



EvoLunch

Inheritance without transmission? â Reconstitution is a hereditary process

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Researchers are confronted with the extragenetic heritability of phenotypes across many subdisciplines of genetics. In such cases, however, it is unclear which processes are responsible for the transgenerational stability of phenotypes. One potential explanation is that similar to the transmission of DNA, other entities, such as histones, RNA, proteins, or whole cells (e.g., microbiota), are also transmitted and causally responsible for parent-offspring similarities. This explanation is in many cases unsatisfactory, though, since most candidate entities do not possess faithful replication and distribution mechanisms similar to DNA. Could such entities nevertheless be units of heredity? I will argue that this is the case, but only if their transmission is not considered a necessary constituent of heredity. Instead, I propose that the reconstitution of traits in subsequent generations makes the transmission of entities obsolete.

Wednesday, March 1, 2023 12:30pm - 01:30pm

I22 Lakeside View (I22.O1.006)



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