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Review: What Middle-Range Theories Are

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Merton's methodology. The research clearly represents a major advance in technique and in developing empirical generalizations. However, it is also the major example of a large body of quantitative research primarily concerned with establishing causal effects without worrying about what the effects mean. The irony of seeing status attainment research as the mark of progress in the direction proposed by Merton is, of course, that it was exactly the need to understand how effects come about that motivated the development of the focussed interview and other empirical analysis by Merton. The main defect of status attainment research, and of much of the quantitative labor market research that has followed it, is that theory formulation is seen as a matter of choosing variables and not as a matter of developing and sustaining an argument about why observed relationships come into being. The problem is lack of attention to the need of research to tell a story that makes us understand better what we observe. In other words, the problem is lack

of attention to the problem dealt with in *The Focused Interview*.

Gould's essay has nothing to do with empirical research, but it is a nicely developed argument in favor of grand theory. This is theory about theory. Several other essays in *Robert K. Merton: Consensus and Controversy* deal with the same theme. None deals with the excitement of confronting ideas with evidence. That is a shame. Perhaps the next book about Merton will improve on the characterization of Robert K. Merton by making that excitement a more important theme.

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## What Middle-Range Theories Are

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Sociologists often use the word "theory" in an idiosyncratic fashion. For many of them, "theorizing" means, for instance, identifying a given type of social process or of independent variable as *the* main one. Thus "the theory of conflict" advocates in a nutshell the idea that conflicts represent the most important aspect of social life. That conflicts are important is trivial. That they are the most important aspect of social processes is at best an empty statement. For other sociologists, social classes—alternatively, *the* "dominant class"—represent the only really crucial groups in societies. Some sociologists have even spent their lives developing the view that any observable social phenomenon should be interpreted as the manifestation of the hidden hand of the dominant class. Let us call this type of theorizing BT (for "broad range" or—*ad libitum*—"bad" theorizing).

Merton had in mind when he coined his famous notion of the "middle-range theory" (MRT). I remember Paul Lazarsfeld once telling me: "an important notion, but I don't know how to define it." I may be wrong, but I think that MRT means two things, which are both of utmost importance and very simple to grasp. A negative one: it means it is hopeless and quixotic to try to determine the overarching independent variable that would operate in all social processes, or to determine the *essential* feature of the social structure, or to find out the two, three, or four couples of concepts (e.g., *Gesellschaft/Gemeinschaft*<sup>1</sup>) that would be sufficient to analyze all social phenomena. In other words, I see first in Merton's MRT notion the polite expression of a severe doubt about the usefulness of a "theoretical" activity which was widespread when Merton coined it, and which appears as a permanent feature of our sociological field.

### Middle-Range Theory

It has sometimes seemed hard to see what

<sup>1</sup> That such concepts are important is one thing; that they constitute a key to all social phenomena is another.

A penetrating British methodologist said recently the same thing in more direct terms: what sociologists call “theory” is often what philosophers would normally consider bad philosophy (Pawson 1989). But the notion of MRT also has a positive side, which I would enunciate plainly: sociologists would be better off and would gain both in efficiency and respectability in the external world if they took the word “theory” in the same sense as do the other sciences, and if they “theorized” in the same fashion as do other scientists.

That the notion of MRT attempts to fight a certain epistemological obscurantism typical of sociology and that BT is seen by Merton as a major obstacle to the advancement of sociology is clear from what he writes: “sociology will advance in the degree that its major concern is with developing theories of the middle range” (Merton 1957, p. 9). In other words, substituting MRT for “theory” (BT) is the main way to give sociology the cognitive power a scientific discipline normally should aim at. So much for the negative critical side of the MRT notion.

As to the positive side: talking about the “reference group theory,” Merton says that it is “one of these theories of the middle range which consolidate otherwise segregated hypotheses and empirical regularities” (1957, p. 280). In other words, MRT describes effectively what the other sciences call simply “theory.” As we all know from our studies in the philosophy and history of the natural sciences, a “scientific theory” is a set of statements that organize a set of hypotheses and relate them to segregated observations. If a “theory” is valid, it “explains” and in other words “consolidates” and federates empirical regularities which on their side would otherwise appear segregated. This amounts also to saying that mere empiricism is of little worth.

### Reference Group Theory

Reference group theory (RGT) is a good classical example of a theory in the sense Merton advocates. The general idea behind the RGT is that many attitudes and beliefs get installed in the minds of social actors by their taking some persons or groups as a natural reference, given the situation and questions the actors are exposed to. This theoretical idea is present behind several models that deal

with and explain all kinds of heterogeneous phenomena. It is present, for example, behind Hirschman’s “tunnel effect” (1980), which suggests that the sensitivity of social actors to the evolution of their own situation depends on the evolution of other social categories close to them. Thanks to this model, Hirschman explains puzzling observations about the tolerance to inequalities in developing countries: when two lines of cars stay bumper to bumper in a tunnel, as soon as the line, say, on the left starts moving, this creates expectations in the other line. Those on the right expect to move as well. If they don’t, or if they move less quickly than they expected, they tend to become more impatient than when they did not move at all. The same happens with inequalities, says Hirschman. Because of this RG mechanism, they can be felt more strongly when the absolute situation of the actors gets better.

Obviously, the “tunnel effect” can be easily related, through the mediation of the RGT, to Stouffer’s famous “relative deprivation” effect, the canonical illustration of the RGT. The same effect is illustrated by the famous analysis in Tocqueville’s *Ancien Regime*, where he explains why discontent grew in the years before the French Revolution, at a time where people were becoming better off (Boudon 1982).

I have elsewhere tried to show that educational inequalities could not be easily understood without introducing RG effects (1977, 1990). Educational inequalities are large and remain so. According to empirical data, they result from the fact that youngsters from lower-class families are cognitively handicapped. But they result also from motivational effects. Other things (achievement, age, and the like) being equal, a youngster from a lower class feels less attracted than a higher-class student by the idea of reaching the next stage in the educational race. This motivational factor is by far much more important than the “cultural” one. The effects of the cultural handicap dwindle over the life of a school cohort because of the overselection of youngsters from the lower class, while the motivational factor enters repeatedly into action, generating exponential effects. Now this motivation factor is most convincingly explained by the fact that the youngsters and their families judge educational and social

achievement not in absolute terms, but by taking their own orientation status as a kind of reference point.

These examples show that the RGT can inspire models that explain various phenomena dealing with educational inequalities throughout the world (Boudon), tolerance of inequalities in developing countries and elsewhere (Hirschman), satisfaction and dissatisfaction in organizations (Stouffer), and birth of social movements (Tocqueville). It effectively connects heterogeneous phenomena, as Merton claims. It helps, as any theory should, to solve puzzles. It plays a role similar to the role played, say, by the laws of motion in physics. These laws can, like RGT in its field, be applied to heterogeneous phenomena (such as refraction or reflection) and transform puzzles into unpuzzles.

### The Two-Step Flow Model

Another example of MRT mentioned by Merton is Katz and Lazarsfeld's two-step flow model (TSM) (1955). Against the current view, according to which the media would exert a mechanical influence on the mind of the receivers, the TSM suggests that messages are actively screened and evaluated by the receiver along a variety of dimensions: interest of the message for the receiver, or credibility of the source. If the receiver has some doubts about the credibility of the source, he or she will look, for instance, for additional information coming from a cheap reliable source, if available. Hence the "two steps": a customer will, for example, check an advertisement for a coffee brand by asking a neighbor about it (a cheap information source whose credibility he or she is likely to know to some extent).

It can be shown that the TSM federates a number of findings that deal not only with consumption behavior, but with the adoption of innovations, or the so-called manifestations of "resistance to change." The TSM replaces the popular *mechanical* model by a much more powerful and acceptable *strategic* one. The diffusion of rumors, ideas, or innovations in rural or industrialized areas and in informal or organized groups, as well as the influence of the media and many other processes, can be efficiently explained by the TSM (Boudon 1988). For this reason, it remains in operation

after thirty years. We have here again an example of a mental instrument to a large extent comparable to what the other disciplines call "theory." In the same fashion, the Darwinian theory of evolution federates the explanation of a number of heterogeneous phenomena in the field of biological evolution.

### Subjective Rationality Theory

I will take a final example. Elaborating on a notion coined by Herbert Simon (1982), I have tried to develop what I proposed to call a Subjective Rationality Theory (SRT) (Boudon 1989a). The SRT starts from the idea that, except in unusually simple cases, a social actor confronted with a decision problem or with the problem of getting an opinion on some subject will often solve it on the basis of objectively ungrounded but subjectively grounded reasons. Thus, the reasons will appear to the subject as objectively grounded in circumstances he or she perceives as similar to the situation he or she is faced with. I have tried to show that this idea can federate many various findings, phenomena, and theories. It is present behind Downs' theorem that the rational voter has to be ideological, behind Spence's "signal theory," behind Durkheim's and Weber's theory of magic, behind many puzzling findings about natural inference processes presented by cognitive psychologists, behind bizarre sociological findings about beliefs (as the fact that believing in supernatural beings appears in many surveys more likely as the level of education increases), or behind many ideological beliefs, as Marx, Mannheim, and others saw in their best analyses (Boudon 1989b).

Not only does the SRT federate many findings; it can be shown that an explanation along the SRT line is generally preferable to other types of theories. The case of magic is illuminating in this respect. Durkheim's and Weber's theories can easily be expressed as "the 'primitive' have *subjective reasons* of believing in objectively ungrounded causal relationships," while Lévy-Bruhl's, say, cannot (Lévy-Bruhl explains magical beliefs by causes, not by reasons). Now, while Lévy-Bruhl's theory is discredited, Durkheim's and Weber's are considered a solid theory, implicitly or explicitly accepted by most

contemporary works on magical beliefs (Boudon forthcoming; 1990). In other words, the validity of the MRT behind the interpretation of a social phenomenon is what makes this interpretation strong or weak.

This latter example shows also that middle-range theorizing is crucial not only as far as the progress of sociology itself is concerned; it can also—as in the natural sciences—contribute federating findings and theories from various disciplines, as from economics, political theory, cognitive psychology, or the sociological theory of ideologies. It produces interdisciplinarity *naturally*, so to say.

### Coda

A brilliant, but strange and defeatist book (Lepenies 1985) recently tried to show that sociology should be considered a third culture, between literature and science, without raising the obvious question as to why, if a new continent between art and science existed really, we would have had to wait so long to become informed of such big news. What is true is that many sociological products can—effectively and unfortunately—be considered both bad science *and* bad literature. But why should the sociological products of the bad literature-bad philosophy-bad history-bad science kind be assumed to define the essence of sociology? As Merton suggests, after Weber and Durkheim, who agreed on this point, sociology can also be good science; it can, as well as any other scientific discipline, help explain puzzling phenomena and create new solid knowledge

about the aspects of the social world it is traditionally concerned with. Middle-range theory is effectively the indispensable means to reach this goal, while broad-range theory is the main source of the third culture.

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## Merton's Sociology of Science: The First and the Last Sociology of Science?

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### Merton the founder of the sociology of science

Even his enemies admit that Merton is the founder of the sociology of science. When he published his classic *Science, Technology, and Society in Seventeenth-Century England* in 1938, the sociology of science was not a recognized field. Fifty years later, an abun-

dance of programs of instruction and centers of research in social studies of science and technology can be found in the United States and Europe, and the status of sociology of science as an academic subdiscipline is beyond question. To be sure, there were other books produced on science, technology, and society at the time of Merton's publication, most notably Bernal's famous *The Social*