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Article in *Philosophy of the Social Sciences* · December 2001

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Philosophy of the Social Sciences 2001 31: 563

DOI: 10.1177/004839310103100407

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Book Review

Dan Sperber, *Explaining Culture: A Naturalistic Approach*. Blackwell, Cambridge, MA, 1996. Pp. 175. \$20.95.

Dan Sperber's *Explaining Culture* is partly an attempt to provide an element, namely, human mental phenomena, which is greatly lacking in contemporary anthropological discussions concerning culture. In the light of recent research by cognitive psychologists in understanding mental phenomena (see *The Adapted Mind* by Jerome Barkow, Leda Cosmides, and John Tooby 1992), Sperber offers an analysis of culture—one that he thinks can no longer be ignored by anthropologists—that articulates the intersection between culture and cognition. Moreover, in an attempt to create a dialogue between both anthropologists and cognitive psychologists, an exchange that is hoped to facilitate a new research program within the social sciences, Sperber presents an interesting and controversial methodology by means of which cultural phenomena can be understood effectively. Sperber upholds an epidemiology of representations (hereafter ER) approach to explaining culture, which is the view that cultural phenomena are mental representations that are widespread due to their contagious effect on human minds. He argues that this ER approach is the study of the millions of microprocesses that lead to the emergence, communication, and transformation of representations associated with intraindividual and interindividual cognitive processes. In Sperber's own words, an explanation of culture is simply an explanation of "how and why some ideas happen to be contagious" (p. 1).

Explaining Culture can be divided into three parts. In the first third of the book, Sperber proposes a nonreductionistic brand of materialism, in conjunction with his ER approach, that addresses both the psychological and the ecological elements that comprise cultural phenomena. After making clear the inadequacies of a reductionistic materialist approach to cognition likened to Paul Churchland's *Matter and Consciousness* (1988) and Daniel Dennett's *Intentional Stance* (1987), Sperber begins his analysis by arguing for a materialist approach to cognition that takes seriously the causal efficacy of mental phenomena that are the product of complex material properties (p. 14). In the spirit of John Searle's, *The Rediscovery of the Mind* (1994), Sperber suggests (though not explicitly) that mental phenomena are emergent properties that

Special thanks to Michael Bradie and Carrie-Ann Kahn for their comments on an early version of this review.

Philosophy of the Social Sciences, Vol. 31 No. 4, December 2001 563-571
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arise from the ensemble of neuronal interaction. Mental phenomena possess causal properties that are then able to affect the system of neurons themselves. It is the top-down causal power of mental phenomena that Sperber takes seriously. This leads him to affirm a version of materialism that he calls "modest materialism" (pp. 12-16). Modest materialism "acknowledges different ontological levels [ontological pluralism] in a wholly material world" (p. 12).

At the other end of the spectrum, Sperber is quick to remind the reader that there is almost no agreement among anthropologists with regard to their study of cultural phenomena because the field of anthropology itself does not seem to acknowledge a theoretical framework—only shared technical terms used to describe particular cultural phenomena (pp. 15-17). Other than a unified resistance to Karl Marx's economic materialism (see *Critique of Political Economy* wherein Marx [1904] asserts that economic [material] conditions determine a group's values and ideas), anthropologists share no theoretical framework from within which a fruitful exchange of ideas is really possible.

However, what Sperber finds disturbing is that most anthropologists, notably defended by David Kaplan (1965) in "The Superorganic: Science or Metaphysics?," think that the theoretical apparatuses used by sociology, psychology, and biology are ineffectual in understanding the concepts of anthropology (e.g., marriage, myth, taboo, totemism, etc.). Sperber reasonably responds that if technical terms are all that anthropologists have, then the ontological status of these terms is ambiguous. In Sperber's own words, "One may acknowledge the expertise of anthropologists in matters cultural, and yet deny that they know (or care) what kinds of cultural things really exist" (p. 16). The answer to this ontological vagueness of technical terms in anthropology, thinks Sperber, is that anthropologists need to realize that their analysis of cultural phenomena (e.g., marriage and myth), which tend to share a host of features that resemble one another, is that of interpretation rather than description. The former has ontological implications that the latter lacks. Interpretations, posits Sperber, are representations that owe their existence to a combination of mental (e.g., beliefs, intentions, and preferences) and public representations (e.g., signals, utterances, and pictures). From this materialist perspective, cultural phenomena are mental representations whose distillation throughout culture/society can be explained through the complex "material interaction between brains, organisms and environment" (pp. 16-26).

After revealing the inadequacies of both reductionistic approaches to psychology and the impoverished state of anthropology more generally, Sperber more fully defends the theme that an ER approach to culture is methodologically the most effective way of explaining cultural representations. Sperber begins by distinguishing three explanatory strategies commonly used by anthropologists: (1) interpretive generalization, (2) structuralist explanation, and (3) functionalist explanation. Interpretive generalization is the strategy of singling out a particular phenomenon in a culture and providing an interpre-

tation of it. This interpretation is then used to explain all similar phenomena in other cultures (see Claude Lévi Strauss, *The Savage Mind* 1966, as paradigm of this strategy.). Anthropologists who employ structuralist explanations argue that there are basic patterns, underlying themes, or simple structures that are common to all cultures. The variation we see in particular cultures is simply a modification of these common patterns or themes (see Patrick Menget, "Time of Birth, Time of Being: The Couvade" 1982, as an exemplar of this kind of explanation). Furthermore, those anthropologists who offer functionalist explanations maintain that an accurate account of cultural phenomena is one that reveals the utility or benefit the cultural phenomena have within the society that produces and maintains them (see Douglas Price-Williams, *Explorations in Cross-Cultural Psychology* 1975, for a discussion on the development of functionalism). As part of his defense, Sperber describes and then rejects these more traditional approaches (pp. 33-49). His basic attack on each of these approaches is that none of them provides the causal factors that adequately explain the emergence and development of cultural representations (note: by "cultural" Sperber means "those representations that are widely and durably distributed in a social group," p. 49).

Having dismissed these traditional strategies, Sperber provides a positive defense of his ER approach. Drawing from his early work with Deirdre Wilson, *Relevance: Communication and Cognition* (1986) on this same topic, Sperber argues that cultural representations have their origin in the transmission of mental representations between individuals. An integral part of this transmission, thinks Sperber, is a cognitive tendency to optimize the "effect-effort ratio." That is, during transmission of mental representations, the content of mental representations becomes transformed and simplified. The newly transformed mental representations, according to Sperber, require less mental effort and provide greater cognitive effects than the previous similar representations. These newly transformed mental representations will most likely be retained within the culture (cultural items) due to their simplicity and cognitive benefits (pp. 52-53). Providing the causal chains of mental representation transmission will yield, according to Sperber, a more robust explanation of cultural representations than do many of the current strategies that anthropologists employ. Indeed, the reader is being drawn by Sperber to surmise that his epidemiological analysis of cultural representations most accurately explains cultural macrophenomena through the cumulative effect of both (1) individual mechanisms that generate and transmute mental representations and (2) interactive mechanisms between individuals that explain the spread and preservation of representations.

In the second third of *Explaining Culture*, Sperber argues that human cognitive processes such as belief and concept formation must be included in any causal explanation of cultural phenomena. Sperber notes that anthropologists need to understand that human cognitive processes, which are either directly (called dispositions) or indirectly (side effects of dispositions called susceptibilities) the product of biological evolution (see Stephen Gould and

Elizabeth Vrba, "Exaptation: A Missing Term in the Science of Form" 1981, and Daniel Dennett's *Darwin's Dangerous Idea* 1995, for a more detailed discussion of this distinction), must be included as a necessary condition in any causal explanation of cultural phenomena (pp. 66-67). The cognitive processes of interest to Sperber are (1) basic concept formation and (2) complex concept formation. The latter includes both (1) metarepresentational ability (e.g., ability to doubt or disbelieve) and (2) evocative ability (the ability to express more fully some partially understood idea of another). Sperber speculates that humans have an innate disposition to develop concepts according to particular schemes of everyday empirical knowledge (e.g., living things tend to be taxonomic, artifacts are characterized in terms of function, etc.) that all languages share (p. 69). On the other hand, complex concept formations, like scientific ideas and religious concepts or institutions, are not so easily grasped and are based on susceptibilities because they were probably acquired as a result of some change in environmental conditions. According to Sperber, then, the human ability to have representations of representations and the ability to provide a better understanding of half-understood ideas at some future date are most likely the product of susceptibilities. Sperber concludes that regardless of how abstract a representation is (e.g., French cuisine), its prevalence can be explained as the product of millions of causally linked microprocesses associated with intraindividual and interindividual cognitive processes.

Still, the reader may want a bit more specificity regarding how individuals process mental representations made public (i.e., cultural beliefs) and how such beliefs are communicated within human populations. Sperber does not disappoint the reader in this regard, although he admits that his answer is rather speculative. Sperber argues that an integration of (1) anthropological speculations on cultural representations and (2) psychological speculations on the cognitive organization of beliefs will provide a provisional solution to explaining cultural beliefs (p. 77; see also Sperber's earlier effort "The Epidemiology of Beliefs" 1990). Regarding (1), Sperber begins by arguing, contrary to some social theorists, that mental representations are more basic than public representations. If one were to follow the causal chain far enough back, it could be shown that all public representations ultimately have their origin in mental representations. Regarding (2), Sperber submits that beliefs represented in the mind can be divided into two kinds: intuitive beliefs and reflective beliefs. Intuitive beliefs (e.g., beliefs about cause, substance, number, etc.) are spontaneous and unconscious beliefs about everyday circumstances. Such beliefs are universal because they owe their origin to intrinsic perceptual and inferential processes. Contrastingly, reflective beliefs (e.g., beliefs about science, religion, myth, etc.) are beliefs that have second-order beliefs about them (pp. 89-92). Sperber speculates that reflective beliefs vary across cultures because the second-order beliefs frequently are influenced by different sources in different environments. Despite the fact that intuitive beliefs are shared across cultures, the diversity of cultural beliefs has its origin in the

sources and modes of transmission of reflective beliefs. Thus, Sperber's synthesis of (1) and (2) leads him to conclude that cultural beliefs can be explained by how they are cognized by individuals and how they are communicated within human populations.

In the last and most speculative part of the book, Sperber draws from Darwinian selection models (and Richard Dawkins's *Extended Phenotype* 1982) to argue that the mind is made up of interacting cognitive modules (genetically specified computational devices), including a single metarepresentational module, both of which are crucial to understanding cultural diversity. Sperber suggests that (1) Darwinian Selection Models (DSMs), (2) Influence Models (IMs), and (3) Attraction Models (AMs) will prove efficacious in understanding that human cultural phenomena are widespread mental representations via public representations. DSMs explain the *human* in "human culture" by pinpointing selected brain mechanisms (i.e., mental modules). Sperber speculates that evolutionary forces are likely to have favored the emergence of specialized and efficient mental mechanisms that are able to take advantage of new information with the aid of old information. The effect is that human cognitive systems are better able to make correct decisions in the struggle for survival. IMs are designed to make clear the term *culture* in "human culture" by pointing out that surviving cultural representations may not be replicas of the cultural representations that preceded them, because the surviving cultural representations may owe their existence to different influences. IMs, which work on the basic premise that influence is a matter of degree, are designed to capture the subtleties of the transmission process from mental representations to public representations. Unfortunately, neither the DSMs nor the IMs fully capture the fact that the human brain creates its own representations—AMs capture this fact better. AMs are statistical models that show patterns of cultural transformations in the direction of some specific point. The trick, Sperber notes, is to isolate this point of attraction and provide a causal explanation that should include both psychological and ecological factors (pp. 113-18). While AMs do not themselves have any explanatory force, they do provide a clearer picture from which an explanation can be procured. (See Elliott Sober's "Models of Cultural Evolution" [1992], Donald Campbell's "Blind Variation and Selective Retention in Creative Thought as in Other Knowledge Processes" [1960], and William Harms's "Cultural Evolution and the Variable Phenotype" [1996], for further discussions on extending the theory of evolution to culture.)

By far the most speculative ideas in *Explaining Culture* are those postulated by Sperber concerning the mind as a complex interacting system of modules. Drawing upon both his own "Modularity of Thought and the Epidemiology of Representations" (1994) and Jerry Fodor's *Modularity of Mind* (1983), Sperber quite nicely sets up the problem with modular views of the mind. He notes that, traditionally, it has been thought that if one views the mind as a bundle of independent genetically specified computational devices (i.e., cognitive modules), then such a postulation cannot account for (1) the fact that

information needs to be integrated for representations to be produced or (2) the existence of cultural diversity and novelty (pp. 120-23). But, contrary to these traditional criticisms, a modular conception of the mind can explain both (1) and (2), thinks Sperber. With regard to (1), cognitive modules are evolved mechanisms that are the result of ancient, gradual, and disordered biological processes. The result is the production of a whole host of connected and disconnected modules performing specific functions. Once a certain level of modular complexity is reached, Sperber conjectures, it is possible for modules to produce additional modules to solve problems internal to the cognitive mechanisms themselves (p. 128). If information needs to be integrated between modules, then existing modules will produce additional modules to facilitate such an integration. With regard to (2), Sperber theorizes further that humans have a metarepresentational module that produces diversity between cultural beliefs. This metarepresentational module processes cultural information and can produce wholly unique reflective representations (pp. 146-50). Of course, Sperber admits that this modular framework of the mind is rather speculative. Nonetheless, he does think that it provides a causal account of cultural diversity that can be confirmed or denied by future cognitive psychologists working in tandem with cultural anthropologists.

While Sperber offers a provocative approach to understanding cultural phenomena that will raise the eyebrows of anthropologists, cognitive psychologists, and philosophers alike, I have a few concerns. First, Sperber would do his readers a favor by clearly defining what he takes to be the difference between *token-token reductionism* (weak reductionism) and *type-type reductionism* (strong reductionism) with regard to cultural phenomena. Considering that cultural types only have epistemological importance rather than ontological standing for Sperber (pp. 21-23), his token-token reductionism and type-type reductionism distinction is not entirely clear. To avoid strong reductionism, types and tokens must both be granted ontological status. Since Sperber only grants ontological status to cultural tokens, he allows himself no room to maneuver away from strong to weak reductionism. Thus, Sperber has left himself with the reductionist label *simpliciter*. This is exactly the appellation that Sperber was trying to rid himself of with the type-token distinction.

Second, Sperber's use of the disposition/susceptibility distinction would be clearer if he provided a good example to illustrate the connection between these terms and how they relate to concept and belief formation. Basically, Sperber considers a susceptibility to be a side effect of a disposition (p. 67). He argues that humans have innate cognitive dispositions that allow them "to develop concepts [or beliefs] according to certain schemas" (p. 69). For example, human concepts for artifacts tend to be categorized in terms of function, human concepts of color tend to be focused on certain hues, and human language-acquisition devices are related to grammar construction (p. 69). These innate cognitive dispositions are the direct product of natural selection, while other mechanisms in the brain (e.g., metarepresentational ability or evocative

ability) are “spin-offs” (i.e., side effects) of these basic dispositions or other more basic dispositions. But this does not accurately capture the biological relationship between these two concepts that are crucial to his project. The following example should help illustrate Sperber’s use of the terms *disposition* and *susceptibility*. Biologists have theorized that the origin of flight in birds is a spin-off from the selective advantage of feathers for thermal regulation. Birds can fly because they became susceptible to flight only as a result of the disposition for feathers. Although Sperber’s entire discussion on the geography of the mind is highly speculative, he should make sure that difficult concepts are grounded in clear examples.

A third concern is with Sperber’s use of a single metarepresentational module. Sperber argues that humans have a single metarepresentational module that “processes concepts of concepts and representations of representations . . . [and] is the set of all representations of which the organism is capable of inferring or otherwise apprehending the existence and content” (p. 147). But it is equally possible that beliefs, desires, and intentions, which are the proper domain of the metarepresentational module, have produced their own metarepresentational modules, respectively. Sperber should leave room for such a possibility. Multiple metarepresentational modules would not hurt the internal structure of his argument in the least.

The last point of contention is with the actual explanatory power behind Sperber’s modularity of mind thesis. He submits that cultural diversity can be explained within a modularity of mind hypothesis. The mind, Sperber speculates, is a bundle of encapsulated modules designed to perform specific functions given particular environmental pressures (p. 133). Not only are these modules able to produce additional modules due to external environmental pressures, but these modules are also able to produce additional modules to help facilitate interaction between modules. Whenever there is an external or internal problem to be solved, then, a new mental module(s) is constructed to resolve the difficulty at hand so long as existing modules are unable to resolve the pressing problem.

On the surface, all this module production is rather convenient. No matter what kind of problem one might present to Sperber about the mind, he could simply invoke the creation of a new module(s). For example, what if I submitted that part of an explanation of dreams requires incorporating the subconscious? Such an explanation, I could argue, could not easily be incorporated into a modularity thesis because the “bridge” that connects the conscious and the subconscious could be the result of an entirely different set of physical relationships that have nothing to do with interacting modules. Sperber could respond that there is a cognitive module(s) in the consciousness that interacts with an existing subconscious module(s). Understanding the processes between these modules, he could say, may help in understanding the intricacies of dreams. My point is that any phenomenon that is presented as a challenge to Sperber’s modularity thesis could be used by him to confirm his theory, thus rendering his analysis of mind unfalsifiable and ad hoc.

Despite some of the concerns noted, Sperber's distinction between the *transformation* of cultural representations and the *replication* of cultural representations is refreshing. He notes that representations that are retained in a culture are rarely the exact same representations that preceded them. Unlike the replication of genetic material, representations are usually transformed by an individual mind that processes information about a given representation and then communicates a slightly altered version to others. In fact, exact replicas of prior representations are limiting cases of transformations. A simple example is the elementary school "telephone game." A group of people are lined up in a room, and the first person is told to whisper a joke to the next person, and so on, until the joke comes back to the original joke teller. The chances of the joke being exactly the same as the original version are very slim. Most likely, the joke has been considerably transformed. In much the same way, Sperber argues that cultural representations get transformed, not replicated, as they are communicated from one person to the next. Sperber's transformation/replication distinction wonderfully pinpoints the limits of the genetic analogy.

In summary, Sperber offers a speculative and highly provocative account of the human mind. This account is grounded in a materialist ontology that pays respect to humans as evolved organisms. Given this framework, widespread cultural phenomena are the accumulated effects of mental representations made public. Sperber has boldly offered this highly speculative analysis of cultural phenomena in the hope of facilitating progress in the empirical sciences through a joint venture between cognitive psychologists and anthropologists. If, at the very least, *Explaining Culture* lays the groundwork for an exchange of ideas between psychologists and anthropologists, then Sperber's work will have accomplished much. It will then be the task of the anthropologists and psychologists to reveal the explanatory power of Sperber's ruminations.

REFERENCES

- Barkow, Jerome, Leda Cosmides, and John Tooby. 1992. *The adapted mind*. New York: Oxford University Press.
- Campbell, Donald. 1960. Blind variation and selective retention in creative thought as in other knowledge processes. *Psychological Review* 67:380-400.
- Churchland, Paul. 1988. *Matter and consciousness*. Cambridge, MA: MIT Press.
- Dawkins, Richard. 1982. *Extended phenotype*. Oxford: Oxford University Press.
- Dennett, Daniel. 1987. *The intentional stance*. Cambridge, MA: MIT Press.
- . 1995. *Darwin's dangerous idea*. New York: Simon & Schuster.
- Fodor, Jerry. 1983. *The modularity of mind*. Cambridge, MA: MIT Press.
- Gould, Stephen, and Elizabeth Vrba. 1981. Exaptation: A missing term in the science of form. *Paleobiology* 8 (1): 4-15.

- Harms, William. 1996. Cultural evolution and the variable phenotype. *Biology and Philosophy* 11:357-75.
- Kaplan, David. 1965. The superorganic: Science or metaphysics? *American Anthropologist* 67:958-76.
- Levi Strauss, Claude. 1966. *The savage mind*. Chicago: University of Chicago Press.
- Menget, Patrick. 1982. Time of birth, time of being: The couvade. In *Between belief and transgression*, edited by M. Izard and P. Smith, 193-209. Chicago: Chicago University Press.
- Price-Williams, Douglas. 1975. *Explorations in cross-cultural psychology*. San Francisco: Chandler & Sharp.
- Searle, John. 1994. *The rediscovery of mind*. Cambridge, MA: MIT Press.
- Sober, Elliott. 1992. Models of cultural evolution. In *Trees of life*, edited by P. Griffiths, 17-38. Dordrecht: Kluwer.
- Sperber, Dan. 1990. The epidemiology of beliefs. In *The social psychological study of widespread beliefs*, edited by C. Fraser and G. Gaskell, 25-44. Oxford: Clarendon.
- . 1994. The modularity of thought and the epidemiology of representations. In *Mapping the mind*, edited by L. A. Hirshfeld and S. A. Gelman, 39-67. New York: Cambridge University Press.
- Wilson, Deirdre, and Dan Sperber. 1986. *Relevance: Communication and cognition*. Cambridge, MA: Harvard University Press.

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