

Stratification and supernatural punishment: cooperation or obedience?

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Schloss and Murray (S&M) have provided an insightful and important contribution to our understanding of the role of supernatural punishment in the evolution of religious systems. Future researchers will need to pay particular attention to their refinements of the cooperation enhancement (CE) and punishment avoidance (PA) approaches. While S&M acknowledge “considerable empirical support that . . . belief in supernatural sanctions [is associated with] recent, cosmopolitan religions” (p. 57) their approach could be further refined through greater attention to the role of social, economic and political stratification in the shaping of religious doctrine (Cronk, 1994). We argue that stratification and hierarchy are the critical elements in producing a cognitive ecology and social structure in which punishing gods can thrive.

Humans are famously obedient to authority (e.g., Milgram, 1963), and there is a great deal of empirical evidence that males in particular possess cognitive adaptations to assess dominance status and modify behavior accordingly. A number of visible traits including stature (Hensley, 1993), eye color (Kleisnera, Kočnara, Rubešová, & Flegra, 2010), and facial structure (Mueller & Mazur, 1996) have been shown to signal dominance, and humans seem to use auditory clues as well. Subordinate men, for instance, unconsciously adjust their vocal pitch to that of a dominant conversation partner (Gregory & Webster, 1996; see also Gregory & Gallagher, 2002; Puts, Gaulin, & Verdolini, 2006; Puts, Hodges, Cárdenas, & Gaulin, 2007). Thus, humans seem to have a number of psychological adaptations that allow us to perceive and navigate status hierarchies effectively.

Hierarchy and stratification are important but not ubiquitous in human societies (Dubreuil, 2010), and there is considerable variation even among types of societies that are often painted with broad strokes. For example, hunter-gatherers are frequently labeled as egalitarian, but many such groups include some stratification (Kelly, 1995). Status differences based upon sex and age are particularly common (e.g., Hart and Pilling, 1979). Stratification may have its greatest incidence in larger human societies, but its seeds are present even among the smallest, most homogeneous groups.

Stratification is maintained through mechanisms of social control. Coercion is one obvious way to maintain control, but it can be costly. Manipulation through the use of signals is often a less costly and less risky alternative. As Schloss and Murray (2011) note, judgmental gods and judgment-based afterlife beliefs are not universal. Considerable evidence exists that such beliefs are rare among hunter-gatherer, small-scale, and egalitarian societies, and common among food producing, large-scale, and hierarchical societies. Swanson (1960) may have been the first to note an association between stratification and the belief in supernatural powers that reward and punish individuals according to how well they behave (see also Peregrine, 1996). Similarly, Roes and Raymond (2003) found an association between social complexity and the belief in moralizing gods. Most recently, Dickson, Olsen, Dahm, and Wachtel (2005) found an association between subsistence type (a common proxy for degree of

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stratification) and the belief that the quality of one's experience in the next life is contingent upon how one behaves in this one. While only 10% of food collecting societies maintain such beliefs, nearly 90% of plow agricultural societies have them. As societies become more socially, economically, and politically stratified, punitive, judgmental gods and judgmental afterlife beliefs become much more common.

Hierarchies can also serve to protect individuals from those lower in rank. If a worker objects to something her boss is telling her to do, the boss can always appeal to the hierarchy: "I, too, am just following orders." When the top of the hierarchy is occupied by a capricious, omniscient, incorporeal being whose primary concern is obedience, a ruler's accountability is reduced even further. By enforcing the divinely prescribed order of things, the ruler is merely doing his or her job.

The hierarchical approach creates a framework in which the CE and PA approaches can be seen as working together. The CE viewpoint suggests that the threat of supernatural punishment enhances cooperation among all members of religious groups. An unstated assumption is that this cooperation benefits all participants. While the hierarchical perspective does not contradict that argument, it suggests that costs and benefits may be distributed unequally – those nearer the top of the hierarchy may benefit much more than those at the bottom. The PA account suggests that individuals subscribe to beliefs that include supernatural punishment in order to avoid real world punishment. In the hierarchical view, elites are using the threat of supernatural punishment as an inexpensive means of encouraging non-elites to follow the rules, but real-world punishment is, of course, a fallback option.

One of the predictions of the hierarchical perspective has already been supported: there is indeed a cross-cultural association between social stratification and belief in judgmental gods. We also predict a relationship at the individual level between the degree to which people believe in the hierarchical system and the strength of their beliefs in supernatural punishment.

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Supernatural punishment: what traits are being selected?

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In their critical analysis of supernatural punishment (SP) theories, Schloss and Murray (S&M) tease apart two distinct but often conflated adaptationist approaches to religion: those that argue that religious belief enhances cooperation (cooperation enhancement, CE), and those that say that it helps people to withstand the temptation to cheat, helping them avoid the costs of being punished (punishment avoidance, PA). They also make a distinction between individual selection and group selection. However, they pay little attention to the traits that are the targets of selection: evolved psychological dispositions, flexible behavioral strategies, or culturally transmitted norms. These three types of traits roughly correspond to three styles of evolutionary approach to human behavior: evolutionary psychology, behavioral ecology, and dual inheritance theories (Smith, 2000). Each has a different expected temporal scale in which adaptive change takes place – this constrains the plausibility of particular hypotheses and their mutual compatibility.

Evolutionary psychologists explain our behavioral repertoire as a result of evolved psychological adaptations, which were shaped in ancestral environments. Let us examine PA accounts from this perspective. If belief in SP is an ancient adaptation, we would expect it to have emerged in small, egalitarian groups, where there is a tendency to punish all defection. The strong connection between detection and defection costs in such societies is said to favor the evolution of God-fearing psychological mechanisms. However, the purported egalitarianism of ancient human groups is to some extent an idealization, because evidence for social inequality, in the form of lavish beadwork in children's burials, dates back at least to the Upper Paleolithic (Vanhaeren & d'Errico, 2005). It is unlikely that in such societies everyone would have faced the same risk of being punished. Also, ethnographic parallels show that at least some small-scale egalitarian societies (e.g., Ju/'hoansi, Kalahari hunter-gatherers) practice mainly *low-cost* forms of punishment, including gossip and jokes at the expense of the offender (Wiessner, 2005). The low cost of punishment (for both offender and punisher) seems incompatible with PA. As Wiessner (2005, p. 135) says: “[this] informal means of punishment would be ineffective or insufficient in a larger-scale society with less mobility.” Taken together, it seems unlikely that PA emerged in ancestral environments. For the evolutionary psychologist, CE thus remains the only viable option, but it then still remains unclear, as S&M aptly point out, why religion, rather than other forms of

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