

# HUMAN CULTURES THROUGH THE SCIENTIFIC LENS



## Essays in Evolutionary Cognitive Anthropology

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Pascal Boyer, *Human Cultures through the Scientific Lens: Essays in Evolutionary Cognitive Anthropology*. Cambridge, UK: Open Book Publishers, 2021, <https://doi.org/10.11647/OBP.0257>

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ISBN Paperback: 9781800642065

ISBN Hardback: 9781800642072

ISBN Digital (PDF): 9781800642089

ISBN Digital ebook (epub): 9781800642096

ISBN Digital ebook (mobi): 9781800642102

ISBN XML: 9781800642119

DOI: 10.11647/OBP.0257

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Cover design by Anna Gatti

# 1. Anthropology, Useful and Scientific

## An Introduction

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The essays gathered in this volume were all intended as contributions to what I would like to call a *useful* and *scientific* anthropology, two words that may seem a tad presumptuous and require an explanation.

First, the useful part. The essays address specific questions such as the following:

- Why do some social institutions seem ‘natural’ to many people across different cultures?
- How do people form their views of the economy?
- Why do human beings engage in ritual behaviors, either pathological (in compulsive disorders) or culturally sanctioned (like ceremonies)? What are the common features of these behaviors?
- How do people detect that someone has a mental disorder? Does this differ from one culture to another?
- What motivates conflict between groups?
- Do ethnic conflict and discrimination have an impact on people’s health? If so, how does that happen?
- What explains the differences between religions?
- Why are some political institutions stable and not others?

These are all questions of some social importance. It is not difficult to see that it would be a Good Thing, so to speak, to make progress in

addressing such issues. I do not claim that the essays gathered here are *more* useful than other attempts in the social sciences, but simply that the main motivation here is indeed to be useful, to provide models and findings that help us move closer to a proper explanation of these phenomena. That is the goal, the ambition, if perhaps not the actuality.

What about 'scientific'? In my view, the main way for scholarship to be useful, indeed useable, in these domains, is to proceed in a scientific manner. By using this term, I certainly do not mean to claim or imply that the various statements contained here are true. In fact, making such a claim would be quite the unscientific thing to do. The implication is simpler and more modest, meaning that the models proposed can and should be examined in terms of empirical data, and that they may be found to be false or in serious need of revision on the basis of such data.

In all these essays we adopt the perspective of an 'integrated' social science, that addresses questions about cultures and societies in a deliberately eclectic manner, combining results and models from evolutionary biology, experimental psychology, economics, anthropology and history (Morin, 2016; Sperber, 1996; Tooby & Cosmides, 1992). This approach is sometimes derided as 'positivistic' and 'reductionistic', and that is exactly what it is. It is blithely reductionist (explaining what happens at a high level of complexity in terms of the combinations of simpler, lower-level elements) and mostly positivist (if the term simply denotes the scientific aspiration).

## Why Science Isn't and Should Not Be True to Life

To some people, it may seem that this way of describing and explaining social phenomena robs them of much of their substance. The models may be compelling but they miss out the rich texture and detail of actual social interactions. We talk about rituals in general without considering the particular and highly varied social contexts in which they take place; we examine people's views of economic processes, but we ignore the subtle individual differences in their construction; we consider widespread assumptions about madness, but not how they are modulated in each case... to these objections, the proper reply would be: Yes, *YES!* We do that, and that is exactly what we should do. Far from

being a problem, the exclusion of so much information is precisely the main virtue of this way of proceeding.

The point will seem quite obvious to some and strikingly wrong-headed to others. For some people, doing science consists in discovering 'what really happens', beyond error, prejudice and received wisdom. Scientists are seen as people who describe things the way they really are. So it seems that one's theories should always be 'true to life.' That is very misleading.

In some sense, of course, scientific theories are 'true to life' because evidence is the only tribunal that judges right and wrong. An embarrassing, unexplained fact carries more weight than a satisfactory, elegant theory, and that is what makes scientific activities so frustrating sometimes.

In another sense, scientific theories are not, cannot be, and should not be 'true to life.' Producing a theory does not mean taking into account all possible aspects of the phenomena you describe. On the contrary, it means that you focus on some aspects that can be described in terms of abstract generalizations, assuming, for the sake of simplicity, that all other aspects are 'equal'. The notion of 'all else being equal' seems entirely natural and compelling to some people; and it seems utterly alien to many others. As the Russian writer Alexander Zinoviev put it, the two styles of thinking are diametrically opposed: 'the scientific principle produces abstractions, the anti-scientific principle destroys them on the grounds that such and such has not been considered. The scientific principle establishes strict concepts, the anti-scientific principle makes them ambiguous on the pretext of thus revealing their true variety' (Zinoviev, 1979, p. 209).

## Why Social Science Is Impossible (Or Nearly So)

Where do we stand, in our understanding of social phenomena? How much do we know? It often seems like we are nowhere near where we should be, given the amount of available information about human cultures and history. Analogies with other sciences are certainly difficult, but it may seem that we are at the same stage as chemistry was, say around the beginning of the nineteenth century. At the time,

chemists had at their disposal a vast number of facts about different substances and their interactions, but very little by way of a systematic understanding of these facts. Why would an acid and a base combine to form water and a salt? (For that matter, the distinction between acids and alkali would have been difficult to explain).

One obstacle on the way to social science is, as it turns out, human minds themselves. The problem is that, in a sense, we already have all sorts of ideas about societies, what could be called a 'folk-sociology' (Boyer, 2018, pp. 216–237). Folk-sociology consists in a set of partly tacit assumptions, that we all use when trying to describe or explain social facts and processes.

For instance, one major feature of our folk-sociology, found in the most diverse societies, is that we spontaneously construe human groups as agents. We talk about villages or social classes or nations as entities that want this, fear that, make decisions, fail to perceive what is happening, reward people or take revenge against them, are hostile towards other groups, and so on. All these terms suggest that, in some implicit way, we consider that what happens in social groups is very much the same as what happens in a human mind.

Another assumption of folk-sociology is that power is a kind of substance attached to particular individuals, and its operation is analogous to a physical force. This is manifest in such phrases as 'she has power,' 'she lost power,' 'his power increased,' and so on. This is not just a Western or European way of speaking. Such metaphors are familiar from many tribal societies, chiefdoms, and early states. We say that people 'have' and 'exercise' power. We conceive of someone with power as able to 'push' others toward certain behaviors (as a physical force can move objects), we say that people who did not follow the leader are 'resisting,' that they are not 'swayed,' they resent being 'pushed around,' etc.

These conceptions of social facts and processes are based on loose and misleading conventional metaphors (Lakoff & Johnson, 1980). We vaguely perceive that social groups are not literally agents and that power is not literally a force, but it is very difficult to think outside the metaphors. Try to describe political power without ever using notions like 'pushing' and 'resisting'; or try to describe international relations without ever saying that 'Russia wanted this' and 'England realized that...,' and so forth. Indeed, the metaphors are so entrenched that they

may seem self-evidently true—which is why some social scientists, in the past, tried to argue that nations really were like agents and political power really was a force.

Now folk-sociology is a real hindrance, when you try to think about cultural phenomena in a scientific manner, because it hides the very problems we should try to solve. Seeing the nation or the ethnic group as agents conceals difficult questions, such as: why do people favor their group against others? Why would people behave as loyal members of an ethnic group, rather than defect to another one? In the same way, seeing power as a force makes it impossible to describe the complicated dynamics, whereby the preferences of some people (the leaders) seem to have effects on the behaviors of others (the followers). The notion of power as force indeed makes it impossible to understand how power relations change: why was the East German communist party so powerful in 1988 and so powerless in 1990?

Can we really discard folk-sociology? It is difficult for two reasons. The first one is that our social understandings are largely implicit. As the old saying goes, it is difficult to reason people out of something they were not reasoned into. The view that power is a force, for instance, is not usually an explicit, conscious representation of what political power consists of. A second, more familiar reason is that our ideas about society are not just a matter of detached consideration. They guide our own social interaction, and what happens in that interaction does matter to us. While abandoning your folk-theories in the domains of physics or biology does not come at much of a price, giving up on some ill-conceived notion of political power or gender roles may be a more delicate affair.

If all this is true, then doing social science in the scientific manner might seem well-nigh impossible. There may be both a natural inclination and some strong incentives *not* to consider social and cultural processes in scientific terms. On the contrary, there may be powerful reasons to adopt and preserve theories that are not entirely coherent, or do not have much supporting evidence, simply because they fit both our intuitive expectations and our particular projects.

That may explain why the results are decidedly mixed, why we are very much in the same position as chemists before Galton. While we can admire the great insights of luminaries like Montesquieu or Ibn

Khaldun, the prospect of a cumulative social science seems to recede almost as fast as we proceed.

## Why Cultural Stability Is a Mystery

A standard answer to many questions in social science, such as those listed at the beginning of this introduction, is that people have particular mental representations, e.g., about what rituals to perform, or what the economy is like, or what is morally repugnant behavior, because those notions 'are in their culture'. So, the fact that you consider, e.g., the economy as a large pie that can be divided in different ways, or a shaman's rituals as required in order to combat witchcraft, these are notions that 'are in the culture' which would explain why people entertain them.

That cannot be a very good explanation, because it is not an explanation at all. To adopt a phrase from physicists, it is not even wrong. It makes little sense to say that most Zulu people like spicy foods, or that Mongols consult shamans because those preferences are in their culture—because what we mean when we say that some notion is 'in the culture' is simply that it is common among people in a particular place. So we are in effect saying that many Zulu people like spicy foods because many Zulu people like spicy foods. That is not a good start.

The only way that kind of strange statement could make sense would be if we assumed that ideas and values, representations and preferences, are always transmitted identically from generation to generation. That is, we might be implying that Mongols resort to shamanism because *previous* Mongols did that too. In this sense, 'it is in their culture' would mean 'they adopted whatever their forebears did'.

That would be almost reasonable. Of course, it would also be largely false. Cultures change as much as they persist. But at least we are now talking about something that is not entirely tautological, and in fact introduces the most important theme in the study of cultures: What is 'in the culture' depends on what is transmitted from one individual to another.

That is of course an old idea, but it is only very recently that social scientists took it seriously enough to build formal models of what is now called 'cultural evolution'. A convenient date of birth for that

movement might be the publication of *Culture and the Evolutionary Process* by Boyd and Richerson (1985). The starting point of the model was that cultural material comes in different packets of information, called memes, transmitted from individual to individual. The notion of memes had originally been proposed by Richard Dawkins (1976), and it then formed the starting point of many attempts to describe cultural material. In this selectionist perspective, trends in cultural evolution, for instance, the persistence of a particular tradition or its downfall, the fact that some ideas can diffuse to large communities or on the contrary remain confined to a few individuals all stems from the relative selective success of different memes. This way of thinking transposed to cultural material the successful models of genetic evolution by random mutation and selective retention.

There was a limitation in these selectionist models, however. Memes were construed as abstract realities that replicate by passing from one mind to another, but there was no explanation of how that happened. Or, people assumed that 'imitation' would be the explanation. This was consistent with another one of our folk-sociological assumptions, namely, that human cultures are by default stable. Social scientists for a long time assumed that there was nothing special to explain in the fact that many Venetian and Xhosa customs or ideas were very similar to what the Venetians and the Xhosa of the previous generation had been doing or thinking. In that view, stability is not mysterious, in fact it is invisible! And only change requires a special explanation.

But it is stability that is mysterious. The Xhosa views about marriage or agriculture are conveyed through a vast number of communicative interactions between individuals. But human communication is a place of high entropy—it resembles a game of Chinese Whispers more than serial photocopying. What you get at the end is very different from the beginning, not just because of distortion, but mostly because of reconstruction (Morin, 2016). Distortion does happen when you make copies of copies of copies... but in Chinese Whispers, each individual in the chain is trying to construct something that would make sense, given what they heard. Human communication, even about 'cultural' matters like marriage or agriculture, is even more entropic, as people are in many cases not even trying to reproduce what they heard.

The ‘epidemiology of culture’ promoted by Dan Sperber and others (and illustrated in several of the essays in this volume) assumed that these facts about human communication were crucial for understanding the apparent stability of some aspects of human cultures, or the fact that different individuals across space and time seem to have roughly similar mental representations (Sperber, 1985). Human communication has to be reconstructive, because much of what is conveyed is not said and need not be said. That is true of the simplest everyday conversations, as studies in linguistic pragmatics demonstrate (Grice, 1991). Sperber and others argued that this fact was essential to understanding human cultures. What makes them stable or changing is not the ‘memes’, the explicit statements and gestures, but the way these are completed, in the minds of the receivers, with all sorts of additional content (Sperber, 1985).

So, where does stability come from? The main factor here is not imitation or repetition, but similarities in the ‘additional content’ I just mentioned. That is where the view of communication inherited from pragmatics was combined with a view of the human mind promoted by cognitive psychology (Tooby & Cosmides, 2005). Human mental capacities were no longer described as a unified, multi-purpose computer that would absorb what the environment threw at it, but as a series of learning systems shaped by natural selection, and specialized in handling recurrent challenges of ancestral environments—how to find nutrition and avoid predators, for sure, but how to find the best possible mate, how to recruit social support, how to defend one’s group against enemies, and many more, as described by what is now called evolutionary psychology (Buss, 2016).

## Why Social Science Is Possible after All: A Field Without a Name

I of course assume that, against the odds, we can build scientific accounts and that we are in fact gaining ground in our models of human cultures.

In this volume, my co-authors and I consider what could be described as questions of political science (What makes institutions stable, and compelling?), cultural anthropology (Why perform rituals? How do people detect mental illness?), sociology (How does ethnicity impact

health?) and economics (Do people's view of the economy match their economic behavior?).

The list may seem a tad disparate, but it is not haphazard. These questions all spring from a common way of seeing human cultures, as the product of the interaction of evolved human capacities and preferences with variable environments. We take seriously the fact that natural selection provides not just an explanation for what we know of human nature, but also a source of rich hypotheses for what is still to be discovered. We also take as self-evident that economic models and game theory provide rich models for interactions between agents, that experimental psychology or neuroscience are the best sources for understanding human minds, and that the variation in human norms and concepts provides a wonderful opportunity to describe the envelope of human nature.

Is there a discipline that studies all that? Not if the term 'discipline' denotes traditional academic divisions. But those matter less and less to actual scholarly projects. Our field-without-a-name is making great progress, and it will prove both scientific and useful.

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