

# The gap between cultural selection theory and sociology

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## Abstract

Cultural selection theorists and sociologists are so far from each other in terms of concepts and methods that they can hardly communicate and understand each other's theories, even though they are studying the same phenomena. The strengths and weaknesses of each of these two paradigms are discussed. As both paradigms have something valuable to offer, which the other hasn't, there is every reason to try to reconcile the two.

This paper offers some suggestions as to why the sociological tradition has drifted away from the methods of the natural sciences, which cultural selection theory adheres to. The communication gap between the two camps is analyzed in terms of cognitive psychology, and some suggestions for bridging the gap are offered.

## Different perspectives lead to different insights

Some of the most acrimonious debates between the social and the natural sciences are caused by differences in the perspectives applied in different areas of science. For example, memeticists focus on the characteristics of the ideas or things that people choose, while other social scientists focus on the characteristics of the persons who make these choices. Different perspectives make scientists see things differently, ask different questions, and consequently make different discoveries. It is unwise to claim that one perspective is the only right way to see things (Fog 2003a).

Many of the discoveries that memetics has brought us are strikingly simple and straightforward. It is therefore surprising that these discoveries have not been made before, despite their far-reaching consequences for our understanding of why certain beliefs and ideas spread. The reason is that other social scientists have applied other perspectives and therefore made other kinds of discoveries.

Natural scientists usually prefer nomothetic studies (i.e. seeking regularities and causal connections) while many social scientists prefer idiographic studies (i.e. regarding every event as unique). Some of the perspectives that are popular among social scientists, but difficult to understand for natural scientists, are cultural relativism, social constructionism, and hermeneutic approaches (Martin and McIntyre 1994).

Assume, for example, that we are studying shamanism in a culture very different from our own. A natural scientist may ask for a proof that the shaman really is a shaman and that he has the supernatural powers that he claims to have. The naturalist perspective may furthermore require an investigation of whether the spirits that the shaman talks about have a physical existence. This line of research is unlikely to lead to important new discoveries.

A social anthropologist, on the other hand, may regard concepts like *shaman* and *spirit* as social constructions. It does not make sense to ask whether a social construction is true or false. If somebody is called a shaman then he *is* a shaman. It makes more sense to investigate which role shamans and spirits play in the social life in this culture. In order to understand why people act as they do, we have to understand their beliefs and regard these beliefs as no less valid than the predominant beliefs of our own culture. This method is an effective antidote against the ethnocentrism that has compromised many of the early anthropological reports.

The relativist perspective has led to many important discoveries, but taken to the extreme it leads to absurdities. If all beliefs are equally valid, then nothing is true or false. We would be

unable to study lies, exaggerations and deceptions. And even the theories of the scientist himself will have the same relative status as the beliefs he is studying. Such paradoxes have led to many bitter debates between adherents of the different perspectives and paradigms (Ross 1996; Sokal and Bricmont 1998; Koertge 1998; Lacey 1999). A discussion of the disagreements between cultural selection theorists and traditional sociologists is given in an accompanying paper (Fog 2003a).

The relativist perspective is superior for understanding the subjective meaning of beliefs and rituals and the role they play in the mental and social life of people. But it is not good at explaining the origin of these beliefs. Here we have to use cultural selection theory. The cultural selection perspective can explain why one set of beliefs has been propagated and spread, while rival beliefs have quickly been forgotten. The cultural selection process can be effective even when no belief has been proved or disproved and no person has intentionally decided the path of development. Cultural selection theory is therefore superior for explaining unintended developments (Fog 1999).

## **Why has social science moved away from the principles of natural science?**

The idiographic and relativist focus of many social scientists has made it difficult or impossible for them to make testable predictions. Many sociologists even claim that it is impossible or irrelevant to apply the principles of the natural sciences to the study of social phenomena. The arguments are that social systems are so complex that everything influences everything, and that you cannot vary one factor and keep everything else constant in order to investigate causal mechanisms (Martin and McIntyre 1994). The counterargument is that many other sciences have dealt successfully with equally complex and open systems (McIntyre 1996). The science of economy is an obvious example showing the possibility of making a nomothetic theory of social phenomena.

I will now venture the hypothesis that the traditions of social science have moved away from the principles of natural science as a result of a cultural selection process. This can be explained as follows. Social phenomena are so complex that every rule has exceptions. Whenever somebody proposes a theory of cause and effect in a social system, somebody else will find an exception that falsifies the theory. In other sciences, an apparent inconsistency most often leads to a refinement of the theory rather than rejection (Lakatos 1974). But in social science, rejection has often been easier than refinement. Throughout the years, this selection mechanism has slowly depleted large sectors of the social science tradition of falsifiable theories. What is left is idiographic descriptions, definitions, categorizations, and interpretations.

One may ask how the social science community can choose between alternative theories when there are no testable hypotheses. Irrelevant criteria like prestige possibly play a larger role than in other sciences. A social scientist may gain prestige by using an elaborate terminology, by making simple things look complicated, and by using an abstract and metaphorical language that any reader can interpret to his personal liking. For example, the prestigious social scientist Niklas Luhmann, in a study of trust, has written:

*Trust occurs within a framework of interaction which is influenced by both personality and social system, and cannot be exclusively associated with either. This is why we must take refuge in a more general theoretical language, where concepts such as environment, function and complexity are formulated at such a high level of abstraction as to lend themselves to psychological as well as sociological interpretation. (1979:6), and later:*

*A theory of trust presupposes a theory of time, and so leads us into territory so difficult and obscure that we cannot map it out here. Nevertheless, recent discussions in systems theory provide some clues. They have to do with the relationship between temporality and the differentiation of system and environment. As soon as systems differentiate from their environment by formulating boundaries, problems about time occur, in the first place, through the dislocation of processes so as to differentiate them by making them sequential. (1979:10).*

## Communication barriers

Studies in the history of science have found that adherents of competing paradigms do not understand each other and are unlikely to convince each other (Kuhn 1962, 2000). An explanation of this communication barrier (or incommensurability, as Kuhn calls it) may be found in cognitive psychology. In order to understand this, we have to look into the way humans process new information.

Every day, humans receive so much information, and so complex information, that it is impossible to digest it all in a useful way unless we apply certain economizing strategies in the processing of information. Obviously, humans select only the information that appears to be useful, and ignore the rest. The selected information is then fitted into cognitive schemas that are constructed on previously received similar information. This is called schematic thinking. Studies of the way humans process information from television and newspapers have shown that the people who have the most appropriate cognitive schemas to apply, understand the information best. In the absence of appropriate schemas, the information is either ignored, or is poorly understood by the application of less appropriate schemas (Graber 1988).

Studies of the way scientists think, have found that mental models and cognitive schemas are widely used in scientific thinking (Nersessian 2002). It is therefore reasonable to assume that Graber's model of information processing also applies to the reading of scientific texts. A scientist trained in paradigm *A* reading a text belonging to paradigm *B* is likely to apply different, and less appropriate, schemas when interpreting the text, than scientists trained in paradigm *B*. The result is that the text is poorly understood or misunderstood.

Previous cognitive models of incommensurability between competing paradigms have been based on differing concepts or frames, but without considering the consequences of economized information processing (Chen, Andersen and Barker 1998).

As explained above, the way social scientists think is often very far from the way natural scientists think, and the communication gap is quite deep. In order to study the way social scientists read texts inspired by naturalist thinking, I have analyzed several peer-review reports written by social scientists judging my writings. The application of inappropriate schemas is evident by the fact that my writings are categorized as belonging to various old-fashioned sociological paradigms such as functionalism or social Darwinism, with which they have only a slight resemblance. Thus, one referee criticizing an early version of my book "Cultural selection" wrote: *"The, not always explicitly stated, theoretical foundation is functionalism."* My discussion of the difficulty of testing causal models of social systems experimentally made the same referee criticize the view of science that my desire to make tests revealed, and commented: *"The author's assumption about the theoretical advantage of experiments must be considered rejected by contemporary social science analyses of culture."* Another referee made a similar comment: *"The very idea of mapping causalities need a justification. To think of social phenomena as a logical consequence of cultural and social psychological factors depreciates the self-regulating mechanisms of social phenomena."* These comments are evidence of a way of thinking which is fundamentally different from the natural sciences. The cognitive problems are sometimes quite evident. One referee commented, *"This manuscript was painful to read."*, while other referees comment only on marginal corners of the texts and ignore the central theoretical ideas.

While I am obviously biased when reading referee reports criticizing my own writings, it would be better to analyze reports about the works of other scientists. If any of my readers have ever had works inspired by naturalist thinking refereed by social scientists, or vice versa, (or know somebody who has) then I would be very happy to see the referee reports. It appears that such reports make a valuable source of information about the cognitive processing of scientific texts.

## Bridging the gap

The communication barrier obviously works both ways. I may have been quite critical of certain social science traditions in the above discussion, but it should not be ignored that the perspectives applied by social scientists have led to important insights that probably would not have been found if only the perspectives typical of natural scientists had been applied.

Different perspectives and paradigms often lead to different kinds of discoveries, all of which may be important.

Kuhn's model of scientific revolutions implies that competing paradigms cannot coexist without one eventually replacing the other (Kuhn 1962). In the present situation, however, we have two conflicting paradigms that both have something valuable to contribute which the other hasn't. In this situation, there is an advantage in being bilingual, as it has been called (Chen, Andersen and Barker 1998), i.e. understanding both paradigms even though the two vocabularies may not be inter-translatable. This situation is likely to persist until perhaps some day a third paradigm is constructed which embraces the best from both worlds.

Many scientists are schooled in one particular paradigm and search for areas that this paradigm is applicable to. A more fruitful strategy would be to start with a problem that one wants to study, and then search for all the paradigms and perspectives that may contribute to an understanding of this particular problem. This requires, of course, that one avoid any concepts and definitions that make sense only within one particular paradigm. This may sound like a difficult strategy, but I am determined to prove that it is possible. In a current research project, I am focusing on how economic competition between commercial mass media influences the form and content of the news stories and political debates in these media, which in turn influence opinion formation and democratic elections, which again feeds back on media economy and regulation. This model involves as diverse areas of science as media economy, the psychology of media effects, the sociology of issues, and political studies, combined under a framework of cultural selection theory. A test of this model on real world data actually shows statistically significant correlations. A draft presentation of this research is available from the author's website (Fog 2003b).

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