

# The Founder Selection Effect

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Tim Tyler <[seemysig@xxxxxxxxxxxxxxxx](mailto:seemysig@xxxxxxxxxxxxxxxx)> wrote:-

The Founder Selection Effect:

``The founders may represent a non-random sample of the original population. This is very likely to be true when the founders have succeeded in penetrating a challenging barrier which normally acts to prevent migration.

In that case the founders may be individuals with exceptional capabilities – since they penetrated the barrier before any of the other members of their species managed to do so."

–[http://alife.co.uk/essays/the\\_founder\\_selection\\_effect/](http://alife.co.uk/essays/the_founder_selection_effect/)

JE:-

At first glance, the idea that it is possible to produce a "Founder Selection Effect" appears reasonable. However, a closer inspection of Darwinian rationale will show that the situation is more complex.. Founders may indeed require special qualities to be able to enter a new environment. However, these qualities are not selected FOR within the new environment but entirely within the old environment and its surrounds. IOW, whatever qualities founders need to have to be able to enter a new environment are not necessarily a benefit within the new environment. Selection is always operating on any founder but the key question is: from within which environment and what exactly are the fitness implications? This can only be more fully answered by more fully understanding what Darwin proposed.

The Darwinian rationale was and remains predicated on the evolution of isolated-for-just-an-undetermined-amount-of-time, additive in fitness groups, which occupy one particular environment which remains delimited by each group such that only individual fertile, adult forms, which can pass on their genes, can be selected FOR. The Darwinian fitness of each parent within each population is an exact and therefore falsifiable constant total per adult per population: a tally of the total number of adult forms reproduced per parent per population, i.e. within just the one, same environment as delineated by that population. Each parental, independent

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fitness total, which can only exist per the one, same population, are compared by simple default providing the Darwin's non random, monocentric process of natural selection (not to be confused with Wallace's di-centric proposal). The net result is that any adult forms exported to a new environment have to leave their original environment in which they provide one fitness unit for their respective parent/parents fitness total producing a new total within the new environment for the same parents. For example, if a parent has a fitness total of 5 in environment A such that one reproduced adult leaves to found environment B, then the fitness of that parent as a total within A must be reduced by 1 to 4 while the fitness of the same parent in B increases from 0 to 1. IOW it has cost the parent a reduction in total fitness in A in order to provide a new minimal fitness total in B of just 1. This may result in the same parent being selected against in A while being selected for in B. The fitness audit required to make Darwinism falsifiable imposes a very strict rationale on evolutionary theory which can produce non intuitive results.

Regards,

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