



NICHE CONSTRUCTION MODELED IN EVOLUTIONARY TIME

- $O(t)$ is representational of an organism in relation to time.
- $E(t)$ is representational of the environment/ecosystem in which that organism exists, in relation to time.
- The lowercase variables in the O column model the phenotype of that organism. The uppercase letters in the E column model the biotic & abiotic attributes of the environment/ecosystem in which the organism lives.

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- t exhibits an organism that, through preceding processes of natural selection and niche construction, has achieved a certain degree of evolutionary fitness (consider variables that match in columns $O(t)$ with those in columns $E(t)$ as exemplars of optimal fitness).
 - $t+1$ exhibits the process of natural selection (modification in the organism to suit its environment).
 - $t+2$ exhibits the process of positive niche construction (modifications made to the environment by the organism that enhance that organism's fitness).
 - $t+3$ exhibits the process of negative niche construction (modifications made to the environment by the organism that compromise that organism's fitness).
 - $t+4$ again exhibits the process of natural selection. Evolutionary pressure exhibited on the organism in $t+4$ illustrates a selective response to negative niche construction (see $t+3$).
 - Note that there are some environmental factors that don't influence an organism's fitness (i.e. **A, Y**).