

# **BIOlogical Perspectivism and Individualisation (BIOPI)**

## Understanding What a Perspective Is for Organisms, Species, and Ecosystem

Biology is rife with pluralism. Many biological categories (such as organisms, species, ecosystems, etc.) are associated with multiple conceptualisations. The common explanation of this phenomenon is linked to scientific practice: there are so many concepts because different scientific goals require different conceptualizations. This raises a big question: do different concepts of, for example, the organism have something in common that allows them to be grouped under the single term ‘organism’? Recent research suggests that there may be a core assumption retained consistently in different conceptualizations. When scientists ask whether a given biological assembly fulfils the requirements set for a given category, they often take similar perspectives – apparently the same ones – for different definitions. For instance, they ask about the organismality of holobionts by assuming the perspective of the host or of the microbes, regardless of the definition of organism in use. This suggests that such perspectives, since they re-appear in the contexts of different concepts, are more fundamental and independent of the goals pursued by scientists.

The main objective of the present proposal is to elaborate the ontology of biological perspectivism, which will synthesise existing ideas and develop a set of rules and concepts for distinguishing biological perspectives across various biological categories. The project will build upon the intuitions presented in our previous work and also present, but less clearly articulated, in the work of certain scholars. The project will attempt to develop these intuitions into a full-blown ontology: *biological perspectivism*. The concept of perspective has various meanings in philosophy (see Massimi and Casey 2019); here I follow the biological interpretation suggested in our paper, which introduced an outline of the ontology of biological perspectivism (Suárez and Stencel 2020) – *mainly, as a component of a biological assemblage whose perspective we take in order to understand the individuality of the assemblage*. Reference to such perspectives appear in the debate on organisms and ecosystems. However, there is very little current understanding of the foundations of biological perspectivism understood in this way. Key questions remain. What properties must characterise a given component in order to justify its consideration as a perspective? Are there more and less justified perspectives? If so, what justified perspectives can one take in the contexts of species, ecosystems, or organisms?

The project will possess an interdisciplinary character, using methods typical for philosophy but implementing them in the context of biological cases. The leading role will be played by conceptual analysis, accompanied by many additional methods: building of arguments, comparative analysis, narrative literature review, and case study analysis. As the project lies at the intersection of biology and philosophy, the PI will endeavour to create a multi-disciplinary, vibrant environment in order to sustain a flow of ideas between biology and philosophy. This will be accomplished through close collaboration with biologists and through the organisation of multidisciplinary workshops and conferences, along with monthly seminars.