

## Testing the cultural group selection hypothesis in Northern Ghana and Oaxaca

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**Abstract:** We examine the cultural group selection (CGS) hypothesis in light of our fieldwork in Northern Ghana and Oaxaca, highly multiethnic regions. Our evidence fails to corroborate two central predictions of the hypothesis: that the cultural group is the unit of evolution, and that cultural homogenization is to be expected as the outcome of a selective process.

While we agree with Richerson et al. that prosocial emotions play a central role in fostering group cohesion (Acedo-Carmona & Gomila 2013; 2014b), we disagree with them in their lack of enough attention to the internal complexity within social groups. Such internal structure, though, casts doubt on the role that group competition is required to play according to the cultural group selection (CGS) hypothesis, as well as on the role culture is assigned. Two arguments are developed to articulate this point, supported by fieldwork evidence from Northern Ghana and Oaxaca (México). These are regions characterized by the coexistence of multi-ethnic, multicultural groups and are therefore well-suited to put the predictions of CGS hypothesis to the test, which fail to get corroborated.

**Argument 1.** The CGS hypothesis contends that the cultural group is the relevant unit of selection for the evolution of cooperation. It follows from this that members of a group should cooperate equally with any member of the group, beyond kin. Instead, what we found in our fieldwork is that individuals within a group preferentially cooperate with the members of their respective “trust circles,” and that these trust circles are small groups related to a past history of reciprocation and affiliation (Acedo-Carmona & Gomila 2015). The cultural group is a much bigger unit, whose degree of internal cohesion derives from the topology of connections among these small groups (Acedo-Carmona & Gomila 2014b).

This suggests that cultural groups are not the basic unit of selection of human societies – rather, small groups are, for the following reasons:

- a. Even in contexts where no common culture exists, individuals develop social ties (Zhou et al. 2005) that make cooperation possible, such as trust relationships.
- b. The social brain is ready to develop close relationships (Roberts et al. 2009). So, it is reasonable to think that psychological dispositions to create and maintain bonds in their immediate environment were selected (Henzi et al. 2007; Stiller & Dunbar 2007), before competition among cultural groups can even start.
- c. Evidence from Northern Ghana also suggests that small groups are more resistant and flexible at a time to face to hard challenges (Acedo-Carmona & Gomila 2014a).

d. Even in contemporary societies, small groups continue playing a central role of structuring cooperation within the society (sociologists call this phenomenon “social capital”; Putnam 1993).

Selective processes at the cultural group level, therefore, cannot be basic, but dependent upon their respective internal structure of several groups, including kin-based groups and affiliation groups, with different degrees of internal cohesion and interconnection. For example, sometimes cultural groups merge into bigger ones, and sometimes groups split: Competition among groups may have little to do with these processes, but rather with internal processes at the small-group level.

**Argument 2.** The CGS hypothesis predicts regional cultural homogenization in the long run: If there is competition among co-local cultural groups, the successful one is deemed to prevail according to CGS, either by exclusion of the other, or by absorption/ assimilation (by imitation of the most successful one, for instance). However, this is not what happened, either in Northern Ghana or in Oaxaca – on the contrary, both regions are inhabited by a plurality of cultural groups, which coexist and also cooperate, while keeping their distinctive ethnic identities (Acedo-Carmona & Gomila, 2015). In both cases, there are different origins, a settlement period, and a long history of interaction among the groups within the same region, while linguistic and cultural diversity continues, despite the fact that some ethnic groups do better than others in terms of status and welfare.

This suggests that the role of culture may have more to do with reinforcing group cohesion than promoting group competition. A shared culture may facilitate cooperation by inducing a positive expectation from individuals whose identities and values are shared (Tanis & Postmes 2005). But in a non-instrumental way, it is not something one can choose. Culture migrations do not take place strategically because individuals by nature do not change their group identity (Bhugra & Becker 2005). The affective sense of familiarity and belonging provided by cultural identity is too strong to allow an easy detachment toward another more advantageous culture. On the other hand, slow cultural changes take place even in successful cultural groups.

The CGS hypothesis emphasizes the well-known in-group/outgroup bias (Chen & Xin Li 2009). However, the in-group bias that contributes to foster internal cohesion does not need to involve aversion to other groups (Mäs & Dijkstra 2014). This aversion emerges only in cases of competition for resources (Foley & Gamble 2009). From this point of view, cultural differentiation appears as the by-product of an adaptive process to a specific environment by a society (Alvard 2003), rather than a way to compete with other social groups in the first place, while keeping track of the basic forms of social cohesion (such as trust). This approach also may account for the diversity of existing cultures, even in the same territory: The prediction is that each society will take advantage of some of the opportunities of the environment, such as peasants versus shepherds or merchants versus state officials, as it happens in Northern Ghana (Acedo-Carmona & Gomila 2014a). Competition derived from population explosion is a too recent phenomenon to have played an evolutionary role.

In summary, in our view, the cement of society is to be found in the basic human disposition to trust each other, which gives rise to small groups. Societies are constituted by these groups, and their interrelationships are different. Culture certainly molds these interrelationships and organization, according to tradition and environmental conditions. But its role in fostering cooperation does not seem to be primarily in providing a competitive advantage, as claimed by CGS.