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Wednesday, March 30, 2011

Kin Selection: Nowak vs the world

So, if you're an evolutionary biologist, or really if you follow the biology literature at all, you have probably heard about the paper published last fall in Nature by Martin Nowak, Corina Tarnita, and E. O. Wilson. The paper claims that all theories based on kin selection and inclusive fitness are fundamentally flawed and unsupported by any empirical evidence.

Recently, responses to the paper were published in Nature, and the original article has been criticized on a number of counts. The controversy sparked by the paper has been covered journalistically by [Carl Zimmer](#) (and others, I'm sure).

I'll just say that I am not really sure what the authors of the original article were hoping to accomplish. From my read, the article seems to reveal a rather disturbing lack of familiarity with a huge body of scientific literature from the past few decades. Either that, or it represents a rather disturbingly disingenuous attempt to misrepresent that huge body of scientific literature. I'm sure that there are other possible explanations, but I'm not coming up with them off the top of my head.

I also don't know what the editors at Nature were thinking when they published this paper. Or, rather, I have some personal theories as to what they were thinking, which I am afraid do not reflect well on their competence, professionalism, or honesty.

In the interests of full disclosure, I should say that I tend to side with the critics of the paper.

Anyway, there has already been a lot written about this subject, so I won't write more. Rather, I thought that I would dramatize the situation using a few quotes and paraphrases from the debate, as well as my own opinions.

I hope that this is obvious, but just in case it is not, please keep in mind that the video is presented primarily for entertainment purposes. I have made an honest attempt to portray the spirit of the arguments accurately. However, let's just say that it is possible that some of the nuance may have been lost.

For another thing, I have lumped together various criticisms, which has no doubt done some violence to the arguments that have been put forward. If you're interested in the topic, I strongly encourage you to read the original article and the published responses. Citations and links are provided at the end of the post.

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About the Blauthor



Jon Wilkins

Jon is a Professor at the Santa Fe Institute, where he studies

theoretical evolutionary biology. He is also a poet, and his book, *Transistor Rodeo*, was recently published by the University of Utah Press. You should buy it.

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Sources used include:

The original article:

Nowak, M., Tarnita, C., & Wilson, E. (2010). The evolution of eusociality *Nature*, 466 (7310), 1057-1062 DOI: [10.1038/nature09205](https://doi.org/10.1038/nature09205)

Responses in blog form:

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Published responses in nature:

Abbot, P., Abe, J., Alcock, J., Alizon, S., Alpedrinha, J., Andersson, M., Andre, J., van Baalen, M., Balloux, F., Balshine, S., Barton, N., Beukeboom, L., Biernaskie, J., Bilde, T., Borgia, G., Breed, M., Brown, S., Bshary, R., Buckling, A., Burley, N., Burton-Chellew, M., Cant, M., Chapuisat, M., Charnov, E., Clutton-Brock, T., Cockburn, A., Cole, B., Colegrave, N., Cosmides, L., Couzin, I., Coyne, J., Creel, S., Crespi, B., Curry, R., Dall, S., Day, T., Dickinson, J., Dugatkin, L., Mouden, C., Emlen, S., Evans, J., Ferriere, R., Field, J., Foitzik, S., Foster, K., Foster, W., Fox, C., Gadau, J., Gandon, S., Gardner, A., Gardner, M., Getty, T., Goodisman, M., Grafen, A., Grosberg, R., Grozinger, C., Gouyon, P., Gwynne, D., Harvey, P., Hatchwell, B., Heinze, J., Helantera, H., Helms, K., Hill, K., Jiricny, N., Johnstone, R., Kacelnik, A., Kiers, E., Kokko, H., Komdeur, J., Korb, J., Kronauer, D., Kümmerli, R., Lehmann, L., Linksvayer, T., Lion, S., Lyon, B., Marshall, J., McElreath, R., Michalakis, Y., Michod, R., Mock, D., Monnin, T., Montgomerie, R., Moore, A., Mueller, U., Noë, R., Okasha, S., Pamilo, P., Parker, G., Pedersen, J., Pen, I., Pfennig, D., Queller, D., Rankin, D., Reece, S., Reeve, H., Reuter, M., Roberts, G., Robson, S., Roze, D., Rousset, F., Rueppell, O., Sachs, J., Santorelli, L., Schmid-Hempel, P., Schwarz, M., Scott-Phillips, T., Shellmann-Sherman, J., Sherman, P., Shuker, D., Smith, J., Spagna, J., Strassmann, B., Suarez, A., Sundström, L., Taborsky, M., Taylor, P., Thompson, G., Tooby, J., Tsutsui, N., Tsuji, K., Turillazzi, S., Úbeda, F., Vargo, E., Voelkl, B., Wenseleers, T., West, S., West-Eberhard, M., Westneat, D., Wiernasz, D., Wild, G., Wrangham, R., Young, A., Zeh, D., Zeh, J., & Zink, A. (2011). Inclusive fitness theory and eusociality *Nature*, 471 (7339) DOI: [10.1038/nature09831](https://doi.org/10.1038/nature09831)

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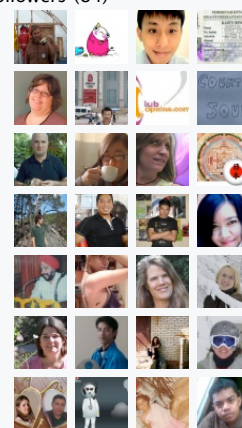
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Herre, E., & Wcislo, W. (2011). In defence of inclusive fitness theory *Nature*, 471 (7339) DOI: [10.1038/nature09835](#)

And the response by Nowak et al.

Nowak, M., Tarnita, C., & Wilson, E. (2011). Nowak et al. reply *Nature*, 471 (7339) DOI: [10.1038/nature09836](#)

Posted by Jon Wilkins at 6:09 PM



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