prosociality regardless of the targets’ group membership (e.g., not only “coreligionists”). Any group favoritism promoted by religiosity in small societies is irrelevant to large-scale societies in which anonymous strangers cannot be presumed coreligionists. For the same reason, any “deep trust and commitment ... characteristic of global religious communities” (sect. 5.2) cannot be extrapolated to pluralistic large-scale societies. Out-group-inclusive trust is not associated with religiosity (Welch et al. 2007) but can appear so because trusting “most people” connotes in-group members to those in more religious countries, but out-group members or strangers to those in less religious countries (Delhey et al. 2011). The use of terms such as “stranger” and “anonymous” (sect. 3) to refer to individuals known to be from a given island or from within the community is oxymoronic from the standpoint of distinguishing a complete stranger – possibly an out-group member – from someone who shares some group affiliation with the participant.

Another problem with the Big Gods theory, as Norenzayan et al. partly concede, is that phenomena attributed to religion are by-products of more generalized, secular mechanisms. For example, supernatural monitoring is a subset of a broader social monitoring function. Equivalent effects are elicited by priming social norms or self-awareness (Greas & Norenzayan 2013a). Other contextual primes shown to promote honesty include mirrors and bright lights, which activate intuitions such as “what would others think of me?” (Chio & Cheng 2013; Diener & Wallbom 1976). Supernatural concepts such as “God is watching” or “avoiding the evil eye” are thus variations of social monitoring intuitions projected as stemming from external agents, rather than uniquely religious in character.

Similarly, the authors often state that prosocial effects (e.g., in sect. 4) are attributable to “religious commitment.” However, naturalistic as well as experimental studies indicate that prosociality is promoted by secular factors such as general group involvement, rather than by uniquely prosocial effects of religious beliefs (Galen et al. 2015; Thomson 2015). Many of the studies in the meta-analysis found varied effects depending on the specific primed content such as “religion” versus “God” (only the latter associated with out-group prosociality; Presto & Bitter 2013). Hence, any prosocial priming effects are not the result of “religious belief” but of certain versions of religious as well as secular content exhibiting positive or reward-related semantic associations (Harrell 2012; Fichon et al. 2007).

In sum, Norenzayan et al. concede throughout their impressive body of work that religious influences are: (1) not necessary for prosociality; (2) intertwined with non-prosocial influences; (3) context dependent; and (4) reliably linked to in-group cohesion rather than extended prosociality. In numerous places, the language used to describe religious group solidarity is properly qualified as referring only to within-group benefits. But elsewhere, phrases are used such as “large-scale cooperation” and “benefitting others” without the crucial qualifier “within the group.” What may seem to be a picayune terminological issue becomes more serious when attributed to a generalized conclusion that religious concepts have prosocial effects. In modern pluralistic societies consisting of individuals from mixed religious and ethnic backgrounds, group cohesion is not tantamount to extended prosociality, and indeed often opposes it. As stated by the authors, sacred non-negotiable beliefs exacerbate the “dark side” of intergroup intolerance by sanctifying and moralizing it (sect. 5.3, para. 3).

Therefore, group cohesion should not even warrant the term prosociality for the same reason that selective nepotism does not. It is one thing for religiosity to connote concepts such as “God is watching and wants you to be nice to fellow group members,” but this is not equivalent to more abstract moral enhancement such as “treat all others the way you want to be treated” or simply “be nice to others.” In many cases (e.g., interactions with a coreligionist), the resulting actions could be identical. However, if the interaction is not with a presumed group member, the two concepts will predict different forms of behavior.
Abstract: Norenzayan et al. suggest that Big Gods can be replaced by Big Governments. We examine forms of social and self-monitoring and ritual practice that emerged in Classical China, heterarchical societies like those that emerged in pre-Columbian Mesoamerica, and the contemporary Zapatista movement of Chiapas, and we recommend widening the hypothesis space to include these alternative forms of social organization.

Norenzayan et al. offer a rich, syncretic account of how prosocial religions allowed societies to scale up from bands of hunter–gatherers to the large-scale, multiethnic societies we now inhabit. They argue that successful cultures foster cooperation, harmony, solidarity, and growth by: (1) outsourcing social-monitoring to moralizing Big Gods; (2) developing rituals to build and signal commitment; and (3) creating practices to exploit in-group favoritism and tribal psychology. With secularization (1) erodes, and (2) and (3) can decay in turn. So how can societies leave behind Big Gods while remaining prosocial? Norenzayan et al. suggest that as Big Gods wane, Big Govs—that is, Big Governments—can serve as surrogates. But are there other possibilities?

The hierarchical thought and organization fostered by Big Gods (like those of the Abrahamic traditions) and Big Govs manage prosociality from the top down. But centralized power can be supplemented (or even replaced) by forms of mutual accountability that are sustained by more mundane forms of social monitoring and communal practice. Focusing on religious traditions that flourished in the Levant, and forming hypotheses in light of these, may downplay other ways of fostering cooperation and prosociality, which flourished in other parts of the world.

Classical China provides an interesting example. As Norenzayan et al. note, Big Gods clearly exist in the earliest historical record, and they exhibit moral concerns. Yet, it is unclear what role they played in fostering prosociality and enabling widespread cooperation and trust (Sarkissian 2015). Big Govs, including centralized governance backed by state punishment, played a substantial role. And other forms of monitoring and ritual practice (1 and 2, above) developed alongside these forms of top-down governance. Commitments to social monitoring developed early in China, in part owing to the advent of labor-intensive sustenance agriculture (Nisbett 2003; Nisbett et al. 2001). Shared commitments to cooperation were crucial in this context, spurring practices of self and other monitoring, along with increased attunement to one’s impact on others (Sarkissian 2010). Social and self-monitoring continue to influence prosociality in collectivist societies today (e.g., Heine et al. 2008; Sarkissian 2014), and they might lessen the need for Big Gods or Big Govs. Moreover, when it comes to ritual practice, there is a sizable and impressive literature in the classical period (not unlike the theory adopted by Norenzayan et al.) that recognizes its instrumental value in strengthening social bonds and taming personal impulse, promoting harmonious prosocial behavior without supernatural incentives (e.g., Puett 2013). Mundane monitoring and ritual theory, then, can be found alongside Big Gods and Big Govs in the classical period, and both are amenable to appropriation today.

The hierarchical power structures that developed in Mesoamerica suggest a second interesting phenomenon. The lowland Mayan economy relied on short-range, self-organized practices of exchange, but they made room for the centrally controlled exchange of ritual goods (Potter & King 2008). Similarly, the massive, multiethnic city of Teotihuacan appears to have been organized as a decentralized network of semiautonomous communities, structured around kinship but leaving room for corporate governance (Manzanilla 2012). The archeological remains at Teotihuacan reveal a distinctive lack of dynastic monuments and limited interest in emulating existing Mayan and Zapotec writing systems, which were commonly used to record dynastic information. Social-monitoring practices can be resilient to fluctuations in the availability of goods and resources, and they can preserve ethnic and cultural diversity. There is no consensus regarding the nature of the gods at Teotihuacan, but costly rituals and CREDs (including bloodletting and ritual intoxication) were critical to intergroup cooperation and the maintenance of local power throughout Mesoamerica (Munson et al. 2014). And it is possible

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Cultural evolution and prosociality: Widening the hypothesis space

doi:10.1017/S0140525X1500045X, e0

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