

This is the second part of Christophe's series of posts on what culture does to culture (the first post is [here](#)).

Most cultural phenomena are embedded in other cultural phenomena. For one thing, any cultural phenomenon takes place within a community that already has many traditions, cultural practices, rituals and beliefs of its own. The important point, however, is that the embedding cultural phenomena are likely to have some effects on the embedded cultural phenomenon and to partially determine its evolution and the content of its constitutive representations. Religious beliefs can have effects on economic practices; economic practices can have effects on kinship relations; etc.

Let us call “cultural embedding” this aspect of cultural evolution. Cultural embedding is certainly what motivated some cultural anthropologists to have a holistic view of culture: every aspect of one culture will be related, more or less directly, to other aspects of the same culture.

Cultural epidemiology on promiscuous causality

For cultural epidemiology, cultural phenomena result from social cognitive causal chains that go from mental processes to social interactions (e.g. communication, imitation, the production of artefacts) to mental processes again. Some of these chains involve many members of a community, last through time and eventually have the effect of stabilising the distribution of cultural items in that community.

Dan Sperber coined such chains, cultural cognitive causal chains (CCCCs).

In the epidemiological framework, cultural embedding is expressed as the fact that cultural cognitive causal chains will almost always be entangled with each other at many points. For instance, the interpretation of a religious text is a cognitive process that is caused not only by the religious text being passed on, but also by the interests, cultural context and background knowledge of the readers. Another example: going up a causal chain that leads to the production of a kitchen tool can involve, say, religious beliefs about how to prepare and consume meat.

About cultural embedding, Bloch and Sperber (2002) say:

Actual cultural practices ... are embedded in socio-historical processes ... Each of these historical flows is unique. These processes are influenced by many types of factors, evolved psychological predisposition being only one of them. Mostly, cultural processes are influenced by other cultural processes

In a later article, Sperber and Claidière (2006), coin “promiscuous causality” to describe the fact that cultural phenomena originate in multiple causal factors. This certainly gets at what Joeri Witteveen is claiming when he notes that culture is “messy” and relies on “Co-evolving Connected Cultural Cognitive Causal Chains” (comment on [How cultural is cultural epidemiology? 1. Enculturation](#)).

Looking for robust aspects of cognitive tracks

In spite of cultural embedding, cultural epidemiologists have focused mostly on the role of invariant features of the mind (or features that vary little across cultures) as factors of cultural evolution. Why is that so, given that cultural embedding can be expressed in the epidemiological framework and given that its impact on cultural evolution has been recognised?

There are several reasons for focusing on invariant features of the mind when studying cultural evolution. Joeri mentions one: it allows tapping into relevant results from cognitive science, which mainly concern culturally independent features of the mind. Cultural epidemiologists insist that the resources and results of cognitive and evolutionary psychology are indeed highly relevant for the study of culture.

Another reason for focusing on invariant features of the mind may be found in the trade off between the scope and the specificity of one's analysis of cultural phenomena. Cultural phenomena can be generated through the multiple occurrences of similar social cognitive causal chains, which Boyer (1998) coined cognitive tracks. For instance, the recounting of a tale – again and again, with little variation in its public versions and mental interpretations – constitutes a cognitive track. Cognitive tracks are relatively immune from local contextual variations. For instance, Little Red Riding Hood has been recounted in different cultures and languages with little change in its form. The immunity to contextual variations, however, comes in degrees. In other words, cognitive tracks can be more or less robust, more or less easily perturbed by contingent changes. One factor of robustness is the variability of the cognitive mechanisms on which they rely. If the cognitive mechanisms are well ingrained and vary little, then the cognitive tracks will be more robust. Thus, evolved cognitive properties provide robustness to cognitive tracks, and the cultural phenomena that are thus produced are likely to be more stable and widely distributed. For instance, religious beliefs are minimally counter-intuitive, and this aspect of religion is very well spread, because of invariant properties of the mind related to attention and memory (Boyer, 1998). Likewise, Bloch and Sperber (2002) argue that aspects of the mother's brother – sister's son relationship can be found across culture because of general dispositions to favour relatives.

Who's interested in the effects of cultural embedding?

The advantage of specifying universal psychological factors of cultural evolution is that the explanation is likely to encompass a wide range of cultural phenomena. Looking at more local psychological factors means restricting the scope of the explanation. There is however a drawback in that the gains in scope are counterbalanced by loss in specificity and precision. Local factors are what eventually leads to the specific aspects of the culture since cultural phenomena are, most often, strongly under-determined by universal properties of the mind.

The under-determination of the content of cultural items by evolved psychological abilities is a consequence of promiscuous causality within cultural evolution. For instance, both ghosts and zombies are minimally counterintuitive entities, so why do some communities believe in ghosts and others in zombies?

The mother's brother – sister's son relationship also knows many variants:

For instance, the mother's brother can either tolerate insults from his sister's son (BaThonga) or tolerate the younger male snatching his meat (Lo Dagaba) (Bloch and Sperber, 2002).

Thus, Sperber and Claidière (2006) say:

Many constructive biases are shared in a population. This may be due to the fact that they are based on the common psychological makeup of the species, or to more local historical or ecological factors. (my emphasis) This statement is then illustrated, however, by using universal properties of human visual cognition (as a psychological factor stabilizing the meaning of colour terms).

Should we be interested in what causes the local details of cultures, if we are cognitive anthropologists? Is cultural epidemiology condemned to study only evolved properties of the mind as causal factors and leave aside the messy promiscuity? Of course not! Certainly, for the science of culture to progress, we need both more general and more specific studies. Not just a trade off between scope and specificity, but descriptions at different levels of analysis.

How do we get at the more local facts and their effects on cultural evolution? Showing that cultural epidemiology is equipped to do it and adding to the theoretical toolkit surely helps. But detailed case studies, in the epidemiological framework, are what fleshes out our understanding of cultural embedding. My own strategy is to try recruiting cultural historians (Heintz, in press). Cultural cognitive history could provide case studies of how and under what conditions cognitive tracks evolve. It could analyse which factors change cognitive tracks thus causing cultural change.

Conclusion: Cultural epidemiologists recognise cultural embedding, but...

In a previous post, I argued that cultural epidemiology does recognise that cultural phenomena can themselves be generative of other cultural phenomena. I took the case of enculturation. Joeri Witteveen then wrote a thought-provoking comment about the many other facts that make cultural phenomena dependent on other cultural phenomena. "Cultural embedding" refers to some of those facts.

Cultural epidemiologists and Dan Sperber in particular have made clear statements recognising the embedding of cultural practices in other cultural phenomena. With this point, cultural epidemiology is closer to current views in social anthropology than any other evolutionary approaches. Yet, this one point of cultural epidemiology surely needs to be fleshed out with further ethnographic and historical case studies.

References:

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