

Reconstructing Marxism

Essays on Explanation and the Theory of History



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*To
Michael Burawoy
and
Richard Lewontin*



Marxism and Methodological Individualism

Perhaps the most striking example of the rejection of claims to Marxian methodological distinctiveness comes from those analytical Marxists who explicitly declare themselves proponents of “methodological individualism”, thereby endorsing a methodological position they attribute to sound social science, but one that virtually all Marxists have traditionally rejected.¹ As is well known, Marx inveighed against the “individualism” of the classical economists and contractarian philosophers, heaping scorn on efforts to conceive individuals abstracted from social relations and on theories based upon the imputed choices of these “abstracted individuals”. And nearly all Marxists, whatever their differences, have accorded explanatory relevance to social “totalities”, in apparent opposition to the strictures of individualist forms of analysis. Furthermore, until quite recently, proponents of methodological individualism have been equally scornful of Marxism. Some methodological individualists—Hayek and Popper, among others—have even promoted methodological individualism expressly as an alternative to Marxian explanatory practices. It is therefore ironic, to say the least, to maintain that what is worth taking seriously in Marx’s thought can be reconstructed in methodological individualist fashion; and that only by recasting Marxian explanations in this way can we save the “rational kernel” (as Marx might have put it) of Marx’s thought from the indefensibility of so many of his own formulations and from the obscurantism that afflicts much of what has come to be identified as Marxism.

1. Of course, not all Marxists working in an analytical style would follow Elster in this regard, but the position has been advanced by a number of influential figures. See, for instance, Adam Przeworski, “The Challenge of Methodological Individualism to Marxist Analysis”, *Politics & Society* (forthcoming); and John Roemer, *A General Theory of Exploitation and Class* (Cambridge, MA: Harvard University Press, 1982).

We are sympathetic to the idea that what is distinctive in Marxian theory is substantive, not methodological, and that the methodology adopted by Marxists ought to be just good scientific methodology. But methodological individualism is *not* good scientific methodology, even if, as we shall show, some of the intuitions that motivate it are sound.

The plausibility of Marxian methodological individualism depends, of course, on what methodological individualism is thought to be. Unfortunately, at the current stage of discussion, many of the obscurities that have always pervaded debates about methodological individualism are effectively reproduced in the Marxian context. One objective of this essay is to try to reduce this confusion by clarifying the stakes in claims for and against methodological individualism, both as these apply to the specific context of Marxian explanations and to social scientific explanations generally.

In the next section, we characterize methodological individualism by contrasting it with three other methodological stances towards explanation in social science. This will be followed by a more intensive discussion of methodological individualism itself. We shall argue that the reductionist ambitions of methodological individualism cannot be fulfilled. Nevertheless we shall argue, in the final section of this essay, that a practical implication of methodological individualism—that the micro-foundations for macro-level theory should be elaborated—is timely and important, even if methodological individualism itself is not.

Throughout this discussion, Jon Elster's book, *Making Sense of Marx*, will be a central point of reference.² Elster is among the most insightful of Marxian methodological individualists, and his book represents the most sustained attempt by anyone within the Marxian tradition to defend methodological individualism. It is therefore a useful point of departure for an examination of the doctrine's strengths, as well as its flaws.

A Typology of Methodological Positions on Explanation

Methodological individualism is a claim about *explanation*. It is the view that all social phenomena are best explained by the properties of the individuals who comprise the phenomena; or, equivalently, that any explanation involving macro-level social concepts should in principle be reduced to micro-level explanations involving only individuals and their properties.

2. Jon Elster, *Making Sense of Marx* (Cambridge: Cambridge University Press, 1985).

In order to give methodological individualism a precise definition, it will be helpful to contrast it with three other possible views: *atomism*, *radical holism* and *anti-reductionism*.³ The first two positions, at least in their pure form, probably have no actual defenders. However they are implicit tendencies within social theory. Indeed, in debates over methodological individualism, disputants sometimes appear to confuse their opponents' views with one or the other of these positions. Thus defenders of methodological individualism depict anti-reductionists as radical holists, and defenders of anti-reductionist positions sometimes regard methodological individualists as atomists. Therefore, in order to clarify the issues at stake in the controversy over methodological individualism, it will be useful to map out all four possibilities.

These methodological stances towards social scientific explanation differ in what they regard as explanatory. They can be distinguished on two dimensions: whether or not they regard the properties of and relations among aggregate social entities as *irreducibly* explanatory; and whether or not they regard relations among individuals as explanatory.⁴ Aggregate social entities include such things as societies, groups, classes, organizations, nations, communities. Such entities have properties (e.g. inflation rates, institutional forms, distributions of income) and exist in a variety of relations to each other (e.g. relations between unions and corporations, between nations, between collectively organized classes). Individuals also have both properties (e.g. beliefs, abilities, resources) and exist in a variety of relations with other individuals (e.g. sibling relations, employer-employee relations, etc.). Taking these two dimensions together, we get the following typology of principles of explanation of social phenomena.

Atomism

Atomism is a methodological stance that denies that relations are ever genuinely explanatory, whether those relations are between individuals or between social entities. Consider any social phenomenon—for example, the transformation from feudalism to capitalism. An atomist would say that this transition can in principle be fully explained by causal processes operating strictly internal to individuals in the society in

3. Each of these positions, properly understood, register claims about the (social) world. Thus anti-reductionists do not oppose reductionism on methodological grounds; indeed, they favor theoretical reductions whenever they are possible. The name "anti-reductionism" reflects a considered view of what is known about successful social scientific explanations—as does atomism, radical holism *and also methodological individualism*.

4. These dimensions are not strictly symmetrical since "properties of individuals" are not included in the second dimension. The reason for this is that atomism accepts the explanatory relevance of properties of individuals but not relations among individuals.

question. While *interactions* among these individuals matter for explaining the emergence of feudalism, the causal processes that govern the outcomes of such interactions are entirely intraindividual.⁵ The atomist would insist, in other words, that only entities that are fully constituted non-relationally are explanatory.

On the face of it, atomism seems plainly unsustainable. In our everyday lives we exist within a network of relations to other people—as parents, siblings, employers, customers, etc. And these relations appear to be explanatory, and also, it would seem, irreducible: being a parent, for instance, necessarily involves another individual, the child. But atomism is not quite so implausible as it may at first appear. The atomist might argue that everything that seems explanatory about irreducible relations between individuals actually is explanatory only because of the corresponding (non-relational) psychological states of these individuals; that what matters explanatorily in, say, power relations between individuals is not an irreducible relation between these individuals, but their beliefs and desires, considered atomistically. If I believe you will punish me if I do X and you believe that I have these beliefs, then we will each act in particular ways. The apparent power “relation” between individuals, the argument would go, is really no more than a set of reciprocal beliefs and it is these beliefs, rather than any “objective relation”, that explains actions.

Although we grant that beliefs and desires explain actions, it seems to us that the world outside the mind helps explain why agents think and want what they do. One plausible explanation for such things as beliefs about power is the objective power relations between people. Beliefs about power are formed, in part at least, by the *practices* of the powerful and the powerless. The enduring interconnection among these practices is precisely what is meant by the “power relation” between the powerful and the powerless. If such relations help explain beliefs and beliefs help explain action then (assuming transitivity) such relational facts help explain agents’ actions. Atomism *might* be right in claiming that relational facts affect actions only by virtue of their affecting (atomistic) mental states. But it is a *non sequitur* to conclude from this that irreducibly relational facts are explanatorily impotent.

It is for this reason that theorists who insist on the reducibility of social explanations to individual explanations generally defend the

5. If the concept of “relation” is equated with “interaction”, then, plainly, no theorist could deny the explanatory relevance of relations. Even a radical atomist would acknowledge that the interactions of a parent with a child is consequential for the child. What is being claimed by atomists, therefore, is not that interactions have no consequences, but that interactions are governed entirely by mechanisms located within the atomistically constituted entities engaged in the interactions.

explanatory importance of genuinely relational properties of individuals. This combination of methodological commitments—a belief in the reducibility of social explanations to individual explanations and a belief in the explanatory importance of relations among individuals—defines what is generally called methodological individualism.

Methodological Individualism

Methodological individualism shares with atomism the view that social explanations are ultimately reducible to individual level explanations. Elster states this claim explicitly at the beginning of *Making Sense of Marx*. He defines methodological individualism as “the doctrine that all social phenomena—their structure and their change—are in principle explicable in ways that only involve individuals—their properties, their goals, their beliefs and their actions. To go from social institutions and aggregate patterns of behavior to individuals is the same kind of operation as going from cells to molecules.”⁶

Elster, however, is not an atomist in that he does not proscribe irreducible relational properties of individuals from social scientific explanations. Indeed, Elster argues that the inventory of individual properties that is the basis for explaining social phenomena extends far beyond the beliefs, desires and other psychological properties of individuals. He concedes that “many properties of individuals, such as ‘powerful’, are inherently relational, so that an accurate description of one individual may involve reference to others”.⁷ “Relational properties” would also include being a sibling or a parent or an employer. Nowhere does Elster (or any other Marxist defender of methodological individualism) claim that these relational properties are reducible to atomistic properties.

It is sometimes thought that methodological individualism implies a rejection of the holistic claim that “the whole is more than the sum of the parts”. While atomism unequivocally regards wholes as no more than collections of parts, the fact that methodological individualism accepts the explanatory relevance of relational properties implies that, unlike atomism, it can accept this central tenet of its putative rival.

The issue hinges on what is meant by “sum” and “parts”. One way of reading the holistic claim is the following: the parts of society are individuals with *atomistic* properties, i.e. properties that can be defined for each individual independently of all other individuals. The whole, then, is “greater” than the “sum” of these parts in the sense that the properties

6. *Making Sense of Marx*, p. 5.

7. *Ibid.*, p. 6.

of the whole come from the systematic relational patterns of *interaction* among these individuals—the relations that bind them together—and not simply from the aggregation of their atomistic (i.e. non-relational) properties. On the other hand, if *relational* properties are included in the descriptions of the parts themselves, then it is no longer true that the whole is more than the sum of its parts. Everything that was included in the word “greater” in the holistic formulation has now been packed into the redescription of the “parts”.⁸

This point can be illustrated formally. Let us say that we have a system with two “parts”, X and Y. If the whole, Z, is equal to the sum of the parts, we would say that:

$$Z = b_1X + b_2Y$$

That is, the relevant magnitude of Z is completely determined by the sum of effects b_1 from part X and b_2 from part Y. If there are interactions between X and Y of the form XY, then:

$$Z = b_1X + b_2Y + b_3XY$$

and thus the whole is greater than the sum of its parts (i.e. the interaction of X and Y has effect b_3 on Z in addition to their additive effects). Now, let us redescribe the parts in the following way:

$$X^* = X(1 + b_3Y/2b_1) \quad Y^* = Y(1 + b_3X/2b_2)$$

In these new descriptions of the parts, the interactions of the parts-within-the-whole are represented as relational properties of the parts themselves. With these new descriptions, it is no longer the case that the whole, Z, is greater than the sum of its newly described parts, for now:

$$Z = b_1X^* + b_2Y^*$$

It is important to note that these redescriptions are only possible *post facto*, after the parts are inserted into the whole (i.e. after all of the interactions with other parts are determined). This reparameterization can make atomism look more plausible than it deserves. But such appearances should not mislead us into thinking that relational properties are eliminable, not just nominally, but in fact.⁹

8. This familiar deflation of the holism/individualism debate is elaborated, for example, in Ernest Nagel, *The Structure of Science* (London: Routledge & Kegan Paul, 1961).

9. This algebraic reformulation is closely analogous to the way some evolutionists defend the idea that the single gene is the unit of selection. See Elliott Sober, *The Nature of Selection: Evolutionary Theory in Philosophical Focus* (Cambridge, MA: Bradford Books, 1984), Chapter 7.

Methodological individualism remains distinct from both radical holism and anti-reductionism in its insistence that only relations among individuals can be irreducibly explanatory. Methodological individualists deny that aggregate social categories are ever irreducibly explanatory. If a social property is explanatory, this is because it is reducible to relational properties of particular individuals. The property of a society “being in a revolutionary situation”, for example, is not irreducibly explanatory in the methodological individualist view. This property possesses whatever explanatory force it has in virtue of the properties of and relations among the individuals in the society. The aggregate social property “revolutionary situation” is no more than an aggregation of all of these particular individual properties and relations. It is only a *convenient* expression. Thus any explanation in which the expression “revolutionary situation” appears can be reduced in principle to an explanation (no doubt of considerable complexity) involving only properties of and relations among individuals.

Radical Holism

Radical holism stands in sharp contrast to methodological individualism. For radical holists, relations among individuals are essentially epiphenomenal with respect to social explanations. They are generated by the operation of the whole, and in their own right they explain nothing. It is not simply that “the whole is more than the sum of its parts”. Rather, the whole is the sole genuine cause and the parts (even when constituted relationally) are mere artifacts. Macro-social categories—capitalism, the state, class relations—are not merely irreducible to micro-level processes. They are unaffected by these processes.

It is difficult to find explicit defenses of radical holism in its pure form, but there are certain explanatory tendencies in social science that reflect this kind of thinking. The Marxist tradition, because of its stress on the “totality”, has perhaps been particularly susceptible to such ideas. Three examples are worth mentioning: teleological reasoning in the theory of history, extreme formulations in arguments for structural causality, and what can be termed “collective agency” arguments.

Holistic teleologies figure in accounts of history that see the trajectory of social change as objectively directed towards an ultimate goal that exists independently of the subjective goals of human actors. In these cases, explanatory force is ascribed to this “end” of history. Individuals, then, are only agents of goal-achieving impersonal social forces; and what they do or choose is explained by—but does not explain—social phenomena. Their actions and choices are not mechanisms but consequences of the immanent principle whose career social science is

supposed to trace. In putative explanations of this sort, social facts explain social facts directly without individual-level mechanisms playing any explanatory role.

A parallel tendency towards radical holism, of considerable importance in recent Western Marxism, is suggested by some of the more extravagant declarations of Louis Althusser and his followers.¹⁰ Despite their express opposition to vestiges of Hegelian teleological thinking, Althusserians effectively reproduced some of its more dubious features. Thus Althusser proposed the obscure notion of “structural causality”, according to which structures cause structures and individuals are only “supports” of social relations.¹¹ While such claims may simply reflect Althusser’s rhetorical style, some Althusserian explanations appear to dispense with individual level mechanisms in principle.

Collectivist-agency arguments are embodied in statements of the form: “the bourgeoisie was unwilling to make compromises” or “the proletariat took advantage of the crisis” or, to take a famous quote from Marx, “mankind always sets itself only such tasks as it can solve”.¹² In most cases, such expressions are simply elliptical or at worst express a certain expository sloppiness rather than deep methodological error. The real referents in the statements could be, for example, organizations (parties, unions) which are viewed as representatives of the classes in question, or the statements could be claims about the distribution of beliefs in the relevant populations. There are times, however, when such expressions seem to imply a belief in collective consciousness and collective agency, where a class or even humanity as such thinks, chooses and acts. Generally, such non-elliptical treatments of collective subjects are linked to holistic teleologies of history: the objective purpose of history in the teleology is represented as the goal of a genuinely Collective Subject. But even when collective subjects are not linked to teleologies of history, positing such entities tends to marginalize the explanatory relevance of individual-level relations within a holistic argument.

10. Cf. *For Marx* (London: New Left Books, 1969); and *Reading Capital* (London: New Left Books, 1970).

11. There are places in Althusser’s work in which the treatment of individuals as “bearers” and “supports” of the structure can be interpreted as consistent with micro-foundational reasoning. Thus, for example, in his analysis of ideology, Althusser discusses the process through which individuals are formed as subjects. This analysis of “interpellation” could be considered an account of how social structural causes shape micro-individual states, which in turn have effects on the social structural relations themselves. See Louis Althusser, “Ideology and Ideological State Apparatuses”, in *Lenin and Philosophy* (London: New Left Books, 1971). For a much more systematic development of these relatively primitive arguments of Althusser’s which makes the micro-mechanisms of subject-formation much more explicit, see Goran Therborn, *The Power of Ideology and the Ideology of Power* (London: NLB/Verso, 1982).

12. Karl Marx, Preface to *A Contribution to the Critique of Political Economy* (1859).

Elster vehemently attacks all of these forms of radical holism—or what he calls “methodological collectivism”—in Marx’s work and the Marxist tradition. He has been particularly intent on attacking functional explanations within Marxism—explanations of the existence and persistence of particular social institutions because of their beneficial effects for ruling classes—on the grounds that such explanations generally reflect teleological thinking about the nature of society and history and typically ignore the importance of specifying micro-level mechanisms.

These errors, Elster argues, are derived from the methodological doctrines Marx inherited from Hegel. We believe instead that sloppiness and rhetorical excess are more nearly the culprit than considered, radical holist convictions. Few, if any, Marxists have ever imagined that functional relations could be established in the absence of micro-level mechanisms or that collective agents could ever be more than aggregations of individual actors. But Marxists (including Marx) have indeed failed rather frequently to trace out the implications of these (eminently sensible) beliefs. Elster has done well to identify instances, even if he has misrepresented their source and character.

In any case, Elster is right in so far as he inveighs against radical holism. The plain fact that if there were no people there would be no societies underwrites the methodological assumption that causal mechanisms involving individuals must always be implicated in social explanations. The issue is not whether the individual level of analysis can be eliminated, but how it should be linked to macro-level social analysis. Methodological individualism maintains that macro-level phenomena can always be reduced to their micro-level realizations, at least in principle. Anti-reductionism rejects this thesis.

Anti-reductionism

Anti-reductionism acknowledges the importance of micro-level accounts in explaining social phenomena, while allowing for the irreducibility of macro-level accounts to these micro-level explanations. Methodological individualism insists that an important goal of science is to reduce explanations to ever more micro-levels of analysis. For a methodological individualist, to explain a phenomenon is just to provide an account of the micro-mechanisms that produce it. Aggregate, supra-individual social categories are therefore admissible only *faute de mieux*, in consequence of our cognitive limitations or the inadequate state of our knowledge. In contrast, anti-reductionists do not prejudge in any given problem whether macro-level (social) explanations are finally reducible to micro-level (individualist) accounts.

This may seem like a paradoxical stance: how can one be simultane-

ously committed to the irreducibility of social explanations to individual-level explanations and to the importance of elaborating micro-foundations? The resolution of this apparent paradox is discussed in the next section.

Anti-reductionism v. Methodological Individualism

Methodological individualists insist that in principle it is desirable not simply to *add* an account of micro-causes to macro-explanations, but to *replace* macro-explanations with micro-explanations. Were we able, methodological individualists would have us ban aggregate social concepts or else tolerate them strictly as expository conveniences.¹³

The issue of reductionism of the macro to the micro in social explanations parallels issues familiar in the philosophy of mind.¹⁴ Any particular distribution of properties among individuals constitutes a particular social state. Similarly, any particular configuration of neurophysiological states of human brains constitutes a particular mental state. It would therefore seem that a complete account of individual properties (or neurophysiological configurations) would constitute a full and adequate explanation of social phenomena (or mental states) and their effects. Thus it would seem reasonable to conclude that we should be able, at least in principle, to reduce macro-phenomena to micro-phenomena.

To understand why this is not so, it will be helpful to introduce the familiar distinction in the philosophy of science between *tokens* and *types*.¹⁵ "Tokens" are particular instances: for example, a particular strike by a group of workers in a particular factory or an idea in the head of a particular individual. "Types" are characteristics that tokens may have in common. Thus a particular strike—a token event—can be subsumed under a variety of possible "types": *strikes*, *class struggles*, *social conflicts*, etc. Similarly, being rich is a type of which Rockefeller is one token. Types are general categories that subsume particular events or instances.

13. A thorough methodological individualist reductionist would also argue that, in principle, individual-level explanations should be reduced to neurophysiological explanations, and neurophysiological explanations ultimately to explanations only involving atomic particles and their interrelations. The ultimate ambition of science is to reduce all phenomena to the operation of physical laws.

14. See, for example, the development of these ideas in Jerry Fodor, *The Language of Thought* (New York: Thomas Crowell, 1975), Chapter 1.

15. For a general discussion of the type/token distinction as it applies to the problem of reductionism, see R. Boyd, "Materialism without Reductionism", in N. Block, ed., *Readings in Philosophy of Psychology* (Harvard University Press, 1980).

Reductionism raises different issues for tokens and types. Most Marxists, because they are materialists, probably would endorse *token-reductionism*.¹⁶ Thus, if current views about the relation between human beings' minds and brains are correct, Marxists (and most non-Marxists too) would concede that a particular mental state in a particular individual can be explained by describing the brain state of that individual at that moment in time. Similarly, for social phenomena, particular instances can be explained by appeal to the activities, properties and relations of the particular individuals who collectively comprise the phenomenon.¹⁷

The real debate, then, concerns the reducibility of macro-social types to micro-individual types. The distinction between tokens and types can be applied both to social entities and to individuals. Thus, we can define capitalism as a type of society and the United States in 1987 as a token instance of that type. And we can define the capitalist-worker relation as a type of relation among individuals, while the relation between the owner of a particular firm and the employees of that firm would constitute a token instance of such a relation.¹⁸

Both methodological individualists and anti-reductionists admit the explanatory power of type-concepts referring to individuals. Where they

16. "Materialism", in this context, is the claim that all tokens are "made" of matter. To oppose materialism would be to accord ontological status to (putatively) non-material entities (like disembodied minds or *élan vital*s).

17. A number of philosophers have defended the idea that a person's brain state at a given time does not uniquely determine what the person believes at that time. The point is that the content of a belief also depends on the person's physical environment and on the social environment as well. The former thesis has been defended by Hilary Putnam in "The Meaning of 'Meaning'", in *Mind, Language, and Reality* (Cambridge: Cambridge University Press, 1975), the latter by Tyler Burge in "Individualism and Psychology" *Philosophical Review*, 95 1986, pp. 3-43. We do not take a stand on the plausibility of either of these positions here, and the latter idea is best laid to one side for the purposes of grasping the analogy we see between the problem posed by methodological individualism and the mind/body problem.

18. Discussions about "social relations" often ignore the distinction between type concepts that refer to relations among individuals and type concepts that are irreducibly social. The "capital-labor relation" is a type concept that identifies the theoretically salient properties that all of the particular instances of relations between capitalists and workers have in common. In this sense it is a micro-level type concept. While this concept may be irreducibly relational—that is, it cannot be represented in atomistic terms—it does not contravene the strictures of methodological individualism, since the relations it describes are among individuals. Ironically, perhaps, those "fundamentalist Marxists" (as they are sometimes called), who emphasize the supreme explanatory importance of the capital-labor relation for understanding capitalism and who most categorically assert the methodological distinctiveness of Marxism may be closer to methodological individualism than those Marxists who emphasize the importance of various kinds of aggregate social entities such as class formations, state apparatuses, etc. Explanations based on the capital-labor relation may be very *abstract*, but they are still fundamentally rooted in a micro-logic. An abstract analysis in terms of micro-type concepts is not equivalent to a macro-level analysis.

differ is in their view of the explanatory status of type concepts referring to aggregate social entities: methodological individualists insist that such type concepts can be reduced to type concepts referring only to individuals; anti-reductionists argue that, in general, this is not possible.

The type/token distinction allows us to see that a science will have at least two sorts of explanatory projects: it will seek to explain why *token* events occur and also to explain the nature of the *types* that fall within its domain. Thus we would want to explain why specific instances of capitalism emerged when and where they did, but also explain what capitalism is. The methodological individualist would be committed to the micro-reducibility of both the token social event *and* the social type. Our quarrel is not with the first of these claims, but with the second.

Our objection can be clarified by an example in which type-reductionism is justified. Consider "water" (that is, a kind of substance, not a particular sample of water). When we say that water is reducible to H_2O , we mean that whatever effects water has can be reduced to effects of H_2O . In any explanation in which water plays an explanatory role, the effects of water come from the effects of aggregates of H_2O molecules.

This reduction is possible for water because there is a single micro-property corresponding to the macro-property in question. Something is *water* if and only if it is an *ensemble of H_2O molecules*. However in the case of social phenomena (and mental states), there is, in fact, no similarly unique correspondence between *types*. Consider mental states. For any kind of mental state—for example, the belief that snow is white, the intention to buy a chocolate bar, the feeling of pain—there are in principle many, perhaps infinitely many, physical states that could realize the mental state in question. This relationship is referred to as one of *multiple realizability*: mental states can be *multiply realized* by many different brain states. Similarly for social phenomena: many distributions of properties of individuals—their beliefs, desires, resources, interrelationships—can realize the same social type. In the case of multiply realized properties and relations, type-type reductionism will not be possible.

The reason why reductionism is not possible in such cases is well illustrated by an example from evolutionary biology. The property of "fitness" figures in many explanations in evolutionary theory. To every token instance of fitness (i.e. the fitness of a particular organism in a particular environment), there corresponds a particular configuration of physical facts about the organism in question. In each of these instances, we can say that the physical facts explain why this particular organism has the degree of fitness it does. There is no reason to believe, however, that any single physical property corresponds to the general category "fitness", that the same mechanisms explain the fitness of, say, a frog

and a giraffe. In all likelihood, fit organisms share no physical properties in virtue of which they are all fit. The *only* explanatorily relevant property they share is that they are instances of a single (multiply realized) type. Thus, while a token reduction of individual instances of fitness to physical mechanisms is possible, a type reduction is not. Fitness is supervenient on its micro-realizations.¹⁹

Methodological individualists are type-reductionists with respect to social phenomena. But to insist on type-reductions as an a priori methodological requirement is plainly unwarranted. The feasibility of type-reductions is an empirical question. It *could* be the case that type-reductions actually are possible in this domain. But they almost certainly are not. Type-reductions would be possible if the relation between social phenomena and individual properties were like the relation between water and H_2O . But in so far as the relation of social facts to their micro-realizations is like the relation of mental states to brain states or like the relation of fitness to physical properties of morphology and physiology, type-reductionism will prove to be a fruitless quest.²⁰

Consider the fact that capitalist societies have strong tendencies towards economic growth. This property is explicable, in part, as a consequence of the competitive character of capitalist markets, which generate innovations and continual investments that, cumulatively, produce growth. This process, in turn, is explained by the survival of those firms which most effectively make profits in the market. Survival and profit-making, in this explanation, are similar to "fitness" in evolutionary biology. For each token instance of economic survival, we can identify a set of decisions made by individuals with particular beliefs, preferences, information and resources that explains why a particular firm survives. However, there need not be anything in common *at the micro-level* between the mechanisms that enable firm X to survive and the mechanisms that enable firms Y or Z to survive. X may survive because of the passivity of workers (enabling capitalists to introduce innovations without resistance); Y because of the ruthlessness of the owner; Z because of the scientific/technical rationality of the manage-

19. Cf. A. Rosenberg, "The Supervenience of Biological Concepts", in E. Sober, ed., *Conceptual Issues in Evolutionary Biology* (Cambridge, MA: MIT Press, 1984); and E. Sober, *The Nature of Selection*, (Cambridge, MA: MIT Press, 1984), Chapter 1.

20. The argument that social type concepts cannot be reduced to individual-level type concepts is very similar to the frequent claim of holists in social science that macro-phenomena have "emergent properties". An emergent property is a property that can only be described at the macro-level. If, however, such properties were not multiply realized, then any explanation in which they figured could be reduced to the corresponding micro-level explanation. The claim, therefore, that emergent properties are irreducibly *explanatory* depends upon the supervenience of the macro on the micro.

ment team, and so on.²¹ The social-level explanation of growth in terms of the macro-processes of competitive market relations, therefore, can be realized by a vast array of possible micro-mechanisms. Accordingly, token reductionism is possible in this case, but type reductionism is not.

In short, the reductionist program of methodological individualism fails because science has explanatory projects beyond the explanation of token events. Besides asking why this organism or that firm survived, we also want to explain what various objects and processes have in common. When the properties cited in answer to such questions have multiple realizations at the micro-level, the explanations provided by the macro-theory will not, even in principle, be reducible to a micro-account.²²

The Relevance of Micro-foundational Analysis for Macro-theory

It might be thought that anti-reductionism implies that micro-level analyses are either unimportant or, worse, irrelevant to macro-theory. But this impression is unfounded; anti-reductionism is not radical holism. Indeed, far from rejecting micro-levels of analysis, the form of

21. If a common property or process among these firms, specifiable at the micro-level, were discovered, a type-reduction of the macro- to the micro-level would be possible in this case. Our point is that this would be an *empirical discovery*, comparable to discovering in evolutionary biology, contrary to current theory, that all instances of fitness reflect a single micro-level mechanism.

22. Graham Macdonald and Philip Pettit, in their book *Semantics and Social Science* (London, Routledge & Kegan Paul, 1981), pp. 144–9, consider the idea we develop here, but reach a different verdict on its plausibility. Suppose that A and B are social properties and that there is a non-accidental regularity such that whenever A obtains, so does B. “In that case”, they say, “while each particular A–B succession might be explicable just by reference to individuals, there would be no individualistic explanation of the succession taken as a nomic regularity; this, because there would be no unified individualistic way of characterizing the regularity, each A–B succession being liable to bear any of an indefinite number of individualistic descriptions” (p. 145). They concede that such irreducibly social regularities would be a problem for methodological individualism; however, they argue that no such lawful regularities could be well supported empirically or theoretically motivated, and that social scientists would be countenancing “anomalies and miracles” to recognize such laws (even were they probabilistic in form). We are not convinced by Macdonald and Pettit’s arguments for this conclusion; moreover, we doubt that the purely philosophical reasons they adduce could settle this matter. For example, there could be many different individual level explanations for individuals’ being unemployed and thus many individual-level explanations for the rate of unemployment. Nevertheless, a change in the rate of unemployment could be lawfully related to a change in the rate of inflation. This “nomic connection” would then be irreducible to the individualistic explanations of unemployment. It is worth noting that Macdonald and Pettit believe that their argument refutes sociological functionalism. Our view is that functionalism stands or falls on whether it is empirically adequate; there is no purely conceptual argument that defeats it from the start.

anti-reductionism we have described attaches great importance to the “micro-foundations” of macro-explanations.

By “micro-foundations” we mean the following. There are four possible explanatory connections between social phenomena and individuals’ properties: first, individuals’ properties can explain social phenomena; second, social phenomena can explain individuals’ properties; third, individuals’ properties can explain individuals’ properties; and fourth, social phenomena can explain social phenomena. The critique of radical holism implies that the fourth of these explanatory connections is legitimate only when the causal chain in the explanation involves combinations of the first two. That is, social phenomena explain social phenomena only in so far as there are linkages—causal mechanisms—that work through the micro-individual level. Social structures explain social structures via the ways they determine the properties and actions of individuals which in turn determine social structural outcomes.²³ The investigation of such micro-pathways through which macro-structures have their effects is the study of micro-foundations.

In defending methodological individualism, Elster advances two reasons why a concern with micro-foundations is important in social science. His reasons are sound, even if the reductionist ambition of Elster’s overall methodological position is not.

First, as a practical matter, the specification of micro-mechanisms is often indispensable for establishing the credibility of macro-level explanations. Because it is so difficult empirically to distinguish spurious correlations from genuine causal relations, and because so many causes may obscure the relationships posited in a theory, the elaboration of microfoundations is necessary for rendering a social theory credible. Thus Elster writes:

If the goal of science is to *explain by means of laws*, there is a need to reduce the time-span between *explanans* and *explanandum*—between cause and effect—as much as possible, in order to avoid spurious explanations. The latter arise in two main ways: by the confusion of explanation and correlation and by the confusion of explanation and necessitation. . . . Both of these risks are reduced when we approach the ideal of a continuous chain of cause and effect, that is, when we reduce the time-lag between *explanans* and *explanandum*. This, again, is closely related to going from the aggregate to the less

23. It must be emphasized that the necessity of micro-mediations does not imply that the macro-explanation is reducible to those micro-mechanisms. The theory of fitness in evolutionary biology implies the existence of innumerable micro-mediations, of micro-mechanisms through which different instances of fitness are realized. Yet the theory of evolution is not reducible to any causal law operating at the level of these micro-mechanisms.

aggregate level of phenomena. In this perspective, reductionism is not an end in itself, only a concomitant of another desideratum.²⁴

Of course, there is no reason to believe in general that there will be a single micro-foundation for any given macro-social phenomenon. As we argued above, the fact that there are many micro-states for a given macro-state is precisely what makes individualist reductionism impossible. Nevertheless, since every macro-process must have micro-realizations, the elaboration of the possible micro-foundations adds credibility to macro-arguments.

In addition, Elster offers a less heuristic reason for seeking micro-foundations:

It is not only our confidence in the explanation, but our understanding of it that is enhanced when we go from macro to micro, from longer to shorter time-lags. To explain is to provide a *mechanism*, to open up the black box and show the nuts and bolts, the cogs and wheels, the desires and beliefs that generate the aggregate outcomes.²⁵

Elaborating the micro-foundations of macro-social explanations not only improves confidence in theories; it also deepens them. Provided that we allow for the possibility of multiple micro-foundations for a given macro-explanation (and thus for the non-reducibility of the macro-phenomenon to the micro-foundations), the discovery of the micro-level processes through which macro-level phenomena are realized enriches theoretical understanding.

The relevance of micro-foundational analysis for macro-structural theory can be illustrated by Elster's discussion of class formation in *Making Sense of Marx*. Class formation is the process by which classes are constituted as collective actors in class struggles. Marxists have been interested in sorting out the relationship between different kinds of social structural conditions and different kinds of class formations. Certain conditions, for example, may be particularly conducive to the formation of revolutionary class organizations; others may give rise to reformist organizations.

Elster holds that the key to understanding class formation is understanding the mechanisms that facilitate or hinder the development of class consciousness in individuals. To explore these mechanisms, Elster deploys a range of concepts derived from the theory of rational strategic interaction (or "game theory"). Specifically, he urges that the process of

24. *Making Sense of Marx*, p. 5.

25. *Ibid.*

class formation be understood in terms of ways of solving the familiar "freerider" problem, the problem of motivating individuals to contribute towards some "public good" that redounds to everyone's advantage, regardless of contribution. Elster describes this problem as follows:

Clearly, whatever anyone else does, it is in my interest to abstain. If all others engage in collective action, I can get the freerider benefit by abstaining, and if everyone else abstains I can avoid the loss from unilateralism by abstaining too. Since the reasoning applies to each agent . . . all will decide to abstain and no collective action will be forthcoming.²⁶

If workers are rational egoists, they will prefer to be freeriders on the sacrifices of others rather than to make these sacrifices themselves. The theoretical issue, then, is to understand how the freerider problem can be overcome. If micro-level solutions are properly specified, we then can inquire into the social structural conditions conducive to creating these solutions.

Many "solutions" to the freerider problem have been discussed in the literature on collective action: individuals may act out of habit rather than rational calculation; side-payments and sanctions of various sorts may be used by the leadership of an organization to encourage participation; individuals may irrationally exaggerate the importance of their individual participation for the success of the collective action and thus believe that the benefits of the struggle in fact depend on their involvement when in fact this is not the case; the "game" may be repeated indefinitely so that actors take into consideration possible sanctions in the future for present behavior; preference orderings of individuals may change in ways which make them more altruistic. Some or all of these may be present in any given empirical context.

Elster's proposal is to understand class solidarity as a transformation of the preference orderings characteristic of a freerider problem (the prisoner's dilemma pay-off matrix) to an assurance game. Whereas in a prisoner's dilemma, each individual prefers to sponge off the sacrifices of others, in an assurance game each individual's highest preference is to cooperate with others (to join in common sacrifices) so long as each person feels assured that others will cooperate as well. In an assurance game people are unwilling to be unilateral altruists—to make sacrifices even if no one else is willing to do so. They do not want to be "suckers". But they prefer cooperation over freeriding. Elster designates this preference ordering "conditional altruism".

Elster's account of possible micro-foundations for overcoming the

26. *Ibid.*, p. 360.

freerider problem suggests a particular research agenda: that we explore the social conditions which enhance or undermine conditional altruistic preference orderings and which facilitate or hinder the translation of individuals' preferences into solidaristic practices. Elster holds that many of Marx's own analyses of working-class formation can be interpreted in this light. For example, Marx ascribed considerable importance to the concentration and interdependence of workers in large factories. These factors are important in part because of the way they increase the level of information among workers about the likely preferences and behavior of fellow workers. Such shared information is crucial for conditional altruistic preferences to lead to solidaristic practices. Similarly, Marxists have always emphasized the importance of leadership and organization in class formation. Elster argues that leaders may play a particularly important role in struggles in which conditional altruist motivations are present:

Obviously, leaders are always necessary, regardless of the motivation of individuals to coordinate collective action. If the motivations are also such that individuals must be assured of each other before they act, leadership takes on the additional function of providing such assurance. If one individual knows and is trusted by one hundred people, he can create the information conditions by two hundred transactions—first asking each of them about their willingness to join the collective action and then telling each about the willingness of everyone else. By contrast, bilateral communication between the hundred will require about five thousand acts of communication. The information gains from leadership can be quite substantial.²⁷

Organization and leadership thus provide potential participants with an indirect communication network essential to convincing them that they will not be "suckers" in collective struggles.

Table 6.1 What is Explanatory of Social Phenomena?

		Properties of and relations among aggregate social entities are irreducibly explanatory	
		Yes	No
Relations among individuals are explanatory	Yes	Anti-reductionism	Methodological Individualism
	No	Radical Holism	Atomism

27. *Ibid.*, pp. 366–7. Everything that Elster says about "leaders" as individual persons would also apply to organizations.

While these kinds of social determinants of class formation—concentration and interdependence of workers in large factories, the emergence of effective organization and leadership, etc.—have long been recognized as important, it is unlikely that the role of these factors in enhancing the information requirements for solidarity would be recognized in the absence of an elaboration of micro-foundations. Specifying micro-foundations, then, can help to elaborate the range of different social structural conditions capable of satisfying the same micro-level requirement (in this case, providing the information conditions for translating conditional altruistic preferences into solidaristic actions). Ethnic homogeneity, for example, may help to compensate for the disadvantages of small factories; or, in a complimentary manner, ethnic heterogeneity may counteract the favorable information conditions of large factories.

The elaboration of micro-foundations, therefore, helps provide theoretical order to the categories used in the macro-explanations of social theory. This, in turn, can facilitate the task of resolving empirical anomalies in research. Consider, again, the micro-foundations of conditional altruism in class formation. The theory predicts that ethnic homogeneity will increase the likelihood of class formation because of the ways it facilitates the information requirements of class solidarity. We then observe cases of ethnically homogeneous working-class communities or workplaces within which the level of manifest class solidarity is low. The elaboration of micro-foundations helps to guide research towards explaining the failure of the prediction. Is solidarity low because some other social factor has undermined the information conditions, counteracting the effects of ethnic homogeneity? Or is it low because the preference orderings of the workers is not in fact conditionally altruist? Or, in spite of favorable information conditions and conditional altruism, is solidaristic struggle low because some social condition has raised the costs of collective action to the point that workers are afraid to struggle? Or, finally, is it because some alternative set of micro-foundations needs to be specified for the process of class formation itself? Without a focus on micro-foundations, it is difficult to know what questions to ask in the face of such anomalies.

It is one thing to call for the elaboration of micro-foundations of macro-theory and another to specify the form such micro-foundational analyses should take. Methodological individualists, Marxist or not, have generally emphasized rational strategic action models. These models assume rationality in that actors are held to choose actions that maximize the probability of achieving some goal. The models are strategic in that they assume actors make choices knowing that other actors also make choices

in pursuit of their goals (thus, in making choices everyone must take everyone else's choices into account). Because of the emphasis on this kind of model, the work of writers like Elster, Przeworski, Roemer and others has sometimes been designated "rational choice Marxism".²⁸

Many Marxists have been suspicious of the call for micro-foundational analyses by analytical Marxists because of the use of these models. Rational actor models are closely identified with methodological individualism and even neoclassical economics. But, as we have argued, belief in the importance of micro-foundational analysis does not require commitment to methodological individualism. In addition, there is no need to equate micro-foundational analyses with rational strategic actor models. There are many other possible kinds of micro-foundations of social phenomena. Theories of socialization which emphasize the inculcation of norms, habits and rituals, or even psychoanalytic theories of the unconscious can be used. The Marxist theory of ideology, understood as a theory of the process of forming social subjects, can also provide a basis for elaborating micro-foundations.²⁹ One therefore can reject formal rational strategic action models and still acknowledge the importance of micro-foundational analyses.

In any event, those analytical Marxists who have deployed rational actor models have done so because they feel they are heuristically useful, not because they believe that actors are in fact universally rational and selfish. Elster emphasizes this point. Understanding the kinds of behaviors which would be predicted on assumptions of selfish rational strategic action, Elster argues, can be a useful foil for specifying the ways in which non-selfish preferences and non-rational cognitive processes shape individual action. Precisely what the mix is in any given problem between rationality and irrationality, selfishness and altruism, intentionality and habit is, in Elster's view and in ours, an empirical question.

Conclusion

Marxist defenders of methodological individualism like Elster have been particularly concerned to attack what they see as tendencies towards radical holism in the Marxist tradition. The antidote they prescribe is placing the elaboration of micro-foundations at the center of the agenda of Marxist theory and research. We believe that tendencies towards radical holism are better ascribed to intellectual sloppiness than to

considered philosophical commitment. Nevertheless, these tendencies *are* evident among Marxian writers (and others too); and the prescription Elster and his co-thinkers propose is reasonable.

But it is neither necessary nor helpful to frame the call for micro-foundations as a call for methodological individualism. To ban social types as objects of investigation is to impoverish the explanatory objectives of social science, and to contravene reasonable practices in the social sciences. Micro-foundations are important for macro-social theory because of the ways they help focus our questions and because of the ways they enrich our answers. But there is much more to science than their elaboration. If social types, as we suspect, are multiply realized, then micro-foundational accounts, important though they may be, cannot suffice to capture the explanatory power of macro-level theories.

We share the general view of analytical Marxists that what are most valuable and distinctive in the Marxist tradition are its substantive theses about the world. Marxian claims to methodological distinctiveness, generally, are misleading at best and harmful at worst. But so are assertions by methodological individualists concerning the proper way of understanding explanation in social science. Social science ought to be methodologically anti-reductionist if the properties and relations it investigates are multiply realized. This, we stress, is an empirical question, not one to be settled by methodological fiat.

28. See, especially, Alan Carling, "Rational Choice Marxism", *New Left Review* 160 (1986).

29. See Goran Therborn, *The Power of Ideology*.