

Re: Hamilton's Rule is Xeno's Paradox (was Re: Underestimating 'r')

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- *From:* an588@xxxxxxxxxxxxxxxxxxxxxx (Catherine Woodgold)
 - *Date:* Tue, 18 Oct 2005 11:52:59 -0400 (EDT)
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"John Edser" (edser@xxxxxxxxxx) writes:

- > If you follow classical population genetics procedures and work out the gene
- > freq. changes using the Hardy-Weinberg Equilibrium Model which employed a
- > bi-nomial expansion of alleles at separate loci it will provide the answer
- > that AB will tend to increase.

....

- > MAIN PROPOSITION:
- > I claim that any relative increase in AB by altruism using HR is just a
- > mathematical illusion which has no basis in empirical reality.
- > Conclusion:
- > Since AB alleles only increase on just a relative basis no empirical way
- > exists to explain WHY they are increasing just HOW they are increasing which
- > of course is insufficient. Therefore it can be validly argued within HR that
- > Hamilton's alleles increase because of altruistic action OR selfish action
- > by the actor where no way exists to empirically discriminate between them
- > within HR.

....

I asked the question in order to try to understand what you were trying to say. Perhaps we've made a little progress, but I'm still not sure.

Would it be fair to say that your position is as follows?

The proposition that in the example I provided, the genes A and B tend to increase and a and b tend to die out, but that Hamilton's rule does not explain why they do this.

- > MY SECONDARY PROPOSITION: r is empirically r^e where $r > 1$.

When you said this earlier, I thought you meant that A and B would not increase in the example I gave, (since in that example, A and B committed the action when $rb > c$ but $r^2b < c$). Apparently that is not what you meant.

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What do you mean, then? In the statement "r is empirically r^e ", what is the definition of "r", and do the two symbols "r" represent the same thing as each other? If not, could you use two different symbols and give clear definitions of each, then restate your proposition?

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Cathy Woodgold

http://www.ncf.ca/~an588/par_home.html

We are all Iraqis now.

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• **References:**

- ◆ ***Hamilton's Rule is Xeno's Paradox (was Re: Underestimating 'r')***
◇ From: John Edser

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