

Re: Group selected altruism – (was: Hamilton's rule)

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- *From:* Guy Hoelzer <hoelzer@xxxxxxx>
 - *Date:* Mon, 28 Nov 2005 22:50:45 –0500 (EST)
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in article dm2s1n\$2cg6\$1@xxxxxxxxxxxxxxxxxxxxx, Jim McGinn at jimmcginn@xxxxxxxxx wrote on 11/23/05 2:55 PM:

> Guy Hoelzer wrote:

>> in article dlvnf0\$mco\$1@xxxxxxxxxxxxxxxxxxxxx, Jim McGinn at

>> jimmcginn@xxxxxxxxx wrote on 11/22/05 10:19 AM:

>>

>>> All that is necessary for group selection is that there situational factors
>>> that prevent or reduce gene flow between groups, as Catherine described, and
>>> situational factors that cause differential survival/reproduction between
>>> the

>>> groups, as Catherine also described.

>>

>> Jim,

>>

>> I am surprised that you of all people have advocated an unrealistic
>> constraint on the potential for group selection. What difference could it
>> possibly make to group selection to "prevent or reduce gene flow between
>> groups"?

>

> I'm surprised that you're surprised.

>

> Because without it any selective benefits or detriments that
> result from the behavior of a member of a group cannot be
> focussed on the group. IOW, without this assumption groups
> cannot be biological entities; without some kind of relative
> reduction or elimination of gene flow between groups you,
> essentially, can't have group selection. From this we get the
> following rule: one of the prerequisites for group selection is
> that you have some kind of situational factor that causes he
> existence of biological groups by way of reduction or
> elimination of gene flow between groups.

>

[snip comments on human evolution]

>> Isn't that analogous to arguing that it is necessary for

>> individual selection that gene flow between individuals (sex) is prevented

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>> or reduced?

>

> Yes.

>

>> IMHO, gene flow is utterly irrelevant in both instances.

>

> I don't see how this is possible.

I agree with you that boundaries must exist around systems that largely isolate the dynamics of the system if a process is to manifest at the level of the system (e.g., natural selection). However, your position assumes that genetics is the sole conduit of heredity in biological systems. I don't think it is controversial at all to claim that there are other modes of biological inheritance (e.g., epigenetics, cultural inheritance). Even if genetic elements flow in and out of a group without restriction, it remains possible that exchange among groups is restricted with regard to other modes of inheritance. This setting permits a group-level manifestation of natural selection even without a restriction to gene flow.

Guy

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◆ ***Re: Group selected altruism – (was: Hamilton's rule)***

◇ *From:* Jim McGinn

• ***References:***

◆ ***Re: Group selected altruism – (was: Hamilton's rule)***

◇ *From:* Jim McGinn

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