We fear that future economic and political 'selection forces' upon universities will further push academic roles towards the extremes of our triangle (i.e. towards role specialisation). For example, Mervis [6] recently highlighted that US universities will be (or already are) under increasing economic pressure, with shrinking support from government and private or industrial sources, a situation aggravated by increased running costs.

Previously, teaching and research were always considered as symbiotic, with many key individuals found in the centre of the triangle (Figure 1). We believe that teaching is informed by research, whereas research gains clarity from the expectation to interact and explain the basic principles to bright young minds. Universities therefore surely need a broad range of interacting academic strategies and cultures to maintain system resilience and long-term survival chances for all. Similar to ecosystems, universities might now be completely unforgiving of failure at any level, but they surely they cannot survive without diversity.

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Letters

Recent developments in sociobiology and the scientific method

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You might have noticed that a recent high profile paper on Inclusive Fitness Theory (IFT), presented in the journal *Nature*, has lead to an enormous and emotional response in sociobiology [1]. The authors, Martin Nowak, Corina Tarnita and Ed Wilson, state that Bill Hamilton's (and the majority of subsequent researchers') paradigm of how altruistic behaviors and eusocial societies evolve is unproductive [1]. The reaction to the publication has been vocal and polarizing, leading to camps of opinions. The Internet with its on-line magazines, blogs and instant comment features for readers, has fuelled the divisive feelings, but these have also been expressed at more traditional venues such as conferences, journal clubs and the corridors and lunchrooms of many university departments. You yourself might have a strong view on this. Or perhaps your research is distant from IFT and therefore you are puzzled by all the hype. This Letter is neither for, nor against, the claims in the Nowak *et al.* paper [1], but rather uses its publication and the tremendous response to throw a spotlight on the manner in which we carry out evolutionary biology today. This episode, whatever the scientific outcome, offers an opportunity for self-reflection.

Reflection is necessary because we currently give far too much weight to celebrity status, impact factors and instant commentary. Here I am not interested if this was or was not always the case (although surely the information age compounds it). Rather I ask that since this is the way we are now, how can we ameliorate the negativity associated with this divisive trinity? Principal among the negative aspects is how we assimilate scientific arguments on complex questions such as altruism. Biologists who either do not work on IFT or are just entering the IFT field need time to assess the evidence on the proposed new approach. A heated exchange among celebrities is harmful because it pressurizes one to take sides quickly rather than after an earnest evaluation. Quite often the side you come down upon is more a reflection of your view of the celebrities' prestige than the underlying argument.

My qualifications for daring to suppose that my view on the *zeitgeist* of sociobiology might be in anyway useful are three. Firstly, as a young biologist I was deeply fortunate to have had Bill Hamilton as a supervisor [2]. Secondly, following this I studied as a post-doctoral researcher at what is probably the best concentration of sociobiological researchers currently active (Koos Boomsma's *Centre for Social Evolution*, Copenhagen). Finally, I recently enjoyed 18 months at Harvard University during the development of the recent *Nature* paper where I engaged extensively with all three of the authors. I have in addition spoken with many of the opponents from both sides.

How best to understand this debate? First, read the paper and the 47 page supplementary material. Also read the positive and negative replies and E.O. Wilson's previous views on kin selection, some of which have been shown to be right while others have been proved wrong [3–5].

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Read what is cited by those who are for and against a certain view. All of these will place you in the best position to discuss amongst your peers in journal clubs. When discussing this topic, or any other, be ruthless in a quest for precise language. The reason why polarization is possible is because those who are not directly involved are unable to pin down members on either side and ask them to precisely define their position. Having publically (at conferences) and privately questioned both the authors and opponents, I know that these celebrities on both sides are willing to patiently explain their position. However, because it is difficult to raise hard questions with high profile celebrities we are typically left to discuss the validity and significance of the suggested new approach amongst ourselves. Earnest discussions on difficult topics in biology departments and on conference circuits are oftentimes less than ideal.

This leads to another problem we have. Our society lacks a culture of respectful debate so that it has become difficult to demand clarity on issues of importance because of perceived aggression. It seems gladiatorial to ask a difficult question, whether at a conference, seminar or a journal club, but how else can we resolve important issues? Leaving it to comment boxes on blogs is not the way forward. Respectful debating is especially needed now that biology is so large and diverse: we are all ignorant, only on different topics. Eroding this ignorance requires the respectful exchange of information. Lest you confuse my stance with a latter-day Socrates, let me assure you that I am as guilty as anyone in erring: sometimes when I aim for the mind of another I miss and only reach the jugular.

A related problem is that much of the debate that we do have really comes down to the expression of opinions. These can, and often do, reflect the truth but at other times they are just opinions. Because science is evidentiary we do ourselves a disservice by not pushing the data forward. I know that it has become difficult to grasp the meaning of certain data as the standard of both data collection and analysis has risen very sharply. That is why thoughtful and earnest discussions are required. The goal of both parties should be to clearly explain the facts and the ways in which those facts have been collected, however torturous that may be.

A final problem is publishing. As a society we should explicitly recognize that high impact journals publish controversial work and that getting published in these journals can be heavily influenced by the celebrity status of the authors. That is not to say the journal is bad but we should just recognize the playing field we are on. We should also recognize that while Nowak, Tarnita and Wilson are all scientists of high caliber and profile, they could, of course, be wrong and their vocal detractors with equally impressive CVs could be correct. Or vice versa. However, to decide this you, dear colleague, need to read the paper and question, question, question. We as a community need to experiment, experiment, experiment so as to make available the data that a forward-moving, integrative biology needs. (This of course requires that we increase the rate at which we publish negative results as well). The decisions on such great issues of the day cannot be derived from sound bites in on-line magazines manipulated by sensationalist journalists whose industry thrives on polarization [6,7]. Nor should our view be the recycled opinion of a celebrity. As idealistic as it sounds, do please be part of a movement to build a society where what is important is the content of the research, the quality of the evidence and the originality and validity of the ideas and not the venue of publication or the celebrity status of the researchers.

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Letters

'Linguistic injustice' is not black and white

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We agree with Clavero [1] that the English language monopolises science dissemination. However, there is no sharp line between being a 'native English speaker' (NES) or not (i.e. a 'non-native English speaker'; NoNES) and we observe a range of intermediate possibilities. Similar to many others, we see the simple polarising dichotomy as counterproductive [2], especially in the context of globalization [3]. We also disagree with Clavero that 'linguistic injustice' against an author's mother tongue has a major role in the probability of having a paper accepted in

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