

Rat and ant rescues 'don't show empathy'

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Ant rescues aren't evidence that individuals understand another's feelings. Photo: L Gomes Moreira

(Phys.org) -- Studies of how rats and ants rescue other members of their species do not prove that animals other than humans have empathy, according to a team led by Oxford University scientists.

[Empathy](#) - recognising and sharing feelings experienced by another individual - is a key human trait and to understand its evolution numerous studies have looked for evidence of it in non-human animals.

The ability to rescue another individual in distress, a typical empathic response of humans, appears in several other [animals](#). Two recent laboratory studies led by US and French researchers looked at how [rats](#) and [ants](#) will attempt to free individuals of the same species they share a cage or nest with which have been restrained. However, writing in the Royal Society journal *Biology Letters*, the Oxford-led team argues that such studies are not rigorous enough to separate examples of 'pro-social' behaviour, the tendency to behave so as to benefit another individual, from genuine empathy.

'Empathy has been proposed as the motivation behind the sort of 'pro-social' rescue behaviour in which one individual tries to free another,' said Professor Alex Kacelnik of Oxford University's

Department of Zoology, lead author of the article, 'however, the reproductive benefits of this kind of behaviour are relatively well understood as, in nature, they are helping individuals to which they are likely to be genetically related or whose survival is otherwise beneficial to the actor.

'To prove empathy any experiment must show an individual understands another's feelings and is driven by the psychological goal of improving another's wellbeing. Our view is that, so far, there is no proof of this outside of humans.'

The team highlights how interpretations of pro-social behaviour vary - rat rescues, for instance, are regarded as being motivated by empathy whilst ant rescues are not - even though the observed behaviour (pulling on the legs or tail of the trapped individual, followed by biting at the restraint) are very similar.

In order to prove empathy any experiment would need to show that [individuals](#) changed their response if the circumstances changed; for instance moving away from a trapped individual if that reduced the trapped animal's distress. It would also need to disentangle empathy from acting simply to stop the trapped animal's stress signals - something that can be psychologically selfish and does not need to involve empathy.

Solving the riddle of empathy would have important implications not just for the sciences but for philosophy and ethics. However, the team concludes scientists will have to come up with new, more rigorous studies to show that empathy exists outside of humans.

The article, entitled 'Pro-sociality without empathy' is published in the Royal Society journal *Biology Letters*.

Provided by Oxford University

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