Contribution ID: **70** Type: **not specified**

A part-dependent account of biological individuality: why holobionts are individuals and ecosystems simultaneously

Friday 25 September 2020 11:00 (20 minutes)

Given one conception of biological individuality (evolutionary, physiological, etc.), can a holobiont –that is the host + its symbiotic (mutualistic, commensalist and parasitic) microbiome –be simultaneously a biological individual and an ecological community? Herein, we support this possibility by arguing that the notion of biological individuality is part-dependent. In our account, the individuality of a biological ensemble should not only be determined by the conception of biological individuality in use, but also by the biological characteristics of the part of the ensemble under investigation. In the specific case of holobionts, evaluations of their individuality should be made either host-relative or microbe-relative. We support the claim that biological individuality is part-dependent by drawing upon recent empirical evidence regarding the physiology of hosts and microbes, and the recent characterization of the 'demibiont'. Our account shows that contemporary disagreements about the individuality of the holobiont derive from an incorrect understanding of the ontology of biological individuality. We show that collaboration between philosophers and biologists can be very fruitful in attempts to solve some contemporary biological debates.

Authors: Dr SUÁREZ, Javier (Bielefeld University); STENCEL, Adrian (Jagiellonian University)

Presenters: Dr SUÁREZ, Javier (Bielefeld University); STENCEL, Adrian (Jagiellonian University)

Session Classification: Morning Session