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on

Harriet Whitehead's

Food Rules: Hunting, Sharing, and Tabooing Game in Papua New Guinea
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Contributing Reviewers include:

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Response to reviews by *Harriet Whitehead*

We are pleased to present JRS Review Forum No. 2
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Food Rules: Hunting, Sharing, and Tabooing Game in Papua New Guinea

(Harriet Whitehead, University of Michigan Press, 2000)

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[Journal pages 105-111]

Whitehead's work is a refreshing combination of fine-grained ethnography and ambitious efforts at analysis, theory-building, and agenda-setting. To the extent that I am equipped to evaluate them, her ethnographic observations both ring true and demonstrate remarkable breadth in the range of ideas and behaviors attended to. My comments will focus primarily on Whitehead's theoretical approaches.

Whitehead situates her analysis of Seltaman food taboos in the larger anthropological landscape by beginning with an attack on the perspective, long a foundation for much of cultural anthropology, that cultural phenomena should be analyzed in and of themselves. Arguing for "the essential vacuity of the truism that something in human life is culturally constituted" (21), Whitehead proposes two radical shifts in scale as a means of understanding beliefs and practices. In the first shift, she suggests that, because ideas only exist as a consequence of the minds that create, hold, and transmit them, the structure of those minds becomes a fundamental determinant of both the content and the organization of cultural information. In contrast to such psychological determinacy, cultural anthropologists have naively treated the mind as a homogeneous vessel to be filled by culture. Drawing on a variety of contemporary findings, Whitehead joins a growing school in arguing that the mind is composed of an assortment of domain-specific mechanisms. The impression that cultural beliefs constitute an integrated, lawlike structure is therefore likely to be erroneous, since any given domain of shared information will be shaped by the discrete psychological mechanisms that produce and process that information. In the second shift of scale, Whitehead draws on dynamical systems theory in again attacking the notion that beliefs and practices are subject to analysis in their own terms. Whitehead argues that the beliefs and practices evident at any one point in time are the product of a variety of complex events the particularistic details of which, especially early in the causal chain, can have an enormous impact on resulting patterns.

I enthusiastically endorse Whitehead's goal of combating cultural anthropologists' myopic one-level-of-analysis approach, and have elsewhere argued for the systematic shifting of analytic levels as a core investigative heuristic for anthropologists (Fessler 1996). Furthermore, I strongly concur with Whitehead's position that a modular evolutionary approach to the mind should play a key role in the analysis of shared beliefs and practices. With regard to her second theoretical argument, I also concur that historicity is of great importance in understanding the particulars of any given time and place and, moreover, that complex causal chains, possibly involving emergent phenomena, may lie behind many observable beliefs and practices. That said, however, I am skeptical as to the value of a dynamical systems approach to the analysis of culture. My skepticism stems not from doubts regarding the sensitive dependence of beliefs and practices both on the initial conditions that gave rise to them and on the multiplicity of past and present events that buffet them. Rather, it seems to me that, once one has agreed that the world is complex and full of contingencies, the dynamical systems approach has little more to offer. It provides no guidelines for dissecting the phenomenon of interest into component parts, nor does it offer any hint as to the temporal, social, geographical or ideational boundaries within which events and ideas should be considered potentially relevant to our understanding of that phenomenon. The dynamical systems approach thus does not constitute a coherent theoretical framework within which analyses can be undertaken -- at least as presented in Whitehead's work, it is merely a call for broad-mindedness when considering questions of causality. In short, the dynamical systems approach is a style rather than a

paradigm, theory, or premise. Styles come in and out of fashion, but they do not lead to great leaps forward in knowledge.

Whitehead advocates a psychological approach to culture in which parochial shared information is explicable with reference to a panhuman psychological architecture that is both modular and the product of natural selection. Whitehead relies on this approach in exploring the relationships between disgust and meat, between disgust and taboos, and between disgust and habituation. Less explicitly, both Whitehead's explication of the relationship between commensality and social solidarity and her discussions of hierarchy hint at similar approaches. While I believe that Whitehead has likely hit on a number of important hypotheses, my principal complaint is that, perhaps as a consequence of the richness of the ethnographic presentation, these arguments do not fully live up to the agenda that she sets both for herself and for anthropology in general. If we are to flesh out the skeletal theoretical structure that is woven into Whitehead's ethnography, we must explore more closely, and expand on, existing approaches to the relationship between culture and mind.

The notion that an understanding of shared idea systems necessitates an analysis at the psychological level is not new, dating back at least to the heyday of psychological anthropology in the 1950's. However, many of the earlier attempts to achieve this linkage were handicapped by their reliance on portraits of the human mind that were, at best, inaccurate. Nevertheless, it is possible to hold aside the limitations of the theories that pioneering psychological anthropologists borrowed in order to consider the larger enterprise in which they were engaged.

The general approach of classical psychological anthropologists, exemplified by the 'culture and personality' school (cf. Benedict 1946), was to examine how beliefs and practices a) shaped experience, and b) served an expressive role. Although it is now clear that there are problems with the assumption that social groups are sufficiently homogeneous as to allow investigators to describe a 'cultural personality type,' nevertheless, these two concerns have remained central to psychological anthropology in one form or another. A fundamental issue raised by this early work, one that has continued into the present, is the question of universality versus parochiality in psychological functioning. On the one hand, if the mental apparatuses that generate experience and lead to behavior are the same in all people, then understanding events, feelings, and behaviors in a given culture is simply a matter of explicating the requisite cultural context, i.e., 'if you accept the premises of the worldview of culture X, then you can see how you would think and react in the same manner as people X.' On the other hand, if the impact of beliefs and practices is profound enough, experience and expression will be incommensurate across cultures, i.e., 'while an ethnographer can portray a culture, it is impossible to ever really put oneself in the Other's shoes.'

The polar positions described above remain starkly evident in contemporary research on human emotions. The universalist position, championed by Paul Ekman and his associates (Ekman and Friesen 1971), argues for the existence of so-called 'basic' emotions that are elicited by prototypical event sequences or stimuli (i.e., death of a family member, a rotting corpse, etc.) and expressed by discrete facial expressions (sad face, disgust face, etc.). The relativist position was stated in its polar form by Catherine Lutz (1988), who argued that the constituent elements of emotional experience could be combined in such diverse ways that the emotional world of one culture has little in common with that of another culture.

What is the relationship between psychological universalism, psychological relativism, and the claim that the mind is composed of an assortment of distinct and somewhat autonomous mechanisms, each dedicated to processing information for a demarcated type of task? Importantly, modularists are universalists, for they claim that the psychological architectures they describe are panhuman. Given that, as Whitehead shows, considerable evidence in favor of modularity exists (and is growing by the day), what are we to make of cross-cultural variation, the very gist of most cultural anthropology?

I can think of a number of ways of making sense of cultural variation from a universalist modularist perspective. First, it appears that we are not born wholly naive. For example, infants seem to have built-in expectations about the physical properties of the world (Spelke et al. 1992), and young

children seem to have some understanding of even such complex phenomena as death relatively independent of experience (Barrett and Behne 2001). It is thus plausible that some modules may contain a considerable amount of information about features of the possible environments into which their possessor will be born; various aspects of this information may be foregrounded or backgrounded in response to environmental input. Hence, combined with sensitivity to particular cues in the social and physical environments, such built-in information may be a source of patterned ideas and behaviors across members of a group -- because all humans contain the same built-in information, individuals who are exposed to similar circumstances will each autonomously generate similar ideas and responses, leading to commonalities within groups (Tooby and Cosmides 1992).

One difficulty with relying upon the above concept, termed 'evoked culture,' to explain cultural variation is that human cultures contain information that is clearly the product of cumulative experience over generations, information that is too complex, and too parochial, to be plausibly explained as the product of similar responses to a shared environment. For example, the kayaks of the traditional maritime Inuit were engineering marvels. Rather than being the evoked face of some hidden built-in body of knowledge, such sophisticated designs are best explained as the consequence of our ability to learn from our elders, to improve on their knowledge, and to pass the resulting sum on to our juniors (R. Boyd, personal communication). Moreover, this is true not just of technology, but of many aspects of culture. Nevertheless, contrary to traditional anthropological approaches to the mind, acknowledging the complexity and cumulative nature of human cultures does not necessitate a *tabula rasa* view of learning. Rather, our reliance on culture is explicable from a modularist perspective once it is recognized that there are discrete psychological mechanisms dedicated to acquiring socially transmitted information (cf. Fiske 2000). Perhaps the clearest example of this is the mechanism that manifests as the emotional/behavioral orientation commonly termed admiration. We admire successful individuals (skilled kayak builders, for instance). When we experience admiration we seek to imitate the actions and ideas of a successful individual, thereby increasing the likelihood that we too will succeed in the local environment; we are also motivated to be near, observe, and be in good graces with, the admired individual, all of which facilitates adaptive information-gathering (Henrich and Gil-White 2001).¹

In rejecting functionalist explanations of taboos, Whitehead (77) remarks on "the possibility that customs spread through their capacity to attract and cohere groups of followers rather than through their capacity to biologically reproduce them." There is considerable explanatory utility in the view that the creation, perpetuation, and spread of cultural information can be understood in terms of an "epidemiology of ideas." In this perspective, an updated and highly cognitive version of the Levi-Straussian notion that some ideas are "good to think," concepts are viewed as propagating entities, the success or failure of which is contingent on their relative fit or lack thereof with specific attributes of the minds that hold them (cf. Sperber 1996; Atran 1990; Boyer 2000). Although Whitehead does not fully explore the theoretical linkages implicit in the epidemiology of ideas approach, it can nevertheless unite the two perspectives discussed earlier. Some ideas may be the relatively direct products of content-rich universal mental mechanisms. Because such mechanisms are panhuman, these ideas are likely to arise repeatedly. In turn, ideas spread in part because of the workings of relatively content-free mental mechanisms. Simply on the basis of the frequency of their genesis, ideas that arise repeatedly are likely to often be spread by such mechanisms. However, this process can be greatly augmented if actors share the same content-rich mental mechanisms, as the ideas and behaviors of others are more likely to resonate with actors' endogenous intuitions.

Because, as Whitehead reviews, meat has strong evocative power as a disgust stimulus, it is more likely that, as a consequence of idiosyncratic events, individuals will come to avoid particular meats than that they will come to avoid particular vegetables. Indeed, humans are far more likely to develop conditioned aversions to meats than to other foods (reviewed in Fessler and Navarrete n.d.). Like everyone else, high-status individuals possess the mental mechanism responsible for the special salience of meat, hence they too are more likely to develop meat-avoidance practices than they are to develop equivalent behaviors with regard to plant foods. Once this occurs, mechanisms such as that responsible

for admiration lead to widespread imitation of the idiosyncratic behaviors of high-prestige persons. Importantly, however, while mechanisms such as admiration are themselves relatively content-free, they do not operate in a vacuum. Suicide cults, for example, are noteworthy precisely because they are rare -- most people question the legitimacy of a leader who advocates mass suicide, presumably because their motivations for self-preservation outweigh their motivation to imitate a high-prestige individual. Hence, while admiration biases us toward adhering to ideas held by others, additional mental mechanisms, including content-rich ones, also influence the attractiveness of those ideas. It is highly plausible that the ideas that are most likely to spread and persist are those that are congruent with such endogenous information. Accordingly, the universal possession of a propensity to preferentially direct disgust toward animal products not only ensures that high-prestige individuals are likely to evince meat avoidances, it also helps to ensure that others are likely to imitate such avoidances.

If the above discussion seems very abstract, consider the following scenarios: You notice that Bob, a respected member of your community, avoids eating friggle meat, displaying apparent revulsion at the prospect. You also notice that Tom, another respected member of your community, avoids eating wimple greens, and displays a similar revulsion. Our predisposition to respond to animal products with disgust makes us more likely to imitate Bob than Tom -- Bob's avoidance resonates with our intuitions in a way that Tom's does not.²

The above discussion moves Whitehead's approach closer to her stated goal of explaining culturally-constituted dietary practices in terms of the operations of discrete psychological mechanisms. However, a number of questions remain. First, an account must be provided as to the special salience of meat as an elicitor of disgust. As Whitehead notes (p. 285), the special status of meat is consistent with the unique hazards of pathogen and parasite ingestion associated with meat-eating (cf. Haidt et al. 1997; Curtis and Biran 2001). While such dangers may be indexed by olfactory cues in cases of overt spoilage, the presence of both parasites and lower levels of bacteria are not readily detectable prior to ingestion. In contrast, phytotoxins are produced by plants as a means of defense against consumption, and hence evolution has favored highly detectable advertisements of plant toxicity. Accordingly, while vegetal hazards can be effectively coped with through a simple aversion to bitterness, the risks associated with animal protein call for a complex and highly focused avoidance learning system (Fessler 2002; Fessler and Navarrete n.d.). The double-edged sword of meat's high nutritional value and its role in disease transmission has thus apparently resulted in both an evolved attraction to meat and an evolved propensity to learn to avoid those specific meats that, under local ecological conditions, constitute a source of danger.

The above argument is consistent with Whitehead's claim of a "subterranean linkage, with phylogenetic components, running from animals-of-the-diet to adult disgust to formal food taboos," (p.90). However, the account remains incomplete since it fails to address the last link in this chain, the processes whereby widespread avoidances become institutionalized as food taboos. Why should a dietary avoidance acquire moral, cosmological, and ethnographic significance, and how does this transformation occur? Although there are probably multiple pathways through which widely shared avoidances become taboos, one process, which I term normative moralization, seems especially important.

People exhibit a robust tendency to assign positive moral value to prevailing patterns of behavior. For example, right-handedness is far more common than left-handedness and, in many societies, the right hand (and, more generally, the right side) is associated with positive concepts and esteemed social behavior, while the left hand has the opposite connotations (Corballis 1980). It seems that people survey the social world around them, note common actions, and assign positive moral valence to them. Since multiple actors engaging in the same process will arrive at similar conclusions regarding the moral rectitude of a prevailing pattern, it is only a small step to the sorts of discussions and elaborations that transform such patterns into formally articulated rules, laying the foundation for the creation of negative sanctions. However, while plausible, this explanation still remains incomplete. In keeping with Whitehead's agenda of grounding both culture in psychology and psychology in evolution,

we must ask from whence springs the human propensity to assign positive moral weight to prevailing patterns of behavior. The answer, I believe, lies in the importance of cooperation for our species.

To an evolutionarily unprecedented degree, humans rely on socially transmitted information in coping with their physical and social environments. Some of this information takes the form of inherently useful recipes or instructions. Cultural schemas such as 'how to build a kayak,' 'how to plant corn,' or 'how to escape a charging water buffalo' bestow direct benefits on their possessors. However, employing this type of information on an individual basis is only one of the ways in which culture allows humans to adapt to, and exploit, their surroundings. In contrast to such individualistic enterprises, many of the most efficient and productive activities in which humans engage are cooperative -- knowing how to kill a rabbit is clearly useful, but knowing how to conduct a large game drive is vastly more so. Humans are unique in their ability to engage in highly variable complex cooperative activities. Such activities are wholly premised on cultural information; by sharing understandings of the goals of a given enterprise, the methods to be used, and the roles to be played by various actors, individuals can coordinate their behavior in a nearly infinite number of endeavors conducted in enormously disparate domains.

Once culturally-mediated cooperation is a possibility it behooves individuals to do two things. On the one hand, they must evaluate all potential collaborators and discriminate amongst them. Individuals will maximally reap the benefits of cooperation if they preferentially ally themselves with actors whose actions demonstrate that they share the observer's cultural templates for behavior and, furthermore, are motivated to adhere to such standards, since these individuals are likely to behave in a predictable fashion that complements others' actions during cooperative endeavors. On the other hand, because every individual is herself subject to such scrutiny, individuals who consistently and conspicuously advertise their conformity to shared standards for behavior are more likely to be selected as cooperative partners, and hence are more likely to maximally reap the benefits of cooperation. Together, these two features will have constituted a source of selective pressure shaping the human mind during our species' evolution: Natural selection will have favored individuals who were strongly motivated to a) survey local forms of behavior, b) recognize prevailing patterns, c) assign positive value to such patterns, d) affiliate with actors who behaved in a manner consistent with such patterns and avoid actors who did not, and e) conform to such patterns themselves. Hence, there are grounds for supposing that the human propensity for normative moralization constitutes a discrete psychological adaptation that evolved in response to the rewards offered by complex cooperation.

I have attempted to expand Whitehead's argument along lines consistent with her stated goal of explaining food taboos as culturally-constituted standards that are produced by, and that articulate with, minds composed of a collection of diverse mechanisms, each of which constitutes an adaptation. It is important to recognize that, consistent with the modular approach advocated by Whitehead, adaptations are discrete features, each of which was produced by natural selection in response to a distinct set of recurrent challenges that confronted ancestral hominids. Accordingly, adaptations can be relatively independent of one another. This insight explains a fundamental feature of proscriptions evident throughout Whitehead's account, namely that, from the perspective of maximizing the efficiency with which available resources are exploited, food taboos are often either irrelevant or dysfunctional. Meat is a mixed blessing, hence it often pays to possess a mechanism that singles out meat as a target of disgust and conditioned aversion learning. Attention to the behavior of prestigious individuals is often an effective means of acquiring locally useful information. And the propensity to moralize and conform to prevailing patterns of behavior often increases the benefits that can be reaped from cooperation. However, while each of these adaptations may, on average, operate efficiently, it is quite likely that, in combination, when instantiated in multiple minds simultaneously, they can produce maladaptive misfirings.

An efficient consumer must balance the costs of toxin avoidance against the costs of food acquisition -- there is no point avoiding a wide range of ingestible hazards if doing so limits the actor's diet to the point that food acquisition becomes prohibitively expensive in terms of time and calories. Accordingly, we can expect psychological mechanisms governing ingestion to operate such that dietary

disgust sensitivity will covary with current dietary adequacy. It is not difficult to find examples of, on the one hand, the reduction or even suspension of disgust sensitivity among poor or starving individuals and, on the other hand, the exaggeration of disgust sensitivity among highly prosperous persons. Because high-prestige individuals will typically have the greatest access to food resources of any member of their community, it is thus expectable that such persons will often express disgust toward a wide range of potential foods (cf. Aunger 2000). When combined with the fact that each individual possesses an idiosyncratic history that may include erroneously acquired conditioned food aversions, this means that actors who imitate the food avoidances of high prestige individuals do so at the risk of maladaptively constricting their own diets. Apparently, either this cost has been consistently low enough to prevent natural selection from refining the appropriate mechanisms, or the nature of the mechanisms is such that refinements are not possible. Either way, when combined with normative moralization these features virtually ensure that many, and perhaps most, food taboos stemming from prestige-biased transmission will be maladaptive for many of the members of a society.

The above account explains why cultures may accumulate a diverse array of bizarre taboos on animal products. However, because small-scale societies such as that of the Seltaman are typically meritocratic to some degree, burdensome taboos may disappear if, despite the initial social costs, innovators are able to prosper sufficiently by exploiting an abundant but tabooed resource. This is consistent with Whitehead's account of the manner in which availability affects taboo targeting, as there is little pressure to modify taboos on scarce animals, but considerable pressure to do so if ecological circumstances change. This is yet another example of the manner in which Whitehead's work contains vital material. I applaud the thoroughness of her ethnographic portrait, endorse much of her theoretical agenda, and urge her to systematically act on her own call for an evolutionary psychological analysis of cultural phenomenon.

Endnotes

1. Prestige-biased belief acquisition explains the adoption of both avoidances and additions to the diet, a pattern noted by Whitehead (p. 88).
2. It is likely that, in addition to domain-general culture-acquisition mechanisms such as prestige-biased transmission and conformist transmission (Boyd and Richerson 1985), domain-specific mechanisms direct attention to the diets of conspecifics -- see Fessler and Navarrete n.d.

References

- Atran, Scott
1990. *Cognitive Foundations of Natural History: Towards an Anthropology of Science*. New York: Cambridge University Press.
- Aunger, Robert
2000. The Life History of Culture Learning in a Face-to-Face Society. *Ethos* 28(2): 1-38.
- Barrett, H. Clark, and Tanya Behne
2001. *Understanding Death as the Cessation of Intentional Action: A Cross-Cultural Developmental Study*. Proceedings of the 23rd Annual Meeting of the Cognitive Science Society.
- Benedict, R.
1946. *Patterns of Culture*. New York: The New American Library.
- Boyd, Robert and Peter J. Richerson.
1985. *Culture and the Evolutionary Process*. Chicago: University of Chicago Press.
- Boyer, Pascal
2000. Evolutionary Psychology and Cultural Transmission. *American Behavioral Scientist* 43(6): 987-1000.
- Corballis, Michael C.
1980. Laterality and Myth. *American Psychologist* 35(3): 284-295.
- Curtis, V. and A. Biran.
2001. Dirt, Disgust, and Disease. Is Hygiene in Our Genes? *Perspectives in Biology and Medicine* 44(1): 17-31.
- Ekman, Paul and Wallace V. Friesen.
1971. Constants Across Cultures in the Face and Emotion. *Journal of Personality and Social Psychology* 17(2): 124-129.
- Fessler, Daniel M.T.

1996. Anthropology in Wonderland, or, the Virtues of Shifting Levels and Frames. *Anthropology Newsletter* 37(8): 44-42.
Fessler, Daniel M.T.
- 2002 Reproductive Immunosuppression and Diet: An Evolutionary Perspective on Pregnancy Sickness and Meat Consumption. *Current Anthropology*, 43(1):19-39.
Fessler, Daniel M.T. and C. David Navarrete
- n.d. Meat is good to taboo: Dietary Proscriptions as a Product of the Interaction of Psychological Mechanisms and Social Processes. Unpublished ms.
Fiske, Alan P.
2000. Complementarity Theory: Why Human Social Capacities Evolved to Require Cultural Complements. *Personality and Social Psychology Review* 4(1): 76-94.
Haidt, Jonathan, Paul Rozin, Clark McCauley and Sumio Imada.
1997. Body, Psyche, and Culture: The Relationship between Disgust and Morality. *Psychology and Developing Societies* 9(1): 107-131.
Henrich, Joseph and Francisco J. Gil-White.
2001. The Evolution of Prestige: Freely Conferred Deference as a Mechanism for Enhancing the Benefits of Cultural Transmission. *Evolution and Human Behavior* 22(3): 165-196.
Lutz, Catherine A.
1988. *Unnatural Emotions : Everyday Sentiments on a Micronesian Atoll and Their Challenge to Western Theory*. Chicago: University of Chicago Press.
- Spelke, Elizabeth S., Karen Breinlinger, Janet Macomber and Kristen Jacobson.
1992. Origins of Knowledge. *Psychological Review* 99(4): 605-632.
Sperber, Dan
1996. *Explaining Culture: A Naturalistic Approach*. Cambridge, MA: Blackwell.
- Tooby, John and Leda Cosmides.
1992. The Psychological Foundations of Culture. In *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*. J.H. Barkow, L. Cosmides and J. Tooby, eds., pp.19-136. New York: Oxford University Press.