

Popper's Views on Natural and Social
 Science
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 CONTENTS

Introduction 1

PART ONE
 GENERAL METHODOLOGY

1. Metaphysics and Science	11
2. Growth of Knowledge	21
3. Deductive Knowledge	27
4. Justification	31
5. Pragmatism	38
6. Inductive Probability	44
7. The Conjectural Method	51
8. Objectivity and Truth	58
9. Causal Laws, Probabilistic Laws and Models	64
10. A World of Propensities	70
11. Metaphysical Research Programmes	78
12. Evolutionary Epistemology	84
13. A Case for Indeterminism	92
14. Critique of Quantum Mechanics	99

PART TWO
 APPLICATIONS TO SOCIAL SCIENCE

15. Critique of Historicist Views	109
16. Holistic Planning	117
17. Situational Logic	122
18. Piecemeal Planning	132
19. Individualism	138
20. Models and Individualism	144
21. Institutions and Traditions	149
22. The Role of History	155
23. An Application to Economics	160
24. Critical Economists	165
25. Relevance to Economics	172

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Conclusion	180
Appendices	
I. The Birth of <i>The Open Society</i> : a Personal Reminiscence	183
II. Popper and Hayek on Piecemeal Social Engineering	191
III. Advice to Russian Readers of <i>The Open Society</i>	198
Bibliography	200
Index	203

17. SITUATIONAL LOGIC

I would be quite nonplussed if I were asked to cite any economic proposition other than of purely formal significance, which might be adduced as a scientific result recognized by everyone.

Knut Wicksell

Ever since Newton's brilliant success in explaining physical phenomena there have been attempts to discover basic laws for social phenomena. Saint Simon, the inspirer of early European socialism, went so far in his enthusiasm as to propose that all sciences, social as well as natural, should seek their basis in Newton's law of gravitation, the supreme principle which God had imposed on the universe. His collaborator and follower, Comte, generally regarded as the founder of sociology, looked rather to biology for 'static' laws of coexistence and 'dynamic' laws of succession in his new science. This idea had great influence in France and also in Germany where it was taken up by the Young Hegelians, so much so that Hayek regarded Comte as having been about as important as Hegel for modern historicism¹.

Comte also influenced some English thinkers, notably Carlyle and J.S. Mill, who had previously been impressed by some of Saint Simon's ideas. But Mill, rejecting the collectivism which was so marked a feature of these Frenchmen's ideas, sought to base social laws, not upon physics or biology, but upon psychology as the basis 'on which all the moral and political sciences ultimately rest'².

This view, no doubt, owed much to his father's *Analysis of the Phenomena of the Human Mind*, a pioneer work in psychology, much influenced by the cognitive psychology of Locke and Hume. A similar view had been expressed in Germany by Fries and Benecke, and was labelled 'psychologism' by Husserl, (who did not agree with it). Neither Comte nor Mill succeeded in finding laws of coexistence or succession. As Hayek points out, Comte gave a scant exposition of the static part of his positive system and, in the dynamic part, did little more than re-assert that

civilization progressed through stages of theology, metaphysics and positive science without explaining this progression³. And Mill, after expounding his scientific views in *A System of Logic*, made hardly any use of them in his *Principles of Political Economy*. His psychologism is reflected there in a partial recognition of demand as an influence on the value of a good, but not enough to make him break loose from Ricardo's labour theory of value. It certainly did not lead him, in spite of some training in the differential calculus, to the marginal utility theory of value.

Menger, an independent discoverer of this marginal utility theory and the founder of the Austrian subjectivist school of economics, was far from holding that psychology, or anything else, could furnish historical laws of economic development; that, he said, 'would be a one-sided monstrosity'⁴. He and his followers rather emphasized the importance and purposive character of individual activity, its dependence on subjective valuations, knowledge and expectations, and the central problem of the unintended consequences of individual actions.

Popper, notwithstanding his decisive rejection of historicism and collectivism, takes for his critique of psychologism⁵, an epigram of Marx's: 'it is not the consciousness of man that determines his existence—rather it is his social existence that determines his consciousness'. He praises Marx for recognizing the autonomy of sociology—its independence from psychology; for Marx made the development of objective conditions of production his basic socio-economic determinant, irrespective of the mental processes or moral characters of individual capitalists or workers.

Although Popper very much approves the methodological individualism which lies behind Mill's view, he has three main arguments against his psychologism. The first is that, if social institutions are to be explained by what Mill called 'the actions and passions of human beings', we would have to explain the beginnings of society in terms of pre-social human nature. That is absurd, if we consider that man's pre-human ancestors had some kind of social organization so that society would have existed before 'human nature' had become developed. Language, moreover, is itself a social institution, and so presupposes some kind of society. The second argument is that human actions often

¹ *The Counter-Revolution in Science*, p. 220.

² *Autobiography*, Ch. VI.

³ *op. cit.*, pp. 342-44.

⁴ *Investigations into the Method of the Social Sciences*, p. 121.

⁵ In Chapter 14 of *The Open Society and Its Enemies*.

have unforeseen consequences which cannot be explained simply in terms of individual motives and desires. (And, as Menger had emphasized, following Montesquieu, Burke and Mandeville, social institutions have largely developed without conscious planning or direction.) The third argument relates to Popper's important idea of *situational logic*. He holds that our social actions are very largely explicable in terms of the situations in which we are placed, objective situations which involve both a physical environment of natural, human or capital resources and a social environment of traditions, customs or institutions. Psychological considerations may enter into the explanation of these actions but cannot be anything like the whole of it and will often be only a comparatively trivial part as, for example, in explaining the development and consequences of a famine. It is, moreover, impossible to cover all individual psychological influences in any analysis of a social situation.

Popper is content to reduce psychological considerations to the simplification of a *rationality principle*, 'the principle of acting appropriately to the situation; clearly an almost empty principle'⁶. He stresses that it has little to do with any psychological assertion that people always act rationally. Rather it is a consequence of his *methodological postulate* that we should, as far as possible, try to explain social phenomena in terms of the objective features of a situation, features which include the objective aspects of human aims and expectations, not the ways in which these are diversely generated in individual minds.

This rationality principle is not, then, to be regarded as an empirical or testable hypothesis. Nor is it to be regarded as *a priori* valid as some Austrian economists, notably Mises, would have asserted. For, being only an approximation, it cannot be universally valid, and so must be false. Often, however, it may be sufficiently near to the truth for providing a good explanation.

⁶ David Miller, editor, *A Pocket Popper*, Section 29. Ludwig Lachmann gives a similar account in his explanation of Austrian methodology which explains human actions in terms of individuals' plans. 'We are here concerned', he says, 'with purposes, not with motives, with plans, not with the psychic processes which give rise to them, with the acts of our conscious minds, not with what lies behind them. As soon as our thoughts have assumed the firm outlines of a plan and we have taken the decision to carry it out over a definite period in future time, we have reached a point outside the realm of psychology, a point which we can use either as the starting point or the final goal of our enquiry. . . . In neither case are we trespassing on the domain of psychology.' 'Methodological Individualism' in *Roads to Freedom* (1969), edited by Erich Streissler, p. 94.

He gives a number of reasons for adopting this methodological postulate.

- (i) Models of an objective social situation are more informative and testable than is the rationality principle; it is almost empty and false so that testing it would not tell us anything new.
- (ii) Theories can be tested only as a whole, and a test involves choice between alternative theories; most social theories of any merit would have this rationality principle in common, implicitly if not explicitly.
- (iii) Attempts at replacing the principle seem to lead to complete arbitrariness in modelling social situations.
- (iv) Adoption of the postulate can lead to deeper analysis of what is relevant in a social situation or structure.

The word 'model' has reappeared here in exactly the same sense as in § 9 of Part One, where it was described as a *representation of typical initial conditions and of typical relations between these conditions*. It was noted that physics, and other natural sciences, had made considerable use of such models to explain or predict a kind of event when universal laws and exact initial conditions were lacking for the explanation or prediction of a singular event. The kind of event could be explained when the model was supplied with some 'driving force', even if this itself could be only sketchily explained. That is why Popper offers his almost empty rationality principle. It is a general substitute for the universal laws which social science, unlike natural science, has had such difficulty in finding.

Social models are discussed in § 23, but they may be given an interim illustration here by sketching an elementary aspect of marginal utility economics, the theory which, Popper says, suggested to him the idea of situational analysis. Consider the situation of consumers with given preferences for goods or services, given market prices for these goods or services, given incomes and predetermined decisions about the proportions of their incomes that are to be taxed, saved or borrowed. Call what they have left to spend on consumption disposable resources. Consumers are assumed to have the aim of reaching their highest realizable levels of individual utility, and to act rationally in achieving this aim by making appropriate allocations of their disposable resources between purchases of the available goods and services. On the further assumption that any additional unit of a good or service is less preferred, —confers less utility than any that preceded it in an individual's consumption, —it is held that marginal utility declines. From this assumption it is deduced that

the purchases of any good or service increase as its money price falls relatively to the money prices of other goods and services. (A fuller version of this theory attempts explanation of saving and borrowing, and also of the exceptional case of an 'inferior good', whose purchases may decrease as its relative price falls.)

It is true that Popper, in affirming 'the unity of method' between natural science and social science, did assert that there are universal social laws, and offered some examples.⁷ It must be said, however, that although his examples have the form of universal laws they are rather vapid and their truth is doubtful. One example is: 'you cannot introduce agricultural tariffs and at the same time reduce the cost of living', and another: 'you cannot introduce a political reform without strengthening the opposing forces, to a degree roughly in ratio to the scope of the reform'. But it is quite conceivable that an agricultural tariff is used to reduce other tariffs which affect the cost of living to a greater extent. It also seems plausible to describe the political changes which Lee Kwan Yu made in Singapore as a revolution, and to claim that he did effectively suppress opposing forces. Nor is it a way out for a Popperian to qualify, for example, his first law by invoking a clause of the *ceteris paribus* type; for elsewhere Popper insists that such a clause must never 'be added to a theory since it would destroy its testability'.⁸ Disturbing influences, that is, should be identified and assumptions about their constancy stated in the initial conditions.

More convincing, perhaps, but rather vague, is another example which he gives; 'wherever the freedom of thought, and the communication of thought, is effectively protected by legal institutions and institutions ensuring the publicity of discussion, there will be scientific progress'.⁹ But the conditions listed may be sufficient rather than necessary, and there is no assertion of anything like a quantitative connection. Has there been less scientific progress in communist Russia than in democratic New Zealand?

Popper, in any case, would now share the scepticism about social laws expressed by Wicksell in the quotation which heads this section, and by Hayek who has said: 'although we possess theories of social structure, I rather doubt whether we know any 'laws' which social phenomena obey'¹⁰. Nor are they alone in

⁷ *The Poverty of Historicism*, Section 29 and pp. 62-63.

⁸ *Realism and the Aim of Science*, p. 288.

⁹ *The Open Society*, Chapter 13, note 13.

¹⁰ *Studies in Philosophy, Politics and Economics*, p. 42.

expressing such scepticism; for two other Nobel prizewinners in economics have said much the same thing. Hicks has emphasized that 'economics is in time, and therefore in history, in a way which science is not'¹¹; and Samuelson, commenting on the 'treacherousness' of economic laws, has said that 'if these be laws Mother Nature is a criminal'¹².

The lack of universal laws, invariant over space and time, does not itself mean that social phenomena cannot be given scientific explanation. A scientific theory is a tentative, criticizable and testable explanation of the relations between empirical phenomena, and we have seen that a model can serve this purpose, given some driving force which need not itself be explained if we have to accept rougher explanations than those which scientific laws make possible.

Social models are necessarily rough approximations to truth because, even if theoretically polished or technically sophisticated, they are schematic oversimplifications of objective social situations. We could not represent anything like the full complexity of such a situation by a model, and so have to attempt a selection of its more relevant and general features for mapping. For this reason, and also because the rationality principle is only an approximation, Popper points out that tests of social models are usually neither clear-cut nor easy to obtain. There will often be difficulties in deciding whether a discrepancy is due to the roughness of a model or to a mistake in its construction. Nevertheless, Popper thinks, that rival models may help us to choose appropriate tests between them, and that historical research can help in this respect. If discrepancies are large we should, of course, try to improve the model. Ideally such improvement would lead to small and non-systematic discrepancies between theoretical and actual outcomes because any large or systematic discrepancy would point to some relevant explanatory feature having been missed from the model.

There is a further difficulty arising from the changeability of social conditions. Physics, like economics, has used models. But in physics, Popper says, it has been possible, in many cases, to reduce the parameters of equations to a small number of natural constants. 'This is not so in economics; here our parameters are themselves in the most important cases, quickly changing variables. This clearly reduces the significance, interpretability, and

¹¹ 'Is Economics a Science?', *Interdisciplinary Science Review*, 1984, pp. 213-14.

¹² *Collected Scientific Papers*, p. 1539.

testability of measurement.¹³ That is why historical research can help. The mere fact of change need not be important; what matters is whether change has affected the model's explanatory power.

The idea of situational logic came to Popper, as we saw, from marginal utility economics which Menger had helped to pioneer. It is not surprising that others who were influenced by Menger's school had a somewhat similar idea. This is particularly evident in the work of Max Weber, the great sociologist, who also found economics a guide for social theory. He saw that, although Menger's school stressed subjective phenomena, Wieser was wrong in describing its method as psychological; it had nothing to do with experimental psychology but was rather 'pragmatic' in the sense of using the categories of ends and means¹⁴. This points to some agreement with Popper's rationality principle, but there is stronger evidence for this in Weber's famous theory of 'ideal types' which, although essentialist, foreshadows situational logic¹⁵.

There is a loose parallel, too, between Popper's rationality principle and Weber's *Verstehen* method of intuitive understanding. For example, in *The Poverty of Historicism*, Popper acknowledges that we have a more direct knowledge of 'the inside of the human atom' than we have of the physical atom and that we use this knowledge to frame hypotheses, although strongly insisting that these cannot be trusted and so have to be tested¹⁶. He goes on to say that the 'element of rationality' in human conduct makes it possible to construct approximative social models which can be less complicated than physical models¹⁷. But in *The Open Society* he refers to Weber's method and, although appreciating his dismissal of appeals to self-evidence, questions whether the method is peculiar to social science because natural scientists may also develop a 'feel' for the phenomena that they are studying¹⁸.

Weber, and the economists Marshall and Pareto, had much influence on Talcott Parsons in developing his rather opaque accounts of 'voluntary social action' and of 'structural-functional

¹³ *The Poverty of Historicism*, p. 143. Popper acknowledges that he got this idea from Lionel Robbins' article, 'Live and Dead Issues in the Methodology of Economics', published in *Economica*, 1938.

¹⁴ See L.M. Lachman, *Capital, Expectations and the Market Process*, p. 53.

¹⁵ See Weber's 'The Interpretative Understanding of Social Action', in May Broadbeck, editor, *Readings in the Philosophy of the Social Sciences*, p. 23.

¹⁶ *The Poverty of Historicism*, p. 138.

¹⁷ *idem*, pp. 140-41.

¹⁸ *op. cit.* Note 44[2] to Ch. 11.

theory', which have some resemblances to situational logic. Hayek also developed something like it from the ideas of Menger and Mises, although in a way that was more polemical than constructive¹⁹.

Some of Popper's philosophical colleagues—Agassi, Jarvie, Watkins and Wisdom—have also discussed situational logic in a supportive way, although, as Jarvie says, 'either in a polemical context or very briefly'²⁰. Jarvie himself points out that Popper's analysis of Plato's law of decay, and of Marx's theory of class struggle, in *The Open Society*, can be interpreted as early applications of the method of situational logic. He also cites examples of situational analysis in non-economic fields; Moynihan's work on Negro riots, Davis' work on prostitution and Evans-Pritchard's work on Azande witchcraft²¹.

There have also been critics of this important method. A recent one is Hands who wrote an article, 'Karl Popper and Economic Methodology'²². His first criticism is a curious logical argument. According to Popper, situational logic was inspired by the example of marginal utility economics, Darwinism is also an example of situational logic, and the growth of scientific knowledge is akin to Darwinism; are, then, Darwinism and the growth of knowledge applications of the method of marginal utility theory? This question would not, perhaps, have been asked if Hands had appreciated what Popper says about models. Models describe, not unique, but *typical* situations, as in marginal utility economics. Evolution is a *unique* development and so hardly susceptible to analysis by a model. Science has used models but has gone beyond them, in many fields, by invoking *universal laws*, and such laws are not available to economics.

But most of Hands' doubts relate to the rationality principle. He asks whether it is necessary, and whether it is not metaphysical. His question about necessity arises from the seeming paradox that this principle is said to be needed for situational analysis in social science but is not available to natural science, and this would contradict Popper's claim for a unity of scientific method. In making this charge Hands ignores many examples of situational logic in biological evolution, some of which are noted in § 17. In any case, the basis of this unity of natural and social science is, for Popper, the general method of conjectures and

¹⁹ *The Counter-Revolution in Science*, Part I.

²⁰ I.C. Jarvie, *Concepts and Society*, p. 179 n 2.

²¹ *idem*, Ch. 1.

²² *Economics and Philosophy*, 1985.

refutation, which applies both to the causal explanations of natural science and to the situational explanations of social science. Theoretical models, moreover, can be used in both types of science. All that is different is the use of the rationality principle to drive the situational models of social science instead of the many laws, causal or probabilistic, which can be invoked to drive the models of natural science.

Mention may be made, too, of Caldwell's claim that there is a conflict between Popper's two principles of falsificationism and situational logic.²³ Science is distinguished from metaphysics by the criterion of falsifiability; situational logic depends on the rationality principle but this, Popper says, is not falsifiable; must it then be metaphysical and also theories which rely on it? Watkins has interpreted the principle a 'confirmable and influential metaphysics', confirmable by introspection. Caldwell thinks there are two other alternative interpretations. If it is to replace in social models Newton's laws in physical models, can it be regarded as a kind of universal law itself? That cannot be the case if the principle is unfalsifiable. Alternatively the principle may be regarded as a methodological principle which is used because it has so far proved useful. But this is an inductivist argument and Popper opposes inductivism. Boland has long argued that falsificationism is inadequate for choosing between theories and has stressed instead the value of Popper's critical rationalism which is anti-justificationist and anti-inductivist. Caldwell's preferred solution of these dilemmas is pluralistic. By invoking also critical rationalism, he would allow the use of both falsificationism and the rationality principle in their appropriate contexts. The principle would then be defended on the ground that a situational model can be most severely and fruitfully criticized by looking to its objective features whenever it appears to be falsified.

This defence, of course, is one of the grounds given by Popper for using the rationality principle, another being to avoid the arbitrariness in theorizing that results from the alternative use of psychologism. It is true that Popper gives no discussion of the relation of this principle to falsificationism beyond saying that it is a methodological principle and as such is not susceptible

²³ 'Clarifying Popper, *The Journal of Economic Literature*, March 1991. His expositions suffers from a common confusion between the logic of scientific discovery and the practice of scientists. Thus he asks; 'If falsificationism is so alien to the practice of economists, why not reject it altogether?' His answer is that 'falsification captures a recognizable part of scientific activity, even within economics'. (p. 28).

to direct empirical testing. We can test a particular model which uses the principle but this would not be a test of the principle because a better model would also use the principle. Brief though these statements are, they would seem to indicate clearly enough that the principle is to be regarded neither as a universal law nor as inductively justified but as a methodological principle which advises us to look to the objective aspects of a situation in trying to explain it.

20. MODELS AND INDIVIDUALISM

The logic of reasoning with models is thus the chief basis of scientific method in economics. It has had a most important part in the building up of economic theory, and has been of even more obvious importance in the different techniques of applied economics.

E. Malinvaud

Criticisms have been made of Popper's insistence on methodological individualism. Blaug, for example, after mistakenly accusing him of muddling economic and political liberalism, asks why methodological individualism should be made a necessary, or even a principal, feature of social science¹. He goes on to assert that exclusive adoption of this principle would rule out macroeconomics so that there must be something wrong with it, and quotes, with approval, similar comments made by Broadbeck². Ryan has questioned why Popper calls this principle methodological individualism since he allows it to include the situations in which individuals find themselves and also interrelations between them. Opposition to holism and methodological collectivism does not, he thinks, entail methodological individualism. For situations and interrelations can be described in non-holistic terms without reference to individuals; e.g. kinship and language rules, which are often needed for identifying 'initial and boundary conditions'.³

Ryan's questions show some failure to appreciate that *methodological individualism* and the method of *situational models* are closely linked in Popper's prescription for the theoretical social sciences. That could have been seen in *The Poverty of Historicism*⁴, but came out more clearly in 'The Rationality Principle'⁵. This explained that a social model would include among its typical initial conditions:

- (i) some physical things and their properties (e.g. natural resources, buildings, transport systems, and machines);

¹ *The Methodology of Economics*, pp. 46–52.

² 'Methodological individualism: definition and reduction', *Philosophy of Science* 1958.

³ *The Philosophy of Social Explanation*, p. 129.

⁴ *op. cit.* Section 31.

⁵ *A Pocket Popper*, Section 29.

- (ii) some institutions and their properties (e.g. laws, markets and money);
- (iii) some aims of people (e.g. maximization of utility, profits, or wealth);
- (iv) some elements of knowledge available to people (e.g. technology, market prices, or taxes); to which could well be added
- (v) some expectations which people hold about future social conditions (e.g. about war, unemployment, inflation or exchange rates).

It is, of course, likely that some of the initial conditions change, and that their change may be at least partly explicable in terms of the working of the model. What makes it work is, as we have seen, the rationality principle that actions taken are appropriate to the problem situation, a principle which escapes the difficulties of psychologism.

The last three conditions, obviously, relate to individuals and to their mental equipment so that, although Popper rejects psychologism, he accepts Menger's emphasis on subjective phenomena, *treated objectively*, as the basis for economic analysis and generalizes it, as situational analysis, to cover other social sciences.

Physical conditions belong to World 1, aims and expectations to World 2, and both institutions and knowledge to World 3. Institutions have the major role of serving to coordinate or interrelate the activities of individuals in attempting to realize their aims subject to the limitations imposed by the physical environment and by the institutions themselves. The kinship and language rules mentioned by Ryan are obviously institutional, and they are related to individuals in the way just explained.

Blaug's question about macroeconomics is a more difficult one. The Austrian School of economists, whose work inspired Popper's situational models, has always had severe reservations about macro-type analysis. Hayek, for example, wrote that it is an illusion to suppose that a macrocosm of collectives or constant configurations can be strictly defined or described in objective terms⁶, although Streissler remarks that Hayek's early work on the trade cycle was of a decidedly macro character⁷. Lachmann, similarly, states that a macroeconomic magnitude must never be brought into an argument without giving a careful account of its micro elements

⁶ *The Counter-Revolution of Science*, p. 104.

⁷ *Roads to Freedom*, p. 249.

because any change in their constellation can affect the macro element⁸.

Popper, like Menger before him, speaks of *typical* initial conditions and of *typical* relations between them and individuals; and 'typical' suggests something like a mode or average, which is a macro concept. There is, undoubtedly a need in social analysis to generalize about individual aims, expectations and behaviour if we are to avoid impossible demands on data collection and impossibly complex analysis. Hicks has shown that the Classical English economists, although liberals, were basically macro theorists⁹, and when Marshall moved towards catallactics he worked in terms of 'representative' men and firms to study markets and industries.

Some of this generalization has involved statistical measures of aggregates or averages—commodity flows and stocks, incomes and wealth, money supplies, price indices, average interest rates, profit rates, wage rates, unemployment rates, etc. These measures have involved difficulties which are well-known to most economists. Diverse elements grouped under the same classification can be aggregated or averaged only on a value basis, and this basis will shift with changes in the relative prices of grouped elements. Such changes can be frequent and large, and especially affect those valuations (e.g. of capital goods) which depend upon future prices and so upon expectations. A further serious problem is that statistical measures of macro variables are often so difficult and expensive to collect that economists have to rely on measurements made by governmental agencies, and hence subject to administrative or fiscal considerations which, along with imperfections of data collection, can cause marked divergences of these measures from the theoretical concepts which they are taken to represent. For both sets of reasons, the imprecision of a macro measurement is likely to increase with the degree of its aggregation.

Other aspects of generalizing individual activity in society do not involve measurement so much as selection—the selection of typical aims, expectations and situations. Objective indications of aims and expectations can sometimes be obtained from such published sources as articles of association and prospectuses of companies, constitutions of trade unions and friendly societies,

⁸ 'Toward a Critique of Macroeconomics', in E.G. Dolan, editor, *The Foundations of Modern Austrian Economics*, p. 152.

⁹ *Classics and Moderns*, Ch. 1.

legislation covering these or instituting public agencies, and from the formal, periodical reports of such bodies. But in the case of individuals, as distinct from formal associations of individuals, there is little but guesswork to determine their aims and expectations although sampling surveys of consumer or business sentiment throw some light. In any case, the published aims and expectations may be vague and incomplete, and individuals will have many and partly diverse aims and expectations. Theorists have, accordingly, to postulate, as best they can, a manageably small number of aims and expectations which they take to be typical for the group that they are analysing, and to revise the postulate as tests of their theories indicate that this is needed.

It cannot be doubted that there are uncomfortable compromises to be made between the impossible complexity of basing social analysis on the behaviour of numerous individuals and using, instead, macro concepts which must be, to some extent defective. Yet it would be a mistake to regard macroeconomics as distinct from microeconomics. That would be the case only if macro concepts and relations could be made independent of individuals' aims, expectations and behaviour. Hahn points out that Keynes, who is supposed to have founded macroeconomics, 'never went on such a hare-brained path. . . . Almost two-thirds of *The General Theory* is in fact devoted to microeconomics'¹⁰.

I conclude, therefore, that notwithstanding the difficulties of macro analysis, and those of providing satisfactory micro foundations for macroeconomics¹¹, Popper's insistence on methodological individualism is sound and that, contrary to Blaug's assertion, it does not make the impossible demand of excluding all macro concepts or analyses. It only insists that these must always be related, so far as possible, to the aims, activities and valuations of individuals—and never given an independent life of their own.

This is all that Lachmann and some other Austrian economists have demanded in regard to methodological individualism, and none of them have tried to avoid analyses based on typical aims and conditions. What they have condemned are holistic analyses of the Marxist or Sraffian type which try to understand the economy in terms of technical relations between macro concepts, those types of theory or econometric analysis which assert

¹⁰ *Equilibrium and Macroeconomics*, p. 311.

¹¹ See, for example, E.R. Weintraub, *Microfoundations*, and H. Theil, *Linear Aggregation of Economic Relations*.

relations between such concepts irrespective of their connections with individuals, and aggregations which ignore changes in relative prices. That, of course, excludes a good deal of what some regard as macroeconomics but still leaves necessary room for macro concepts in economic analysis.

21. INSTITUTIONS AND TRADITIONS

The Americans have shown that it would be wrong to despair of regulating democracy by the aid of manners and of laws.

Alexis de Tocqueville

Popper's insistence that social science has to seek explanations of important social phenomena largely in terms of the unintentional results of intentional individual aims and actions has already been noticed. Both he and Menger stressed that such explanation was often needed for social institutions and also for many economic phenomena, notably market prices. Popper argues that it is even more needed to explain traditions, which have much in common with institutions but are less subject to conscious creation or deliberate change¹.

Traditions, on his view, refer to those aims, tastes or values which a body of people have in common with others, over successive generations, and which influence their behaviour in similar ways; examples are family or group loyalties, respect for law and order, honesty in dealings with others, and critical rationalism in science. Institutions refer to the common observation of a certain set of norms for joint fulfillment of certain *prima facie* social functions, public or private; examples are a police force, an educational system, a scientific association, a supermarket chain, or an insurance company.

Traditions are closer to individuals than institutions are, and can have an important role in ensuring that institutions function as they are supposed to do. For example traditions of honesty and fair dealing may lead a government department to avoid corruption among its members, or else lead to effective demands from politicians or citizens that the bureaucrats mend their ways.

There is what Popper calls a certain *ambivalence* about social institutions. They are set up to perform accepted functions but their powers may be misused to pervert those functions. Members of a police force, for example, may accept bribes to protect criminals instead of arresting them, members of a customs service may assist smugglers instead of preventing them, or generals

¹ *Conjectures and Refutations*, Ch. 4.