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This Idea Must Die

Scientific Theories That
Are Blocking Progress

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CULTURE

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Culture is like trees. Yes, there are trees around. But that doesn't mean 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's nothing much to find out—for example, to explain growth, reproduction, evolution—that would apply to all and only those things humans 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's such a thing as culture? Like "tree," it's a 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 in others. There's 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 doesn't 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's what evolutionary biology and psychology and neuroscience can do—but that's 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're just saying that it bears some similarity to notions and behaviors of other people. That's a statistical fact. It doesn't tell us much about the processes causing that behavior or notion. As the French cognitive scientist 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 don't aim to explain why cultural stuff is the way it is—and there's probably 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 there's such a thing as "culture," you naturally tend to think it's 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's not a domain at all, just as there's a marvelous variety in the domain of white objects or 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's vastly improbable and deserves a special explanation. Human communication doesn't 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'll say that some people behave in a particular way because of "Chinese culture" or "Muslim culture." In other words, you'll be trying to explain material phenomena—representations and behaviors—in terms of a nonmaterial entity, a statistical fact about similarity. But a similarity doesn't 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.

CULTURE

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Reproduction*

Years ago, when I sat at the feet of the master, the King of the Amazon Jungle liked to talk about culture. He quoted his own teachers, who considered it *sui generis*: Culture was a thing in and of itself. It made us more than the sum of our biological parts; it emancipated us from the Promethean bonds of our evolutionary past. It set us apart from other animals and made us special.

Napoleon Chagnon wasn't so sure about that, and neither was I.

What if the 100,000-year-old evidence of human social life—from arrowheads in South Africa to Venus figurines at Dordogne—is the effect of nothing more or less but our efforts to become parents? What if the 10,000-year-old record of civilization—from tax accounts at Near Eastern temples to the inscription on a bronze statue in New York Harbor—is the product of nothing more or less but our struggle for genetic representation in future generations?

Either case can be made. For 100,000 years or more, prehistoric foragers probably lived like contemporary foragers in Africa or Amazonia. They probably did their best to live in peace but occasionally fought over the means of production and reproduction, so that the winners cohabited with more women and supported more children. And they probably were more likely to fight where it was harder to flee, in territory

where resources were easy to come by and food and shelter in nearby territories were relatively scarce.

Then, within just the last 10,000 years, the first civilizations were built. From Mesopotamia to Egypt, from India to China, then in Greece and Rome, eusocial emperors—like eusocial insects—turned some of their subordinates into sterile castes but were extraordinarily fertile themselves. A *praepositus sacri cubiculi*, or eunuch, set over the sacred bedchamber, eventually ran the empire on the Tiber, and other eunuchs collected revenues, led armies, and kept track of the hundreds of “home-born” children in the *Familia Caesaris*—the imperial family in Rome. Then the barbarians invaded, and the emperor took his slave harem off to a secure spot on the Bosphorus.

And the Republic of St. Peter took over in the depopulated west. From Clovis’s kingdom in Paris to Charlemagne’s empire at Aachen to the Holy Roman conglomerate east of the Rhine, cooperatively breeding aristocrats—like cooperatively breeding birds—turned some of their sons and daughters into celibates but raised others to become husbands and wives. Abbesses, abbots, and bishops administered estates and conscripted troops, or instructed their nieces and nephews in monastery schools; their older brothers begot heirs to their enormous castles or covered the countryside with bastards. Then the Crusaders took ships to the Near East, and Columbus led the first waves of immigrants across the Atlantic.

Over the next few centuries, hordes of poor, huddled masses from across the Old World found places to breathe free on the American continents. Millions of solitary slaves and serfs, and thousands of unmarried priests and monks—like helper birds or social-insect workers whose habitats had opened up—walked away from their lords and masters and out of their cathedrals and

abbeys. They were hoping to secure liberty for themselves and their posterity; they were looking for places to raise their own families. In the *Common Sense* words of a common man, Tom Paine: “Freedom hath been hunted round the globe, Asia, and Africa have long expelled her. Europe regards her like a stranger, and England hath given her warning to depart. O! receive the fugitive and prepare in time an asylum for mankind.”

Since those early days when I learned from Napoleon Chagnon, it has seemed to me that “culture” is a seven-letter word for God. Good people (some of the best) and intelligent people (some of the smartest) have found meaning in religion: They have faith that something supernatural guides what we do. Other good, intelligent people have found meaning in culture: They believe that something superzoological shapes the course of human events. Their voices are often beautiful, and it’s wonderful to be part of a chorus. But in the end, I don’t get it. For me, the laws that apply to animals apply to us.

And in that view of life, there is grandeur enough.