologii* ...).

Marx himself, whose central issue was not the questions of rationality but the attempt "to lay bare the economic law of motion of modern society" (Marx, *Capital*, ..., vol. I, p. 10), recognized the significance of rationality for the development of productive forces

in capitalism and socialism and specified it in his principle of "economy of time":

"The less time society requires in order to produce wheat, cattle, etc., the more time it gains for other forms of production, material or intellectual. As with a single individual, the universality of its development, its enjoyment and its activity depends on saving time. In the final analysis, all forms of economics can be reduced to an economics of time. Likewise, society must divide up its time purposefully in order to achieve a production suited to its general needs; just as the individual has to divide his time in order to acquire, in suitable proportions, the knowledge he needs or to fulfil the various requirements of his activity.

On the basis of community production, the first economic law thus remains the economy of time, and the methodical distribution of working time between the various branches of production; and this law becomes indeed of much greater importance" (Marx, K. *The Grundrisse*. Ed.: D. McLellan. Ldn, N. Y., 1971, p. 75f.).

The emphasis on the principle of rationality in economic theory by means of increasing formalization and mathematization and the consequently increased computability and applicability of economic theory as well as its prevalence in the practice of capitalist and socialist societies should nevertheless not obscure the lasting antagonism between capitalism and socialism, between bourgeois economics and Marxist theory:

"... these general or common features discovered by comparison constitute something very complex, whose constituent elements have different destinations. ... The conditions which generally govern production must be differentiated in order that the essential points of difference be not lost sight of in view of the general uniformity. ... The failure to remember this one fact is the source of all the wisdom of modern economists who are trying to prove the eternal nature and harmony of existing social conditions" (Marx, Introduction to the Critique of Political Economy, ..., p. 269).

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