Spite is the flipside of brotherly love

By Tom Rees on Friday, April 09, 2010

The biologist JBS Haldane famously said that he would lay down his life for two brothers... or eight cousins. That's kinship altruism - the idea that it makes evolutionary sense to sacrifice yourself to benefit close relatives (who share a lot of your genes). But there's another side to kinship altruism, as described by two Oxford University biologists, Stuart West and Andy Gardner, in a recent paper in Science.

They point out that spiteful behaviour - acting cruelly for no gain to yourself - actually makes sense (in certain circumstances) for the same reason kinship altruism does. If your relatives benefit from your spiteful behaviour (or even if the target of your spite is less related to you than the average stranger) then then your genes could benefit.

In fact, from an evolutionary perspective, spite and kinship altruism are the same thing (they're both explained in mathematical terms using 'Hamilton's Rule').

Now, West & Gardner don't mention religion, but this fact has interesting implications. As the anthropologist Lyle Steadman has pointed out, almost all the world's religions use kinship terms (mother, father, brother, sister) to refer to their co-religionists.

The idea is that religion helps to stabilise large societies by subverting our intuitive kinship altruism and extending it to non-relatives. Which is all well and good for co-religionists, but the downside is that people of a different religion then become emphatically non-kin (failing both real and religious kinship criteria).

Which might help to explain the spiteful actions that often occur between followers of different gods.

West and Gardner also discuss so-called 'green beards'. This refers to genes (or gene-complexes) that code for an altruistic trait and also for a signal. Dawkins coined the term to describe the hypothetical case of a gene that simultaneously codes for the green beard itself and also for co-operative behaviour towards fellow green beards.

It's been suggested that just such a linkage could explain the rise of religion - if religious displays are a reliable guide to honest behaviour.

However, West & Gardner put the kybosh on that idea. Green beards are unlikely to be relevant to human evolution, because personality traits are complex and not due to genes that could also code for a visible signal:

Some models for altruism in humans and social insects implicitly invoke greenbeard mechanisms without realizing this, such as the suggestion that altruistic individuals differ from individuals who are not altruistic in some observable characteristic [such as being more likely to smile and laugh] or models of "strong reciprocity" that assume punishment and altruism to be genetically linked. However, there is no reason to suspect that traits such as smiling or punishment will be encoded by the same gene or closely linked genes as those that lead to altruism. Consequently, falsebeards could arise, and these proposed explanations for altruism would not be evolutionarily stable.

Epiphenom: Spite is the flipside of brotherly love

And finally... I actually learned about this article from a Christian blogger, who picked up on one sentence about how kinship altruism can lead to a particular kind of social behaviour. He says the authors:

...point out that "strict lifetime monogamy, in which females only mate with one male in their entire life, is crucial for the evolution of eusociality." This provides a very natural scientific basis for understanding the critical importance of "thou shall not commit adultery"

Now, this is very funny when you know that 'eusocial' is a very specific term used to describe the kind of society exemplified by honey bees - one dominant queen, with a slavish workforce comprising her sterile daughters. It sounds like adultery is the only way to save us from a bleak future!

I don't think the blogger is actually hoping for a bible-based eusocial future for humans. Most likely he simply doesn't realise what eusocial means - hard to believe when the paper illustrates it with pictures of termites and sterile worker shrimps!


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Labels: Causes of religion - evolution, Causes of religion - psychological

6 COMMENTS:

Razib said...

minor correction, the quote is from haldane, not hamilton. here's a cite:

http://books.google.com/books?id=_VCnI02FwHAC&dq=haldane%20cousins%20brothers%20life&pg=PA262&v=onepage&q&f=false

SATURDAY, APRIL 10, 2010 1:59:00 AM

alias Edmund said...

I read this from your selfpresentation and got interested about methodological question:

"I want to know why some people believe in gods, and what the psychological and social consequences of those beliefs are."

So what kind of methods are propiriate to investigate this kind of questions?

What kind of answers these methods can produce?

What kind of answer would be enough? When do you know: now I have the answer and I dont have to investigate this anymore?

SATURDAY, APRIL 10, 2010 8:06:00 PM

Tom Rees said...

Haldane! Looking at his wiki bio, it looks like he's the source of quite a few cool quotes I've heard, but miss attributed. Anyway, my fact checker has been taken out and shot.

SATURDAY, APRIL 10, 2010 9:03:00 PM

@alias Edmund: yes, all good questions. I wish I had good answers. Cultural effects are profound...

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people in particular situations or environments and assess how they react, and observational studies - often of large surveys or other data.

I doubt there will ever be a final answer. While there is a broad picture, which gets better and better defined, there are many nuances - what is religion, how do individuals differ, etc etc. Enough to keep me busy for the next few decades at least!

SATURDAY, APRIL 10, 2010 9:06:00 PM

alias Edmund said...

Thank you for your answer!

Are you also interested in studying how secular thinking affects society etc.? This kind of question suggests that we have first some beliefs and then we affect our social environment. But we have also been affected from our childhood. Should we use some comparative methods here to study different cultures on countries?

Im asking this kind of methodological questions because I think that the answers depend on methodology. If we think that there will never be answer big enough its because our methodology is built that way. Scientific methods tries to be rational so the answers are also rational. But how many of any human beings actions are rational? So what kind of methodology would give holistic answers to satisfy the whole person of an individual?

Much depend on concepts also. How to define “religion”? Personally I would like to emphasize individual religious experiences. There is also much more but we should look at the hart of religion to study why-questions.

SUNDAY, APRIL 11, 2010 9:54:00 PM

Tom Rees said...

@alias Edmund: yes, all good questions. I wish I had good answers. Cultural effects are profound and difficult to disentangle, and I’ve written about this several times (e.g. here). But then there is the added challenge that human culture is not constant - results from 20 years ago do not necessarily apply today.

Science inevitably has to proceed in a piecemeal, reductionist way, with a view to trying to recombine the pieces to get a holistic answer. Which is why I'm interested both in interventional psychology and in observational sociology.

However, on the plus side, although humans are not rational, they are often predictably irrational.

As to how to define religion: well, that’s another chestnut. I have seen some really good definitions recently (perhaps I should blog some of them) but at the end of the day it’s clear that ‘religion’ is an umbrella term to cover a lot of different things, not all of which are present in every culture.

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