

Social image concerns predate social media

Maintaining a positive social image is an essential feature of human psychology, as it fosters collaborative group behaviour more efficiently than other motivations. This is the main conclusion of a study led by Gianluca Grimalda of the Universitat Jaume I, published in *Nature Communications*.

Our current obsession with social media and creating a public "brand" may seem like an entirely superficial concern brought on, or at least exacerbated, by online social networks. However, recent research carried out in Papua New Guinea suggests that caring for our social image runs deeper than the social web.

Gianluca Grimalda, researcher at the Universitat Jaume I, who has recently spent some time among the Teop people in Papua New Guinea, tells us: "Our preoccupation with how people see us is not limited to our interactions over social networks or feedback on e-Bay, rather it emerges prior to the arrival of these new technologies. It is intrinsic to our psychology." The Teop people were selected to test Grimalda's theories on human cooperation for the small size of their communities (populations of around 50 inhabitants) and low levels of social complexity, though also because they present very different characteristics to those found in Western societies: they are horticulturists and gatherers; they use rudimentary tools to grow their food; they have no mechanised industry; and retribution for manual labour is infrequent. This makes them "ideal for testing the evolutionary theories of human behaviour, since the conditions found here are much closer to those that prevailed throughout most of our evolutionary history, not like those found in Western societies. The field study on the Teop people is one of the first to examine the effects that our real-life social image has on human cooperation," emphasised the professor.

According to evolutionary and economic theories, human beings, like other animals, are expected to behave selfishly, maximising material gains for themselves. Given that cooperation implies sacrificing one's own interests for those of the group, it should have been eliminated by natural selection. However, human cooperation occurs in all known societies, which is enigmatic and demands an explanation.

Many theories have been posited to explain the evolution of cooperation. In this field study, Grimalda, joined by Andreas Ponderfer, of the Institute for World Economy of the University of Kiel, and David P. Tracer, from the University of Colorado in Denver, focused on two of the most common: the preoccupation with social image and the propensity to punish wayward behaviour. The first theory describes the desire of the individual to maintain a

reputation as a cooperator in the social group. The second theory emphasises the capacity of human groups to "self-impose" the norms of fairness, with some individuals that act as "punishers," who are prepared to sacrifice their own material gain in order to punish those who do not play by the rules.

The relevance of the preoccupation with social image was put to the test among the Teop people though the presence, or not, of a "Big Man" (community leader) as observer in the decisions they made in anonymous rounds of Prisoner's Dilemma. In the absence of effective formal institutions, these Big Men are responsible for resolving social conflict and enforcing social norms. They also act as 'hubs' of the social network and are the figures towards whom individuals strive to maintain a positive social image.

Efficient Cooperation

The main conclusion of the study is that the preoccupation with social image weighs much more heavily than punishment as a factor to promote efficient cooperation in this society. Curiously, when a Big Man from an external group acts as an observer, it does not have the same positive influence on cooperation. This implies that the preoccupation with social image is limited to the social group to which the individual belongs. In general, "our results reinforce the idea that the preoccupation with social image is a universal trait of human psychology. Conversely, the propensity to punish non-cooperative behaviour, observable in some contemporary societies, was probably acquired relatively recently in human evolution" (Grimalda). The study concludes that the desire of individuals to maintain a positive social image within a community is more important than punishment as a driver of social cooperation.

Grimalda also stresses that the most surprising result from his research is, "without a doubt, that receiving punishment from the other "player" or from the "observer," did not bring any benefits. On the contrary: it used up many of the resources that the participants may have gained. In fact, in many societies, especially in the Protestant religious tradition, this mechanism serves to increase the benefits of cooperation."

In this society in Papua New Guinea, as in others in Russia, Greece and Turkey, high punishment levels are observed -much higher than in replica studies carried out in Germany-, including high levels of "anti-social punishment," punishment even when the other person cooperates. Grimalda tells us that "we still do not understand the reasons for this anti-social punishment. To our surprise, we have seen how the observer-punishers also punish cooperators en masse. We believe that these societies are very competitive and that a kind of *mors tua, vita mea* logic is applied (your death is my life). That is, that my personal position improves if yours worsens, but this translates into real collective disaster."

This research group plans to return to Bougainville (Papua) next year to tackle one of the most interesting, and as yet unresolved, questions regarding cooperation: why punishment works well in some societies and not in others. Is there a link between the capacities of social image and punishment to increase the benefits of cooperation?