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2014 : WHAT SCIENTIFIC IDEA IS READY FOR RETIREMENT?

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Culture

Culture is like trees. Yes, there are trees around. But that does not mean that we can have a science of trees. Having some rough notion of 'tree' is useful for snakes that lurk and fall on their prey, for birds that build nests, for humans trying to escape from rabid dogs, and of course for landscape designers. But the notion is of no use to scientists. There is nothing much to find out, e.g. to explain growth, reproduction, evolution, that would apply to all and only those things human and snakes and birds think of as 'trees'. Nothing much that would apply to both pines and oaks, to both baobabs and monstrous herbs like the banana tree.

Why do we think there is such a thing as culture? Like 'tree', it is a pretty convenient term. We use it to designate all sorts of things we feel need a general term, like the enormous amount of information that humans acquire from other humans, or the set of idiosyncratic concepts or norms we find in some human groups but not others. There is no evidence that either of these domains corresponds to a proper set of things that science could study and about which it could offer general hypotheses or describe mechanisms.

Don't get me wrong—we can and should engage in a scientific study of 'cultural stuff'. Against the weird obscurantism of many traditional sociologists, historians or anthropologists, human behavior and communication can and should be studied in terms of their natural causes. But this does not imply that there will or should be a science of culture in general.

We can run scientific studies of general principles of human behavior and communication—that is what evolutionary biology and psychology and neurosciences can do—but that is a much broader domain than 'culture'. Conversely, we can run scientific studies of such domains as the transmission of technologies, or the persistence of coordination norms, or the stability of etiquette—but these are much narrower domains than 'culture'. About cultural stuff, as such, in general, I doubt any good science can say anything.

This in a way is not surprising. When we say that some notion or behavior is "cultural", we are just saying that it bears some similarity to notions and behaviors of other people. That is a statistical fact. It does not tell us much about the processes that caused that

behavior or notion. As Dan Sperber put it, cultures are epidemics of mental representations. But knowing the epidemiological facts—that this idea is common whereas that one is rare—is of no use unless you know the physiology, so to speak—how this idea was acquired, stored, modified, how it connects to other representations and to behavior. We can say lots of interesting things about the dynamics of transmission, and scholars from Rob Boyd and Pete Richerson to more recent modelers have done just that. But such models do not aim to explain why cultural stuff is the way it is—and there probably is no general answer to that.

Is the idea of culture really a Bad Thing? Yes, a belief in culture as a domain of phenomena has hindered the development of a proper science of human behavior in groups—what ought to be the domain of social sciences.

First, if you believe that there is such a thing as 'culture', you naturally tend to think that it is a special domain of reality with its own laws. But it turns out that you cannot find the unifying causal principles (because there aren't any). So you marvel at the many-splendored variety and diversity of culture. But culture is splendidly diverse only because it is not a domain at all, just like there is a marvelous variety in the domain of white objects or in the domain of people younger than Socrates.

Second, if you believe in culture as a thing, it seems normal to you that culture should be the same across individuals and across generations. So you treat as unproblematic precisely the phenomenon that is vastly improbable and deserves a special explanation. Human communication does not proceed by direct transfer of mental representations from one brain to another. It consists in inferences from other people's behaviors and utterances, which rarely if ever leads to the replication of ideas. That such processes could lead to roughly stable representations across large numbers of people is a wonderful, anti-entropic process that cries out for explanation.

Third, if you believe in culture you end up believing in magic. You will say that some people behave in a particular way because of "Chinese culture" or "Muslim culture". In other words you will be trying to explain material phenomena—representations and behaviors—in terms of a non-material entity, a statistical fact about similarity. But a similarity does not cause anything. What causes behaviors are mental states.

Some of us aim to contribute to a natural science of human beings as they interact and form groups. We have no need for that social scientific equivalent of phlogiston, the notion of culture.

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