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## Evolution of Human Sociality, The



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### Synonyms

Cooperation; Human cooperation; Large-scale cooperation; Prosociality

### Definition

There are different evolutionary mechanisms that explain human large-scale cooperation (which is so rare in animal kingdom) even with genetically unrelated people.

Cooperation has adaptive importance as it increases the chances of hunting success and access to resources through the establishment of coalitions in almost all primates including humans (Tomasello 2000). Cooperative interactions are also of vital importance to the members of the group in terms of survival advantage since the resources obtained by the group are closed to those who do not contribute to the public good as a cooperative interaction. That is why

cooperation can be considered as a mechanism that emerged as an evolutionarily stable strategy. Similarly, our cognitive architecture is thought to evolve in order to make cooperation possible. For instance, the emergence of a number of cognitive mechanisms such as language or sense of morality is thought to have emerged because they have a role to enhance cooperation in groups (Tomasello 2016).

If we look at the evolution of human sociality more specifically, the first cooperative interaction emerges in the interaction between mother and child as a result of the attachment relationship. In other words, caring for the offspring in terms of physical and psychological bonding occurs with the help of hormones such as oxytocin (Nelson and Panksepp 1998), and it might be considered as the origin and simplest version of human sociality. Second, this cooperation is extended to close relatives (Hamilton 1964). The rationale here is that helping relatives is actually an indirect investment in our own genes because we share certain genes with our relatives.

However, human sociality can go beyond kinship relations in contrast to other primates. Human beings interact and cooperate with genetically unrelated people and can even help by endangering their own lives. The primary evolutionary mechanism that explains the cooperation among genetically unrelated people is the principle of reciprocity (Trivers 1971). Reciprocity can take place directly or indirectly. In the case of direct reciprocity, friendship relationships are defined

and the person wants to help someone else directly and to guarantee the potential provision they receive from the person in the future. In other words, if I help you, I can see the same help from you and this expectation of helping in return can explain why friendship among genetically unrelated people emerges in human animals. In indirect reciprocity, because of the reputational concerns of the person, the person helps another person and indirectly increases the likelihood of getting help from others who witness this help. For example, helping a beggar walk down the street can be taken as an example because helping the beggar is not about expecting direct help from the beggar. On the contrary, this help gives a sign that she can be a reliable cooperation partner to other people in the vicinity, and this behavior increases her reputation and increases the likelihood that she will be helped by other members of the group when she falls on hard times in the future.

However, large-scale cooperation with genetically unrelated people without any kind of reputational concerns is not easily explained by standard evolutionary mechanisms. To solve this evolutionary puzzle, supernatural punishment hypothesis was proposed in order to understand why people help others in anonymous and one-time interactions (Johnson and Krüger 2004). According to this hypothesis, human surveillance is not enough to observe every situation that violates the norms of large-scale cooperation (such as “do not kill anyone,” or “do not steal”), and thus unable to punish every norm transgression, and thereby unable to deter future moral violations. However, belief in the existence of a supernatural entity that can observe and punish every norm transgression can sustain large-scale cooperation and deter free-riding. In other words, the idea of supernatural punishment contributes to the large-scale human sociality as a mechanism for interpersonal cooperation. This approach argues that the emergence of religions, especially of religions with big and moralizing gods, is a fundamental factor that extends human sociality and allows us to spread all over the world.

In conclusion, it is possible to say that human sociality, in part, is based on the evolutionary process. This mechanism first appears in mother–child interaction and the mother is cognitively equipped for protecting her child from potential harm. Likewise, relatives with similar genes can also help each other by protecting each other, because helping relatives is actually an investment in their own genes. People who do not have any genetic similarities help each other in regard to the mechanism we call reciprocal altruism: if I help you, one day you can help me (direct reciprocity), or someone else in society can help me (indirect reciprocity). However, large-scale cooperation without any kind of reputational concern, which is commonly seen in human societies, still awaits a more systematic explanation. The supernatural punishment hypothesis might be a good candidate for solving this puzzle.

## Cross-References

- ▶ [Coalitional Relationships](#)
- ▶ [Cooperation in Social Carnivores](#)
- ▶ [Evolution of Cooperation](#)
- ▶ [Psychology of Reciprocal Altruism](#)

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