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THE INDIVIDUALISTIC RESEARCH PROGRAMME IN SOCIOLOGY

by

Karl-Dieter Opp
Professor of Sociology
University of Hamburg
West Germany

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Sociology's explanatory problems refer to social aggregates or, as we shall also say, collectives. These may be simple aggregates of individuals (like voters, criminals, employees) or groups in a wide sense (like cities, families, societies). Typical questions exemplifying sociology's universe of discourse are: Why does the suicide rate vary between countries? Why are all societies stratified? Under what conditions do social movements emerge?

In answering these questions two different theoretical orientations are possible. The one - we call it the collectivistic research programme - posits that properties of collectives (like the suicide rate of countries) or the existence of collectives can only be explained by applying propositions whose universe of discourse are only collectives, i.e. by collectivistic theories.

There is a second theoretical tradition-the individualistic research programme (IRP) in sociology - claiming that properties of collectives or the existence of collectives can be explained by applying theories about the behavior of individual actors, i.e. individualistic theories (ITs). Adherents to this programme also postulate that individualistic theories should be utilized.

This rough characterization of the two conflicting research programmes raises two questions: 1. What are the claims of the

two programmes? Only if we know what adherents to the programmes assert and postulate, they can be discussed. 2. What are the arguments in favour and against the two programmes?

Both questions are addressed in this paper. In section I we shall present some material about the two programmes, proceeding from special schools in sociology. In section II we propose an explication of the programmes. In section III some of the most frequently raised objections against the individualistic (and thus, arguments in favour of the collectivistic) research programme are discussed. In the final section we give a short discussion of the present state of the IRP,

I. Conflicting Research Programmes in Sociology

The two purely collectivistic theoretical orientations in sociology are sociological functionalism and marxist sociology. Functionalist sociology¹⁾ is concerned with social systems. The aim is to explain the stability ("equilibrium") or change of these systems. The basic orienting theoretical postulate is that social systems exhibit certain functional requirements (or functional prerequisites) which are met by particular mechanisms (like social control or economic institutions). If the realization of the functional requirements is threatened, these mechanisms develop forces which reestablish the equilibrium (or stable state) of the system, within certain limits.

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This simplified sketch of functionalism indicates that individuals have no place in explanatory arguments, at least not explicitly.

In evaluating functionalism it must be said that it has been a failure: It has not generated a precise testable theory with explanatory power.²⁾

At first sight it seems that marxism is explicitly concerned with individuals: the working class and the bourgeoisie consist of individual human beings with conflicting interests. However, the working class and the bourgeoisie are social aggregates. Marxist theory deals with "objective" relations between these aggregates: conflicts of interest are not subjectively felt divergent goals, but objective relations, whatever this means. Furthermore, collective properties like relations of production (Produktionsverhältnisse) and productive forces (Produktivkräfte) are important collective properties marxist theory is concerned with. Such properties are the explananda (like "death" of the capitalistic systems) and the explanatory variables (like "contradictions" between relations of production and productive forces).

Also marxists have failed to develop a general, testable theory with high explanatory power. Single propositions which have been tested, seem to be wrong.³⁾

Why have these research programmes failed? An adherent to

the IRP will suspect that functionalism and marxism failed because individuals are completely disregarded in their explanations. For example, one might argue that workers and employers behave according to their subjectively held aims (preferences), taking into account their opportunities for various actions. The preferences and opportunities of individuals may be very different. So it is to be expected that under certain distributions of preferences and constraints there will be no revolution and no overthrow of the capitalist system. Thus, from the perspective of the IRP marxist hypotheses only hold under certain conditions.

Of course such individualistic claims have to be tested: Explanatory arguments whose consequents are collectivistic hypotheses must be stated rigorously and they must be subjected to empirical tests.⁴⁾

The antipode of the two collectivistic research programmes is the attempt to realize the individualistic research programme in sociology. The theoretical tradition is called behavioral sociology or exchange theory.⁵⁾ George C. Homans is the founding father of this theoretical tradition and its most well known advocate. Therefore we give a short outline of his position. The following three theses seem to be most important:

1. The most general propositions of all social sciences are those of behavioral psychology (1967, pp. 38 - 39).

The term "behavioral psychology" first of all denotes propositions from learning theory. But the rational choice model (or utility theory) is also subsumed under this term. This model "coincides in part with the body of propositions of behavioral psychology" (1967, p. 38); "... it is not an alternative to behavioral psychology; the two are in fact largely the same" (1967, p. 39).

In what sense are these propositions "psychological"? Homans' answer is: "First, they are usually stated and empirically tested by persons who call themselves psychologists. Though they are, as we shall see, used in explanation by all the social sciences, the field of research in which they lie is the special concern of only one of these sciences, psychology. Second, they are propositions about the behavior of individual human beings, rather than propositions about groups or societies as such; and the behavior of men, as men, is generally considered the province of psychology." (1967, pp. 39 - 40)

2. Sociology has failed to develop propositions about aggregates which are of great generality and explanatory power and which are well confirmed (1967, p. 83, 85).

This means that sociologists have not developed fruitful propositions to achieve their explanatory objectives.

3. In order to solve sociology's explanatory problems, psychological theories should be applied. More specifically: "We need psychology to explain both why social propositions hold good, and why they do not, when they do not" (1969, p.17).

Homans' position is often called "psychological reductionism" in the sense that he aims at reducing sociological to psychological propositions. However, Homans argues that there are no sociological propositions to reduce (1967, pp. 85 - 86).

Homans did not only put forward an individualistic research programme. His work contains also original contributions to substantial sociological problems (see particularly 1974) and critical analyses of alternative theoretical orientations (see, e.g., 1964).

II. An Explication of the Individualistic Research Programme of Sociology

In this section we want to restate the individualistic research programme. Our explication is not in conflict with Homans' position, as the reader himself will recognize if he compares the following theses with our discussion of Homans' research programme in the preceding section. Our aim is to make those postulates more explicit which are, so to say, the core of the IRP.⁶⁾

A research programme - like the programme of a political party - should not contain terms which elicit misunderstandings about the content of the programme. Unfortunately, the terms "psychological theory" and "reductionism" caused associations which grossly misrepresent what adherents to the individualistic programme mean. It is easy to avoid these terms and substitute them by - hopefully - more appropriate terms.

The basic propositions of the IRP are general theories specifying how individuals behave in their social context. We call these theories "individualistic theories" (ITs) instead of "psychological theories". For space limitations we shall not try to characterize these theories in a general manner. Throughout this paper we have in mind particularly the rational choice model (or utility theory), but also hypotheses from learning theory, if we refer to ITs. The reason is that those ITs are mainly used by social scientists working in the frame of the IRP. A collectivistic theory is given if a theory only mentions collectives as its universe of discourse.

The term "reduction" will be substituted by the term "explanation" in the sense of "explanation of singular events" (or, more precisely, of statements describing such events) or "explanation of - more or less - general propositions". The term "explanation" describes what the IRP really aims at. This is expressed in the following theses:

1. ITs can be used to derive (i.e. explain) singular and general collectivistic propositions.
2. If attempts are made to derive existing singular and general collectivistic propositions by using ITs, the collectivistic propositions are derivable in their original or in a corrected version.

Thesis 1 says that if you want to explain a collectivistic phenomenon (like the increasing crime rate in a particular city) or if you want to propose a collectivistic theory (e.g. about conditions for the emergence of democracies), you can accomplish this by using ITs.

Thesis 2 refers to the situation where you try to confront existing collectivistic statements with ITs. The result will be a deductive argument, where the conclusion is the collectivistic proposition in its original or - from the view of the IT applied - in a corrected form. For example, it may turn out that a collectivistic statement is only valid under certain conditions.

Theses 1 and 2 claim, in short, that it is possible to explain sociologically relevant collectivistic propositions by applying ITs. Both theses are called the explanation theses of the IRP.

Individualists accepting postulates 1 and 2 also accept a third thesis. Assume, e.g., it is to be explained by an IT, why

different societies develop more or less division of labor. On the one hand, the explanandum refers to collectives (societies) and a collective variable (division of labor). On the other hand, the IT to be applied only refers to individuals and their properties (e.g., preferences, constraints). In order to explain the collective phenomenon by an IT, it must be specified how the collectivistic concepts can be "translated" into the individualistic concepts of the IT. Put in another way, there must be some "bridge assumptions" specifying what "society" and "division of labor" mean in terms of the applied IT. If we use the rational choice model and if a meaning analysis indicates that "society" designates a set of individuals (with particular relational and non-relational properties) and that "division of labor" refers to a particular distribution of activities among the "members" of the "society", then the rational choice model can be applied.

This example illustrates that ITs can only be applied to explain singular or general collectivistic statements if the collectivistic concepts can be reconstructed in terms of the concepts of the IT applied.⁷⁾ In general, adherents to the IRP claim:

3. Concepts designating aggregates or their properties (i.e. collectivistic concepts) in fact refer to individuals or their (relational or non-relational) properties, as a meaning ana-

lysis of the collectivistic concepts always reveals.

This thesis is often expressed in the following manner: collectivistic concepts can be defined by individualistic concepts. "Defining" a term means introducing it by stipulating a convention. Thesis 3, however, does not mean that conventions are introduced specifying that collectivistic concepts are equivalent to concepts designating individuals or their properties. Thesis 3 means that the meaning of collectivistic terms is analysed and that the result of this analysis is that the referents of collectivistic terms are individuals or their properties. We suggest to call thesis 3 "reconstruction thesis". The reason is that the meaning of the collectivistic terms is often vague so that a reconstruction (i.e. explication) is necessary.

Let us assume for a moment that the preceding theses hold true. A social scientist adhering to a collectivistic research programme may find them interesting - and continues to work as he did before. There is nothing objectionable to this reaction. The reason is that our three theses do not make any normative claim. They simply assert that collectivistic propositions can be explained by ITs, but they do not demand that anything should be done.

Of course, the IRP comprises a postulate (in the normative sense). This was apparent in our discussion of Homans' position.

We may state this normative claim - which we term explanation postulate - in the following manner:

4. ITs should be applied in explaining singular and general collectivistic propositions.

Thus, if a social scientist wants to explain singular collective events or if he wants to state new collectivistic theories, he should proceed from ITs (see thesis 1). Furthermore, if a social scientist deals with existing collectivistic propositions, he should confront them with ITs (see thesis 2).

It is important to separate the factual and normative part of the IRP. The reason is that different arguments may be invoked for each part. Consequently, one may accept the factual statements (theses 1 through 3), but may not agree to the normative thesis 4. However, acceptance of the factual theses 1 to 3 is a necessary condition for accepting the normative thesis 4. The reason is that one will not claim anything, if this cannot be realized.

Why should individualistic theories be applied? As we mentioned already in discussing Homans' position, the answer to this question is: ITs have a relatively high explanatory power and the explanations they deliver are more valid than those offered by collectivistic propositions. This is also expressed in thesis 2, according to which ITs may provide corrected versions of existing collectivistic propositions.

This outline of the IRP leaves several questions open. For example: What is the relationship between the individualistic and collectivistic concepts? How do individualistic theories correct collectivistic propositions? What is the structure of the explanatory arguments if ITs are applied to collectivistic propositions? How can the IRP be evaluated, i.e. can it be refuted?

Some of these questions are dealt with in the literature. However, it must be conceded that much work has to be done. But even if some questions are unsettled, the IRP, as it is explicated in this paper, can and actually does serve as a regulative idea or, put otherwise, as a positive heuristic: It advises the social scientist to apply ITs in order to solve his specific explanatory problems.

The focus of our explication was the individualistic research programme. How does the collectivistic research programme read? We do not know any explicit statement of this programme. The often very emotional critique the IRP has evoked suggests: An advocate of the collectivistic research programme denies each of the foregoing theses. Thus, the collectivistic research programme is a strict antipode of the IRP.

The four theses have been proposed as the IRP of sociology. But we suggest that our explication is the IRP for the social sciences in general. Presumably economists, anthropologists, historians etc. advocating an IRP subscribe to the four theses.

III. The Individualistic Research Programme Under Attack:
Problems, Misunderstandings, and "Bad Shots"

As everything in the social sciences the IRP in general and particularly in sociology has brought about wide criticism and counter-arguments. In sociology a debate about "reductionism" has been elicited by the work of George C. Homans, mainly in the sixties. Philosophers like Karl R. Popper and J.W.N. Watkins (see O'Neill 1973) have been involved in a similar debate with the label "methodological individualism". Both debates hardly noticed each other.

The arguments for and against the IRP in general and particularly in sociology are so manifold and often unclear that it is not possible in this paper to give an exhaustive account and an evaluation of them. Instead we shall confine our attention to those objections which seem to be raised most frequently and which we deem most important and most plausible.⁸⁾

1. Concepts denoting social aggregates do not refer to individuals and their properties.

The reconstruction thesis is one of the most widely discussed theses of the IRP (see, for example, O'Neill 1973, see also Opp 1979). The denial of the reconstruction thesis as we stated it in the preceding section is at least in part due to the fact that different authors attack or defend different theses. Therefore it is useful that we first discuss why we

stated the thesis as we did, before we discuss the thesis itself.

Existing ITs can explain relational properties of individuals.⁹⁾ These may be relations between individuals (like interacting, communicating, being more powerful than) or relations between individuals and things (like individual a owns thing b or individual a exchanges good b with individual c).

If the existing ITs can explain relational and non-relational properties of individuals, then these theories can only be fruitfully applied in sociology - and in the social sciences in general, if the collectivistic concepts, being of interest to social scientists, can be reconstructed as relational and non-relational properties of individuals.

Therefore it is meaningful to state the reconstruction thesis as we did. This implies, that a critique of other reconstruction theses might be correct - e.g., that collectivistic concepts cannot be reconstructed by those individualistic concepts denoting purpose of individuals (Wisdom 1970). But those other theses are entirely irrelevant for the IRP.

How can the reconstruction thesis be criticized? The only way is to carry out meaning analyses of collectivistic concepts and to examine whether these concepts actually refer to individuals and their relational or nonrelational properties. Primarily those concepts should be selected which can be expected to falsify the reconstruction thesis most probably.

Such an analysis has been provided by Hummell and Opp (1971) and Opp (1979, pp. 127 - 132). The result was unequivocal. Each collectivistic concept under analysis could clearly be reconstructed individualistically.

Two other facts can be adduced in support of the reconstruction thesis. First, the meaning analyses mentioned in the preceding paragraph may have flaws. However, up to now no scholar has pointed out any shortcomings of these analyses. So we conclude for the time being that these analyses are sound.

Second, there is no thorough meaning analysis of a collectivistic term showing that no individualistic reconstruction is possible.

Thus, at present there is no reason to doubt that the reconstruction thesis is correct.

2. The unintended consequences of individual actions cannot be explained by individualistic theories.

An action of a single individual or of a group of individuals may be of two kinds: First, the behavioral consequences may be intended or unintended and, secondly, they may be desirable or undesirable for the acting or for other individual(s). For example, an accident caused by the driver of a car is an unintended consequence of his driving and undesirable for him and often for others too. Perhaps the most famous example of an unintended consequence of individual actions is Adam Smith's

analysis of the consequences of self interested actions in the market. Such egoistic actions in fact lead to the promotion of the welfare of society (see Adam Smith's "The Wealth of Nations", book 4, chapter 2).

The explanation of the unintended consequences of actions is often considered the most important task of the social sciences. Even if one will not accept this, every social scientist will agree that a fruitful theoretical approach must successfully cope with the explanation of the unintended consequences of individual actions.

It is sometimes claimed that an individualistic research programme is not able to handle this problem successfully. One may argue that preferences (i.e., among other things, intentions) are regarded as a relevant set of conditions in the theories under considerations (like utility theory) and, accordingly, only intentional behavior can be explained.

The charge that unintended consequences of individual actions cannot be explained by ITs can be met in two ways. First, it may be pointed out that there exist numerous analyses showing in detail by applying ITs how unintended consequences of social actions emerge. The most prominent example are prisoner's dilemma situations (see, e.g., Luce and Raiffa 1957, pp. 94 - 97, Barry and Hardin 1982). This is a situation where each individual chooses the behavioral alternative which yields

the highest payoff to himself. However, all individuals involved would be better off, if they had chosen otherwise. Unintended consequences of individual actions are also dealt with under headings like paradox (or perverse) effects and social traps.¹⁰⁾

The second way to cope with the critique that the IRP cannot adequately deal with unintended consequences of individual consequences of individual actions is to analyse the IRP itself: Do they imply that unintended consequences of individual actions are possible?

Let us look at the rational choice model. One set of conditions relevant for the explanation of individuals are the preferences of the individuals. These preferences may be termed intentions. Thus, people may want more material goods of a particular kind, they may prefer more social support to less social support, they may want to increase the welfare of their families and so on. In deciding how to achieve these goals individuals take into account the constraints they perceive. Put otherwise, they will consider how far certain behavioral alternatives lead to the achievement of their goals. They choose the action which yields the highest net utility to them. It is important to note that among the constraints are the actions of other people or of groups (police, organizations and so on).

Does this theory imply that individuals will always achieve their goals or, put differently, can the theory only explain

those actions which accord with the individuals' goals? The answer is clearly "no". The theory does not exclude that individuals totally misperceive the consequences of their actions. That is, the subjective and objective constraints may diverge. Furthermore, an individual may even realize that an action not chosen by him would make him better off, if others behaved in a certain way (see the prisoner's dilemma). Thus, we may say that individuals deliberately choose actions whose consequences they do neither intend (but predict) nor desire.

The critique under consideration is indeed very strange in view of the fact that the most extensive literature on unintended consequences of individual actions has been provided by the advocates of the IRP, as the preceding references indicate.

3. Groups have emergent properties (properties which cannot be assigned to individuals). Therefore individualistic theories cannot be applied to explain properties of groups.

This objection has two parts. The first is the assertion that groups have emergent properties in the above sense. The second part is that the existence of these properties prevents their explanation by means of ITs.

Are there emergent properties? Take the property "age". An individual and a group may have a certain age (or, to take another example, they may be more or less authoritarian). Are these examples which falsify the assertion under discussion?

Although the terms used to designate the properties of the individual and the collective are the same, their meaning is different. "Age" means with regard to an individual the time elapsed from his physical birth up to a certain point of time; however, if we speak of the "age" of a group we mean the time period from its foundation up to a certain point of time. (To measure "authoritarianism" for an individual we may present him items of a questionnaire and compute his test score. (If the "authoritarianism" of a group is determined, we shall first measure the authoritarian attitudes of the group members and then aggregate the scores of the individual attitudes.) Thus, even in cases where the terms used to designate properties of individuals and aggregates are the same, the meaning of these terms is different in each case.

For other properties it is apparent even at first sight that they can only be assigned to groups and not to individuals or vice versa. For example, variables like bureaucratization, hierarchy, division of labor, crime rate, mean age, cohesion, and homogeneity can only be ascribed to groups, but not to individuals.

These examples clearly confirm the claim that there are emergent properties in the above sense. We may even go further and posit: There are only emergent properties. Thus, an advocate of the IRP will accept the first part of the above assertion.

Does this assertion imply or at least support the second part of the above critique, namely that ITs are not able to explain these properties? First, the existence of emergent properties would make their explanation by ITs impossible if the terms, designating these properties, could not be reconstructed by the terms of the ITs applied (see thesis 3 in section II). However, as we saw, the reconstruction thesis could not be falsified so far. A meaning analysis of the preceding examples ("age", "authoritarianism", "bureaucratization" of groups etc.) also indicates that these are aggregations of (relational or non-relational) properties of individuals. E.g., "hierarchy" is a particular distribution of power between individual actors. "Power" refers to certain relations between individuals (individual a is more powerful than individual b).

Even if it is conceded that the emergent properties can be reconstructed individualistically, it may be argued that the ITs are not able to explain relationships between individuals or between individuals and things. This argument seems to assume that ITs can only explain the actions of isolated individuals. But actions may be of a relational character. For example, individuals may decide to communicate with others, to appropriate or to exchange things, to bargain etc. Such relational actions may lead to certain results in an aggregate of individuals. These results may be denoted by collectivistic terms (power structure, communication structure and the like).

These intuitive considerations suggest that the existence of emergent properties is no obstacle to their explanation. This is not only endorsed by the intuitive considerations of the preceding paragraph, but also by substantive investigations of individualistic social scientists. Examples are the economic theory of crime or works on exchange.

4. Individualistic theories do not take into account the social (and particularly the institutional) context in explaining individual behavior. Thus, these theories are wrong and not appropriate as a basis for a research programme.

One of the most often raised objections against the IRP is that the ITs applied explain individual behavior by the motives or drives of the individual actors. This reproach is often called psychologism. Accordingly, a theory is called "psychological", if behavior is explained by the motives of the actors. Thus, "individualistic" and "psychological" (in the above sense) are used as equivalent terms.¹¹⁾

Every scholar is, of course, free to assign any meaning to a term. But it seems that the use of the term "psychological" is not intended as a nominal definition, but as a description of how members of a scientific community, namely psychologists, explain behavior. The assertion that psychologists explain behavior by recourse to motives is plainly false. Even a superficial look at a psychological, and particularly social psycho-

logical, textbook shows the falsehood of this claim.

With respect to the currently most often used IT, namely the rational choice model, it is again clearly false that the social or institutional context is neglected. According to this model preferences (i.e. motives, wants) and restrictions (or opportunities) are determinants of behavior. The social and institutional context pertains to the restrictions. For example, enforced rights limit the behavioral opportunities of actors. This holds also for various reactions of the social environment like social support, negative sanctions or social approval.

Thus, the predominant IT avoids psychologism in the above sense. But it posits that motives or preferences are one class of relevant variables. The rational choice model also avoids sociologism in the sense that only the social environment or, to put it differently, only social structures are explanatory variables. But the rational choice model posits that the social environment is one class of relevant variables.

IV. On the Present State of the Individualistic Research Programme in the Social Sciences

The best way to evaluate the successes or failures of the IRP is to look at the substantial research of those social scientists working in the individualistic tradition. If this is done, the following features of this research are important for

an evaluation of the IRP.

1. The prevailing IT applied by the overwhelming majority of individualistic social scientists is the rational choice model. Apart from the success of this model there seems to be a tendency of dogmatization in several respects. First, problems the rational choice model is not able to solve are neglected. This holds particularly for the explanation of preferences and expectancies. Second, research results of social psychology which could lead to new applications of the rational choice model are neglected. For example, according to cognitive consistency theories (e.g., dissonance theory, balance theory) certain combinations of cognitions (opinions, attitudes) are dissonant (or unbalanced), i.e. unpleasant to an individual. To illustrate with one of Festinger's (1957) examples, a man who heavily smokes and at the same time knows that smoking is unhealthy, feels dissonance. In terms of the rational choice model the simultaneous existence of certain cognitive elements is more or less costly. This example suggests that taking into account the cognitive consistency theories could draw the attention to new kinds of costs, which may be termed cognitive costs, and to new behaviors to be explained (like selective reading of newspapers which may be a strategy to avoid cognitive costs).

2. The actual research of social scientists accepting the IRP can be quoted for particular theses of the IRP and against

particular criticisms of the IRP. This has been done already several times in section III. Some additional points will be added here.

a) Postulate 4 of the IRP (collectivistic propositions should be explained by ITs) is fully realised. Individualistic social scientists are usually concerned with macro-phenomena, in every case with social aggregates, not with single individuals.

b) The foregoing point implies that the reconstruction thesis is confirmed by each piece of research which those social scientist have produced. However, it is possible that explananda whose individualistic reconstruction led to difficulties have been excluded from research. This is merely a possibility but no cases of this sort are known to us.

c) Point(a) also implies that emergent properties (see section III, point 3) have not been an obstacle to explanations by means of ITs.

3. There is wide agreement in the philosophy of science that the most effective way of criticizing a theory is to confront it with competing theories. Consequently, one would have expected that one of the preoccupations of individualistic social scientists is to design crucial empirical investigations where deductions from ITs and existing competing propositions are tested. Such empirical confrontations are rare. If one of

the main arguments for applying ITs is that they are able to correct competing propositions, this should be demonstrated more extensively.

It is true, as Homans emphasizes (see section II), that sociological hypotheses are of a low explanatory power and, it may be added, are often not put in such a form that they can be criticized at all. Even if sociological propositions have a low empirical content (like hypotheses on suicide or on the formation of protest groups), they are of interest to many social scientists - and practitioners - and should be confronted with the pertinent deductions from ITs. If sociological propositions are not testable, the first step should be to explicate them so that they can be criticised. However, this should be attempted only for those hypotheses whose meaning is not totally in the dark.

4. The individualistic tradition in sociology conforms more than other sociological schools to the standards of an empirical-theoretical science. Its procedure - model building - consists of stating explicit deductive arguments. Among the premises of a model are the IT applied and other assumptions referring, among other things, to distributions of initial conditions in a social aggregate, or to semantic stipulations about the meaning of collectivistic concepts in terms of the IT applied. Thus, the IRP may be a paradigm for an exact social

science.

5. The main criterion for evaluating a research programme is to what extent substantive theorizing and research has been brought about by those adhering to the IRP. In applying this criterion it turns out that the IRP was extremely prolific in suggesting new solutions to a great many quite different problems. To give an impression about this diverse range of problems a look at the contents of the books by G. Becker (1976), Boudon (1981), Hechter (1983) and McKencie and Tullock (1978) is informative, although many topics dealt with by individualistic social scientists (like property rights or political processes) are at best touched in these books.

Original theoretical propositions and explanations of specific events (like historical processes) are not only proposed; there is also ample empirical research testing these propositions.

It is not possible for a single social scientist to have an overview of all the propositions and empirical investigations provided by individualistic social scientists. To the knowledge of this author the overwhelming number of investigations could not falsify the propositions tested.

Thus, in evaluating the IRP according to the extent to which new theoretical insights have been provided and empirically confirmed, it cannot be denied that the IRP has been successful so far.

6. One implication of what we have said before should be noted: A new unity of the social sciences has developed: First, a single theory - the rational choice model - is applied by scientists of different disciplines. Second, there are many identical research questions which are of interest to scientists of different disciplines. Thus, for various topics the borders of the disciplines break down: there is no longer a division of labor with respect to the kinds of problems dealt with and there is also no longer a division in the disciplines with respect to the kinds of theoretical propositions accepted.

Footnotes

- 1) A good exposition of this tradition is provided by Turner and Maryansky (1979); see also the anthology of Demerath and Peterson (1967).
- 2) See the detailed critiques, particularly by George C. Homans (see, e.g., 1962, 1964, 1967); Hempel 1965; Nagel 1956, 1961 (pp. 401 - 28, pp. 520 - 35).
- 3) For critiques of marxist theory see particularly Helberger 1974, Popper 1966, Schumpeter 1942.
- 4) For an excellent critique of functionalism and marxism from the perspective of the IRP see Vanberg 1975.
- 5) The latter term should be avoided because it suggests that only exchange processes are under scrutiny which does not hold true.
- 6) Some of the following arguments are elaborated in Opp 1979.
- 7) Accordingly, collectivistic propositions cannot be derived only from an IT. In addition at least one "bridge assumption" must be specified.
- 8) For a more extensive discussion see Opp 1979. See also Raub and Voss 1981. Also in the writings of George C. Homans many

objections are dealt with.

- 9) ITs can also explain non-relational properties like "being a thief". Perhaps these properties can also be formalized as two-place predicates (like "individual a steals thing b"). Then we may say that all explananda of ITs are relational properties of individuals. Whether this is so, will be left open in this paper.
- 10) For a thorough analysis of many examples of unintended consequences of individual actions see, with further references, Wippler 1978, 1980. See also Boudon 1982.
- 11) See, e.g., Gellner 1956, pp. 261 - 62. The term "psychological" is used in the above sense by Popper (1966, p. 90) and apparently also by Goldstein (1956, p. 269) and Lenk (1977).

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