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Explaining religious concepts

Lévi-Strauss the brilliant and problematic ancestor

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Claude Lévi-Strauss was arguably the most prominent anthropologist of the twentieth century, certainly one who went further than most in renewing our understanding of universal constraints on human cultures. Surprisingly, his findings and theories have had very little influence on contemporary accounts of religion. This I would contend stems from three reasons. First, Lévi-Strauss was a proponent and an eminent practitioner of something I call the “science mode” in anthropology, while most scholars of religion work from a rather different perspective. Second, Lévi-Strauss clearly had no trust in the notion of “religion”. He did not believe that the term denotes any coherent set of phenomena. He was, I will argue, quite right about that, but this of course did limit the appeal of his models for scholars of religion, many of whom do assume that there is such a domain as “religion”, distinct in important ways from other domains of culture. Third, Lévi-Strauss did not relate his hypotheses and models of cultural phenomena to any precise cognitive models of psychological processes, for the perfectly good reason that the latter did not exist at the time he put forward the basic tenets of structural anthropology. As a result, most structural models lack the psychological precision required to account for actual religious concepts and behaviours.

Science and erudition combined

Two modes of scholarship

Discussions of methods and theories of religious thought and behaviours are often framed in the ever-recurrent contrast between natural sciences and the

humanities (Snow 1959). Elsewhere, I have argued that this is fundamentally misleading, and that a more appropriate characterization of how we study cultural phenomena may benefit from a description of different *modes of scholarship* (Boyer 9999 [date?]). In particular, one can make a rough distinction between two ideal types of traditions, or legitimation strategies, that I would call the “science mode” and “erudition mode”. The science mode can be identified as what people do when they test a model or set of hypotheses against some evidence, using statistics and other mathematical methods to evaluate the fit of the model. People engaged in such projects typically publish short contributions, in a field where methods and findings are agreed on, and where people also agree on what the relevant issues are. The erudition mode is typical of scholarly projects in which people aim to provide not causal explanations for why the world is the way it is, but a catalogue of a particular domain of reality. Note that this a distinction between *modes of scholarship*, that is, ways of going about one’s scholarly work, not a distinction between disciplines. It is possible, indeed it is actually the case, that these two modes are present in a single discipline, and often inside a single scholar’s mind. The difference is between the epistemic goals, not the people or the academic departments.

Most important, this is *not* a contrast between “natural sciences” and the “humanities”, because the distinction proposed here cuts across these common categories. For instance, within the same discipline one may want to explain the role of symmetry perception in visual art (science mode) as well as to catalogue the works of the Wu school (erudition). One may test hypotheses about ergative syntax (science mode) as well as classify Tibeto-Burman languages (erudition). In many disciplines there is a constant dialogue between erudition and science projects. For instance, many linguists are specialists of some language families (erudition) while also trying to test particular hypotheses about linguistic structure (science). Many biologists are specialists of a specific genus or family, as Darwin was with finches and snails (erudition), while testing hypotheses about molecular, evolutionary or ecological hypotheses (science).

Structural anthropology

Lévi-Strauss pioneered a study of cultural phenomena that required a constant exchange between “erudition” and “science” projects. Lévi-Strauss himself was an erudite scholar, although his domain was unorthodox. He did produce an ethnographic monograph, but that was fairly limited in scope, based on a short and unique period of fieldwork, and not quite representative of his style of analysis (Lévi-Strauss 1948). That much would have been typical of

cultural anthropology, usually centered on a particular “culture”, usually a small-scale polity at the scale of a tribe or chiefdom. Lévi-Strauss did not actually believe that this unit of social organization should be privileged, as it had been in anthropology since Malinowski. For Lévi-Strauss, the focus on small polities had more to do with the limitations of participant observation (one cannot really do that kind of fieldwork on large groups) than with any scientific rationale (Lévi-Strauss & Charbonnier 1969). His real domains of erudition were, first, elementary kinship systems (Lévi-Strauss 1969a); and second, and most important, the mythic corpus from Native America, an immense domain that spans highly different social organizations, ecologies and language groups (Lévi-Strauss 1969b). This kind of large-scale comparison is more typical of large-scale archaeological studies than classical ethnographic monographs. Indeed, his studies on mythology also resemble archaeological comparison in focusing on the transmission of particular features and styles from one place to another, rather than the integration of each feature in a local system (Lévi-Strauss 1979).

Erudition in this case was in the service of a scholarly project that unambiguously belongs to the “science” genre. That is, Lévi-Strauss was pursuing the erudite projects of cataloguing kinship systems, then charting correspondences and similarities in Native American mythologies, as a means to evaluate the relevance of specific hypotheses concerning the basic cognitive processes engaged in categorizing the natural and social world (Lévi-Strauss, 1963a). This is not the place to survey these hypotheses (I will discuss their divergence from more recent cognitive models below) but at this point I should emphasize that they constituted a radical departure from standard social science, including the standard approaches to religious thought and behaviour as social phenomena.

Some consequences of the phonological model

Lévi-Strauss borrowed his main analytical tools from the Russian formalists, the Prague linguists and particularly from Roman Jakobson’s structuralist phonology. An important idea was that language was *not* a unidimensional system, contrary to what Saussure in particular had described as the “linearity of the signifier”. In Saussure’s model, the linguistic stream consisted in the temporal (therefore unidimensional) succession of discrete units or phonemes (e.g. /k/ + /æ/ + /t/ for “cat”). This seemed intuitive, indeed almost self-evident, as we spontaneously imagine language to consist of a chain of such units. Against this, structuralist models described each articulation (e.g. /k/) as the simultaneous realization of several choices (in this case /k/ = non-voiced rather than voiced, stop rather than fricative, velar rather than glottal etc.). Each sound

of a language is a multidimensional mental object, which has an important consequence. Linguistic structuralism demonstrated that the actual working of phonology, the mental system that supports articulation, is completely different from the units we are aware of. All English speakers, by mere observation and introspection, can probably imagine that there is something like the sound /k/ in English. But explaining phonology requires that we postulate concepts like voiced/non-voiced or lax/tense, that are not usually part of our phonological awareness.

Now Lévi-Strauss applied this to the elements of conceptual structure that we use to represent the social and natural environment. Although this conceptual structuralism was often treated as an analogical use of structuralist phonology, the extension was not metaphorical at all. Lévi-Strauss treated myths as apparently unilinear mental productions, in which a sequence (e.g. a young man climbing a tree to steal fire from a bird) should be analysed as a succession of paradigmatic choices (in this case, young not old, man not woman, climbing not digging, stealing not buying, fire not water, bird not mammal). Although some of these distinctions are expressed in natural language, a crucial point was that the system of binary oppositions that framed concepts was not available to conscious inspection. The underlying “code” that structures cultural phenomena is not one that anyone is aware of.

Another important assumption borrowed from structural phonology was the notion of a material basis for unconscious binary distinctions. Phonological distinctions such as voiced/non-voiced or fricative/stop are grounded in the way the human vocal tract produces sound, e.g. in the fact that there are two tracts for air expulsion, that the shape of the vocal box can be changed only by a limited set of muscles, that the motor system has a specific way of activating these muscles and so on. One consequence of the view of phonology as grounded in articulatory phonetics is the assumption that all natural languages can be learned by all human beings, and that a unique set of phonological models should be able to account for them all.

In the same way, Lévi-Strauss regarded the elementary distinctions of the *pensée sauvage* as grounded in sensory qualities, such as dry/wet, raw/cooked, which would be ultimately grounded in the way human brains function (Lévi-Strauss 1979). Lévi-Strauss naturally inferred that the underlying code of sensory qualities and conceptual categories would be common to all human minds.

Far from the madding crowd (of standard social science)

Despite the great fame of Lévi-Strauss, his work only had a very limited influence on research in the social sciences, even in his own field of cultural anthro-

pology. True, there were epigones who applied structural methods to other myths and rituals, and serious historians or classicists used the methods as an inspiration. Overall, however, the impact is barely noticeable.

One reason may be that Lévi-Strauss combined the “erudition” and “science” modes of scholarship in a way that was certainly typical of anthropological ancestors of his and the previous generation (consider for instance the entire structural–functional school) but had become oddly unpopular after that. Indeed, a large part of cultural anthropology abandoned the “science” mode entirely, considering the practice of hypothesis-testing and the search for explanatory models as futile if not immoral (Boyer 9999 [date?]; Tooby & Cosmides 1992). At the same time, many anthropologists and other social scientists also retreated from “erudition” projects, arguing that describing cultures was a thinly disguised way of oppressing them. Freed from the constraints of either mode of scholarship, many social scientists turned to less taxing activities, in particular to the search for exciting, unexpected associations between cultural phenomena (Boyer 9999 [date?]).

This applied also to the narrower field of religious studies, which has been marked by the absence of the science mode, indeed the general absence of precise, empirically grounded theorizing (Whitehouse 2004). Some scholars of religion have pursued respectable erudition projects, for example, documenting early Buddhist traditions or varieties of Islamic doctrine, without trying to connect them to any particular science-like hypotheses about the dynamics of religious thought or behaviour. Instead, discussions of “theories” in the field of religious studies have often consisted in the half-hearted adoption of particular academic fads, for example, phenomenology or post-structuralism. This did not matter too much, as theorizing in these cases often boiled down to paying lip-service to the current fad, while carrying on with the erudition projects in much the same way as before (Wiebe 1981). As a consequence of this lackadaisical approach to explaining religious thought and behaviour, the field became theoretically amorphous, and unresponsive to actual scientific proposals about the way religious thought and behaviour could emerge in individuals, be distributed in groups and contribute to social dynamics.

No need for “myth”, or indeed “religion”

Lévi-Strauss contributed to the theory of kinship, and wrote extensively on myth, two classical topics of anthropology. But he was clearly indifferent to traditional distinctions between domains of culture, for example, between kinship and the economy, or magic and sorcery. In particular, he never paid much attention to the notion of “religion”, probably considering, like many

other social anthropologists, that there was obviously no such thing as religion, that is, as a coherent domain of thoughts and behaviours that would require a specific set of hypotheses and models. Indeed, to the extent that his work touched on phenomena we would usually call “religious”, totemism for instance, Lévi-Strauss demonstrated that their underlying principles were the same mental codes and concepts that applied to, say, folk-botany or zoology (Lévi-Strauss 1963b).

This in itself would not be worth emphasizing (he was not exceptional in this respect among social anthropologists), but Lévi-Strauss was probably unique in putting forward a coherent alternative to such categories as “religion”. Besides, the assumption that religion is special is so pervasive in so many academic and popular forms that we should consider why it is so misguided and misleading.

Anthropological skepticism

Consider first the standard anthropological view on this. In most human cultures there is simply no word to designate a package that would include ideas about supernatural agents, moral imperatives, rituals and other prescribed behaviours, taboos and the building of a community around a common cult. There is no word (missionaries from world religions often resorted to neologisms to designate what they were trying to impose in those places) and in general there is no concept either. For most people in such societies, there is simply no clear connection between the notion that dead people become invisible spirits, the notion that you should not kill your kin, and the idea that marrying your cousins is proscribed (or prescribed). Often, there is no connection at all between dead ancestors who protect you and forest spirits that may or may not be helpful. If you tell people that both notions belong to a single domain, they find that puzzling. Ideas about forest-spirits are connected to other ideas about the forest. Ideas about ancestors are connected to other ideas about dead people and the family. But there is no “religion” umbrella concept that would put these two supernatural notions together.

Does that mean that in such places “there is no religion”? Some anthropologists are tempted to think that people’s categories more or less define their world, so that people who have no concept of x have no x . So on this view, in places where there is no concept of religion, there is no religion. This inference however is question-begging, and assumes the very point it purports to demonstrate. It is obviously true that in some cases having a concept is necessary to create a reality. People who have no concept of “cricket” or “parliamentary elections” certainly have no games of cricket or parliamentary elections, because such social institutions only exist among people who have a roughly

similar understanding of a specific set of concepts and norms. On the other hand, whether people have a notion of demography or economy or not, they all have demography and they all engage in economic transactions.

A variety of domains

Is “religion” like the economy, something that you find in most societies although in many places people have no concepts to describe it? Or is it like cricket, something for which you need an explicit set of concepts and norms? The answer is: both; but several different sets of phenomena are involved here. It is difficult to pursue a coherent account of these matters unless one distinguishes the following:

- *Domain A: Thoughts and behaviours about imagined agents.* Human beings seem disposed to entertain thoughts about non-physically present agents. This includes their thoughts about absent or deceased persons, but also about mythical heroes, fictional characters and a variety of superhuman agents with, usually, counter-intuitive physical capacities but standard mental processes, such as gods, spirits, ancestors, shadows and the like. Spontaneous creation of such notions is universal in human minds, and probably explained in terms of evolved cognitive dispositions (Boyer 1992, 2001).
- *Domain B: Traditions of domain-A thoughts.* In most social groups, people communicate domain-A thoughts. Usually this results in the spread of roughly similar versions of these thoughts, around what are called “attractors” of cultural transmission (Sperber 1996). For instance, people have common notions of superhuman agents and agent-like artifacts, shared notions and norms about people’s interactions with such agents, prescriptions about rituals in connection with these agents and so on. Note that in most societies at most periods of history, people did not identify this domain as “special”. That is, they had traditions about spirits, other traditions about the evil eye, and still other traditions about the proper way to sacrifice to ancestors, and saw no obvious connections between these domains.
- *Domain C: Institutions that foster a particular domain-B tradition.* This is a phenomenon confined to large polities, usually state-like societies with literate scholars. In such places, organized corporations of ritual specialists codify, standardize and “brand” a particular version of a domain-B tradition. Such guild-like groups of specialists also try to gain political influence and to exclude rival organizations as well as non-institutional domain-B traditions. Being exclusive specialists, they usually promote

the idea that what they provide is unique and different from any other type of service or commodity, and use a term that social scientists can readily identify as “religion” to describe that domain.

The main point here is that the notion of “religion” as a special domain is *ideological*. It is the creation of the large, corporation-like established religious guilds. For members of such organizations, it is intuitively obvious that a special kind of service corresponds to a special kind of institution. It is also highly desirable that other people be convinced that there is indeed such a special domain, otherwise the guild would be seen as having nothing special to provide.

Nothing in the various domains described above requires that we use the term “religion”, except as a convenient, non-technical pointer to what we study. The term however is an impediment in more serious discussions of the social dynamics or cognitive processes involved. Unfortunately, the distinction is often blurred between useful common-sense term and analytical category. As a result, even serious scholars may be misled into thinking that one has for example, to account for the “evolution of religion”, or how “the brain creates religion” or the social interaction between “science and religion”. Such projects may well be doomed, as they associate a proper set of scientific objects (e.g. the evolutionary processes that led to human social life or cognitive dispositions) and a non-existent one (“religion”).

Lévi-Strauss, despite his many years constructing erudite, indeed often recondite catalogues of myths, did not actually believe in the category of “myth”, certainly not as a special domain of human culture. This created many misunderstandings with readers who thought, for instance, that his models required a clear definition of “myth” or a clear distinction between “myth and folklore”, “myth and history” and so on. Lévi-Strauss repeatedly emphasized that his object was not myths but mythical thought, understood as the brain-based underlying codes that informed our folk-knowledge (Lévi-Strauss 1979), in stories but also in visual arts, rituals, magic. There was no need to think of myth as *sui generis*.

Students of things religious should of course follow that example. But there is a catch. Lévi-Strauss could abstract from misleading categories because he worked on the basis of explicit, precise hypotheses about the mental processes he wanted to uncover, derived from the structuralist linguistics framework. In the study of religious thought and behaviour, it is only recently that a novel framework, inspired by cognitive psychology and evolutionary biology, has made it possible to entertain precise and explicit hypotheses about cognitive dispositions and social dynamics. It is only by making these hypotheses more precise that we can escape the tyranny of misleading ideological terms like “religion”.

The psychology of (some) “religious” stuff

Limits of structural anthropology

Structural descriptions of cultural realities were based on strong assumptions about supposedly universal patterns of thinking. From a psychological viewpoint, however, such claims turned out to be rather inaccurate. For instance, structuralism assumed that the most important aspect of conceptual structure was binary opposition and that various complex structures, like analogy, were based on the combination of several binary oppositions. Psychological research, however, did not confirm that. The way human minds represent such concepts as “chair”, “cat”, “gold” or “friendship” is extremely complex, involving attribute-lists, mental images, prototypical templates or scripts. Binary oppositions, however, play virtually no part in these representations. In the same way, a central tenet of Lévi-Straussian analysis of myth was that these same binary oppositions were crucial to the memorization and transmission of stories. Again, however, empirical research in this domain uncovered many complex processes, to do with the reorganization of stories in memory and the modification of thematic content, none of which have anything to do with structuralist oppositions.

These limitations were inevitable. At the time when Lévi-Strauss elaborated an account of mythical codes and of kinship structures, structuralist linguistics was probably one of the most sophisticated tools available to provide hypotheses about cognitive processes, together with information theory and cybernetics, of which he made more limited and sporadic use.

However, it is perhaps telling, and sadly so, that these rich, precise hypotheses about cognition were never discussed, evaluated against potential alternatives, or tested in specially constructed experimental situations. By and large, anthropologists either “believed” in this phonologically inspired conception of cognition and accepted that it could make sense of many cultural phenomena, or they simply dismissed it as alien to their world-views and interests. This of course is mostly because cultural anthropologists, as mentioned above, had abandoned scientific ambitions.

But Lévi-Strauss too was responsible, to the extent that he did not himself treat his highly specific hypotheses about cognitive processes as, precisely, hypotheses that should be empirically tested (Sperber 1985a). To a large extent, he either treated his structural assumptions as self-evident, or considered their application to a large corpus of data (e.g. in the four volumes on Amerindian mythology) as proof enough. Which it was certainly not. In these volumes, Lévi-Strauss presented links between different myths as evidence for the underlying code. There were thousands of stories, each with dozens of motifs, and no constraints on how to interpret each motif (e.g. a fish could

be interpreted as an aquatic animal opposed to terrestrial ones, but also as a long object as supposed to round ones, or as a wet thing, or as a live thing etc.). Such a corpus, handled in such a way, could support indefinitely many different hypotheses, and none in particular. Finally, although the cognitive sciences developed and provided more and more useful models for anthropologists, Lévi-Strauss did not see these developments as relevant, and never mentioned them in his works.

This way of considering models and hypotheses was and remains unfortunately typical of cultural anthropology and other social sciences. One assumes that ad hoc models are perfectly fine. Further, one ignores neighbouring disciplines that actually provide tools one should use. In recent decades, fields such as neuroscience, evolutionary biology and micro-economics have made spectacular progress and created a vast number of tools for the description of social dynamics and cognitive processes. Faithful to its tradition, most cultural anthropology has remained blissfully impervious to all this.

Remarkably, the domain of “religion” is one promising exception. In the last twenty years, a set of scholars from anthropology, cognitive science, evolutionary biology and other disciplines have constructed a common, “standard model” of important aspects of religious thought and behaviour (Atran 2002; J. L. Barrett 2000; Boyer 2001; Lawson & McCauley 1990; Pyysiäinen 2001). This may serve as an example of what structural anthropology could have become, had it been run as a scientific programme.

A standard account

This account starts from the notion that religious agents like spirits and gods are part of a broader supernatural repertoire. The world over, people’s conceptual repertoire includes a variety of notions of imagined artifacts, animals, persons and plants: concepts of floating islands, of mountains that digest food or have blood circulation, of trees that listen, of animals that change species, or of people who can disappear at will. These are found in folk tales, anecdotes, myths, dreams and religious ritual, and correspond to a small “catalogue” of templates for supernatural concepts. In the standard account, “supernatural” is defined in a precise way, which does not in any way assume that the people concerned entertain an elaborate notion of nature, such as the Aristotelian φύσις. Indeed, in most cultures in the world there is no explicit notion of the natural world and its limits. However, in most minds around the world, there are some precise implicit assumptions about natural processes, what we can call an intuitive ontology (Boyer 2000b). It is relative to those implicit understandings that some concepts can be called “supernatural”. So this cognitive account stipulates that there is a limited *catalogue of supernatural concepts*. The

concepts may be very different from one place to another, but the templates are few. Experimental evidence confirms that novel concepts that correspond to such templates are more easily recalled than others (J. L. Barrett 1996, 1998; Boyer & Ramble 2001).

Traditions of religious thought and behaviour, in the sense of domain B as defined above, do not just involve concepts and inferences. They also recruit a variety of other mental systems, none of which is specific to this domain, and all of which serve evolutionarily clear functions in non-religious domains. For instance, in many human groups supernatural agency is associated with moral understandings. This is “natural” enough to be found in non-literate groups but also in the spontaneous religious thinking of most religious believers. Now this does not happen because religious doctrines promote morality, as religious guilds often claim. Indeed, developmental evidence suggests that young children have an early understanding of moral imperatives (Turiel 1983). Moral understandings, far from being dependent upon socially transmitted (e.g. religious) conceptual frames, develop before such concepts are intelligible to children, and regardless of what religious concepts are entertained by adults around the child (indeed, regardless of whether there are *any* religious concepts in the child’s cultural environment). In this view, it is not surprising that moral intuitions exist before and outside of religious commitment, in much the same form across individuals and with the same compelling force (Krebs & Van Hesteren 1994). Nor should it be surprising, then, that when people associate their moral understandings with non-physical agency, the association tends to be a post hoc rationalization. Although religious believers generally hold that non-physical agency is the origin of morality, a cognitive model would suggest the reverse: that our moral feelings emerge independently but are consequently recruited to lend plausibility to the moral notions of religious agents.

Other aspects of religious cognition, such as teleological reasoning and afterlife beliefs, may also be rooted in basic operational characteristics of social cognition (Bering 2006). Consistent with an interpretation of misfortune in social terms, an overarching bias to generally perceive events as the manifestation of intentionality may contribute to a chronic sense of supernatural presence and intentional activity, which is a bias demonstrated even by children, for example with regard to the origin of natural objects (a view dubbed “intuitive theism”) (Kelemen *et al.* 2005; Kelemen & DiYanni 2005). Taking intentionality and social considerations a step further, another proposal considers that afterlife beliefs may originate from the interplay of theory-of-mind capacities, over-perception of intentionality and prosocial concerns regarding “moral” behaviour versus opportunistic behaviours (Bering 2006).

Obviously, notions of imagined agents are also often associated with misfortune. People assume that the ancestors or gods are involved in various

occurrences (bad crops, illness, death etc.) but generally do not bother to represent *in what way* they bring about those states of affairs. That is, people's reasoning, when thinking about such situations, is entirely centred on the *reasons* why an ancestor would want them to fall ill or have many children, and not on the *causal process* by which they make it happen (Boyer 2000a).

Finally, shared notions and norms about imagined agents are often made public, and people in many human groups are intensely interested in other people's behaviours in this domain. This may be because they constitute powerful signals of group affiliation (Bulbulia 2004b; Irons 2001).

These different hypotheses (only a small subset of the current research programmes) are all grounded in psychological findings that were established outside the study of "religion". More important, all these hypotheses are considered worthy of attention only to the extent that they are experimentally tested and confronted with alternatives.

Conclusion

Scientific ancestors should be interestingly wrong in their conclusions and quite admirable in their assumptions. Lévi-Strauss certainly was both. He tried to break the shackles of common-sense realism, describing the cognitive processes involved in cultural creations as immensely complex and definitely impenetrable to conscious access. Not unlike Noam Chomsky, he described a cognitive unconscious that is highly counter-intuitive, because it does not consist in the kinds of thoughts we consciously entertain, but of correspondences within codes and analogical transfers between them. In the same way, recent cognitive science describes mental functioning in terms that simply do not connect to any of our common experience. That is why it is difficult to do, and even more difficult to transmit. One lesson from Lévi-Strauss is that the only way to escape the limits of common-sense notions, "religion" among others, is to go ever further in the construction of a scientific alternative.