

'Just-so' stories of sex and family life

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According to Richard Dawkins' selfish gene theory, our genes drive our behaviour to maximize their survival. Human males, for example, are said to have a natural tendency to be promiscuous (e.g. via rape or plain old infidelity) because this spreads their genes around and maximizes their evolutionary success.¹ Females are said to be much less promiscuous, preferring a long-term 'protector', because of the relatively greater 'cost' of bearing children. Males are seen as enticing females into copulation by courtship, gifts, etc. Males are generally seen as 'fly-by-nighters', because of their genes. Steven Pinker, MIT psychologist, (re-)stated these sorts of scenarios in *How the Mind Works*.²

However, the males of certain species are not at all promiscuous. The female Zeus bug (a water skater on the East coast of Australia) has a special depression on her back for carrying the smaller male around with her.³ She feeds the male from a special wax-secreting gland on the back of the neck. The male, half the size of the female, rides on the back of the female, mating for up to a week, being fed while ever he remains on her back. She can lay fertile eggs for up to two weeks following a mating. So why this generosity to the male, and a reversal of the (supposedly) stereotypical male/female roles?

Mark Elgar, University of Melbourne, explains:

'A constant stream of suitors wanting to participate in a polygamous free-for-all could possibly lead to greater harassment, leading to the female expending more energy and placing herself at greater risk of harm than if she doted on just one male ... while it seems he may be putting his eggs in one basket by remaining faithful, by doing so he is ensuring that his sperm rather

than his rival's sperm is being used.'

So on the one hand male promiscuity is 'explained' by the selfish gene idea, but male fidelity is also 'explained' by the same selfish gene idea. What is the moral of these stories? Whatever the male and female mating behaviour might be, 'evolution' can 'explain' it—even situations that contradict each other!

But not even all 'higher' animals exhibit male promiscuity. Many bird species mate for life. And of course many human males remain true to one spouse for life ('till death us do part').

Examples of woolly thinking abound in sociobiology (the analysis of social behaviour in evolutionary terms). Advocates of the 'selfish gene' hypothesis predicted that step-parents would be less devoted to child rearing than biological parents (because the parents would not be so devoted to children that did not share their genes). Not so. A comparison of parenting of children conceived naturally with those conceived through invitrofertilization (IVF) or donor insemination (DI) showed that the quality of parenting with IVF and DI exceeded that in well-functioning families arising from natural conception.⁴

Similar evolutionary 'kinship' theories also fail to explain cooperation within related social groups. Here, the 'choice' of a member of a family or colony not to breed, but to help siblings breed, is attributed to the result that half the genes of the non-breeder survive via the sibling breeding. This theory supposedly explains eusocial species—where a colony is organized like a honey-bee or ant colony with a single 'queen' and several males breeding and the rest of the colony caring for the young, 'choosing' not to breed for the benefit of the colony.

But the naked mole rat and Damaraland mole rat (which is hairy) are closely related eusocial species which



Photo by Andy Robertson

contradict this theory. Eusocial behaviour—like that of termites and ants—is found in very few mammals, and in itself is a puzzle for natural selection.⁵ With the naked mole rat, the colony is a virtual clone, so helping raise siblings ensures one's own genes survive. And so the evolutionist happily reasons from kinship theory for the maintenance of such eusocial behaviour. However, the Damaraland mole rat colony is much more genetically diverse. The colony seems to prefer a replacement queen from somewhere else if their queen dies.⁵

There is obviously more to sex and family life than selfish gene concepts can account for.

References

1. Thornhill, R. and Palmer, C.T., *Natural History of Rape: Biological Bases of Sexual Coercion*, MIT Press, Cambridge, MA, 2000.
2. Pinker, S., *How the Mind Works*, Allen Lane: The Penguin Press, London, 1997.
3. Anon., The way to Zeus' sperm is through his stomach, *Australasian Science* **24**(8):13, 2003.
4. Golombok, S., Cook, R., Bish, A. and Murray, C., Families created by the new reproductive technologies: quality of parenting and social and emotional development of the children, *Child Development* **64**(2):285–298, 1995.
5. Holloway, M., Socializing with non-naked mole rats, *Scientific American* **272**(1):11, 1995.