

A commentary on A. Mesoudi, A. Whiten & K. Laland,
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The Role of Psychology in the Study of Culture

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Abstract: While we are enthusiastic about a Darwinian approach to culture, we argue that the overview presented in the target article does not sufficiently emphasize the crucial explanatory role that psychology plays in the study of culture. We use a number of examples to illustrate the variety of ways that appeal to psychological factors can help explain cultural phenomena.

The target article makes three main claims. The first, a claim about culture itself, maintains that culture exhibits key Darwinian evolutionary properties. The second and third are about the study of culture. According to the second, research on culture can and should take a broadly Darwinian stance, which borrows many of the theoretical assumptions, analytic tools and experimental methods of evolutionary biology. The third claim is an account of a unifying framework within which that research should be organized : "the structure of a science of culture should broadly resemble the structure of evolutionary biology" (ms, pg. 2). Though we agree wholeheartedly with the first two claims, we find the third less convincing. For while the proposed account is useful, it is also importantly incomplete because it fails to clarify or sufficiently emphasize the central explanatory role that *psychology* is likely to play in the emerging science of culture.

Research has already shown that a number of features of the species-typical human psychological endowment influence cultural evolution along a variety of

dimensions. For instance, the content of some cultural variants makes them more likely to be socially transmitted than others, and the increased frequency of such variants is often explained by the influence of *content biases* on social transmission processes. These content biases are in turn often explained by appeal to the operation and properties of psychological mechanisms. For instance, Heath et al. (2001) showed how the psychology of disgust can influence the horizontal transmission of cultural variants. They found that the more likely an urban legend was to trigger disgust, the more likely it was to be passed along to peers and to appear on urban legend websites. Nichols (2002) showed that disgust can also bias the vertical transmission of cultural variants. He found that etiquette norms of the 15th and 16th centuries that prohibit actions likely to induce disgust were significantly more likely to have survived to the present than those that did not.

Appeal to psychological mechanisms can also help uncover and explain other important regularities relevant to the science of culture. Fessler & Navarrete (2003) showed that while details differ from one culture to the next, taboos regulating the consumption of meat were found in nearly all investigated cultures. The cross-cultural recurrence of meat taboos is explained, in part, by psychological factors, specifically the salience of meat to the human disgust mechanism. Machery & Faucher (2005, forthcoming) call attention to another instance of the pattern of local variations on a theme that is present in all or most cultures. While races are conceptualized differently across cultures, a common theme is identifiable in the various conceptualizations: races are cross-culturally conceptualized as biological entities. Following Gil-White (2001), Machery and Faucher argue that this puzzling regularity is explained by the character of the psychological mechanisms that underlie racial cognition: the observable cues associated with race mistakenly trigger a hypothesized system for *ethnic* cognition, and that system employs a folk biological mechanism as one of its constituent subsystems.

Other more comprehensive projects such as the recent work on religions and religious beliefs (Boyer 2001, Atran 2002) offer additional rich and suggestive examples of the substantive explanatory role psychology can play in the investigation of culture. While the complex intersection of psychological and cultural phenomena is not yet completely understood, these examples begin to illustrate the range of ways in which psychological factors have already been shown to exert profound influence on social transmission and cultural evolution. This suggests to us that psychology should be deeply integrated into the foundations of a science of culture.

This perspective points to potentially fruitful lines of future inquiry as well. For instance, some of the most promising theoretic work on cultural evolution might be enhanced by more detailed psychological research. Theoretical models and experimental evidence show that the transmission of cultural variants is strongly influenced not just by their content, but also by the local social context of their transmission: conformity and prestige biases lead people to adopt, respectively, cultural variants common among their peers, and variants adopted by prestigious members of their culture (Boyd & Richerson 1985, 2005). In much of that work, conformity and prestige are characterized behaviorally, and little is yet known about the nature of the psychological mechanisms underlying conformity and prestige biases (though see McElreath et al. 2005 and Henrich & Gil-White 2001). Discovering more about those mechanisms' internal structure, the observable cues in the social environment to which they are sensitive, and the manner in which they process information about those cues promises to shed light on the cultural evolutionary dynamics that they influence. Perhaps more importantly, as in the case of racial cognition, idiosyncrasies uncovered in the functioning of the psychological mechanisms underlying conformity and prestige bias could provide resources for explaining more puzzling aspects of cultural phenomena they affect.

Despite the valuable overview it provides, the organizational framework proposed in the target article does little to emphasize or elucidate the significance of such psychological factors in explaining cultural phenomena, and thus leaves an important ingredient out of its account. Perhaps this indicates that the similarity to evolutionary biology is at best a partial one, and that nothing in evolutionary biology corresponds to the central role we maintain psychology will play in the study of cultural evolution. Alternatively, it could indicate that the analogy indeed holds, but the account of evolutionary biology is incomplete as well. Indeed psychological factors such as sensory biases have been shown to have a powerful influence on biological evolution via the process of sexual selection (Miller 2001). Either way, we agree with the authors that such limitations do not "invalidate" an evolutionary approach to culture. Rather, they suggest that the account needs to be enriched, to underscore the important role of psychology in the study of culture.

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