

## EXPLANATIONS OF GROUP DISPLAY IN HUMANS

Most people are familiar with group displays in non-humans. For example, meerkats will adopt a threat display to scare away predators. Such a group-based display is advantageous to each of the individuals that make up the group. In humans, 'group display' can be defined as "*the coming together of like-minded individuals for the same purpose*". Evolutionary psychologists argue that some of the group-based displays we see in humans may also serve an important *adaptive* purpose for the individuals within the group.

Two forms of group display in humans are **cultural rituals** and **religious rituals**. These rituals take many forms. However, what is interesting about some of them is the torturous and terrifying form they take. **Henrich (2009)** calls these extreme displays **credibility enhancing displays (CREDs)**.

For example, during a religious festival called *Ashura*, Shia Muslims practice a form of *self-inflicted* violence called *self-flagellation*. This festival commemorates the martyrdom of a grandson of the prophet Mohammad. Some followers symbolically recreate the grandson's suffering by self-flagellating with chains and knives, or cutting their foreheads until blood streams down the body.



Other extreme rituals include the initiation and marriage rituals of the Ilahita Arapesh, the stinging ant ritual, the sun dance ritual, and the Hindu pilgrimage to Sabari Malai.

According to evolutionary psychologists, these kinds of displays have *evolved*. However, extreme displays such as those identified above appear

to contradict the principles of natural selection since they are (if anything) maladaptive. The only way that these kinds of display could be an adaptive strategy is if they were in some way advantageous. One advantage is that they manage to solve common problems that all groups face.

One problem that all groups face is dealing with **free-riders**, that is, people who take all the advantages group membership offers but contribute nothing in return. According to **Sosis (2006)**, *one explanation* for the evolution of cultural and religious displays of self-inflicted violence is that they act as a deterrent to anyone who wants to join a group simply to take advantage of the benefit it offers.

A second problem that groups face is that of having members who are **committed** to the group and all that it stands for, since people who are committed to a group are much more likely to be **co-operative** with other group members. Therefore, *a second explanation* for the evolution of these kinds of cultural and religious is that they indicate commitment, and increase the likelihood of co-operation.

Consider, for example, martyrdom, which demonstrates the ultimate level of commitment to a group. According to **Atran (2003)**, the adaptive benefit of martyrdom is that it signals commitment to a cause to other group members. As a result, more moderate members are likely to signal their commitment by becoming radical. The consequence of this is that the group grows stronger because of the increased commitment of all its members.

One interesting observation about many group displays is that they are performed by men. In the nineteenth century, Charles Darwin pointed out that it is females who sexually select males in non-human species rather than the other way round. According to evolutionary psychologists, a *third explanation* for the evolution of these kinds of rituals is that they could also signal male reproductive fitness.

Consider, for example, the peacock. Peahens favour peacocks with brightly coloured and lengthy plumage. However, bright colours and long plumage is a 'costly signal' because it makes such a peacock a seemingly easy target for predators. (**Zahavi, 1975**, calls it a 'handicap'). Yet despite this handicap, the peacock has managed to survive. What he is actually signaling is this: "Look at me. Despite this enormous handicap I

have, here I am displaying it to you. I have managed to survive despite this handicap, and so I must be a 'high quality' male who is worth mating with." Zahavi calls this '*the handicap principle*'.



Extreme cultural and religious rituals may also be signaling this, as well as signaling commitment and deterring free-riders. For example, Haredim Jews have thick beards, and wear long black coats and heavy hats. This is fine in Winter, but not in the heat of an Israeli summer. Yet they spend their days sweating as they sing praises to God in the desert sun. The 'qualities' that these men are signaling is their level of commitment to the group and their reproductive fitness to potential mates. Such a display is also likely to deter somebody who thinks they can free-ride in the group.



Haredim Jews

One way in which groups differ is in terms of *how* individuals signal their membership of and commitment to a group. Some groups have permanent and costly displays of group commitment. These include things like tattoos, scars and incisions. Other groups have temporary and less costly displays of commitment, including things like body painting and ingesting toxic substances.

**Sosis et al (2005)** found that the type of group commitment display is correlated with the nature of warfare that is common in a society. Some societies predominantly engage in **external warfare**, that is, they fight wars against other societies. Here, it is necessary for the group to unite unrelated men into as large a combat group as possible. One way of ensuring commitment and minimise the possibility of men absconding to another group would be to have permanent and costly displays. This is exactly what Sosis found - permanent 'badges' of group membership *are* more common in these societies.



Scarification - a permanent indication of group membership

In other societies, **internal warfare** is more common, and these groups continually break up and fuse - somebody who is an ally one day may be an enemy the next. Sosis found that in these groups, men only engage in temporary displays of commitment. These findings support the idea that costly male ritualistic displays have evolved to promote commitment and solidarity in men who must cooperate at times of war.



Body painting - a temporary indication of group membership

Although evolutionary explanations can apparently explain the nature of certain group displays, it should be noted that they are **non-falsifiable**. They explain the apparent evolution of some behaviours in elegant and interesting ways, but not ways which can be tested scientifically. In that sense, evolutionary explanations are no different from Freudian explanations. Evolutionary explanations are also **reductionist**, and try to explain a complex behaviour in terms of a gene(s) that had an adaptive benefit in the past.

It should also be noted that some aggressive behaviours associated with certain rituals do not seem to have any adaptive function (e.g. killing your own children). Evolutionary explanations cannot explain these instances of aggression, nor can they explain **cultural differences** in the expression of aggression (unless it is assumed that different selection pressures operated on different cultures).