

# Example of resurrecting biological essentialism critical thinking

[Science](#), [Biology](#)



## **Analysis of the Article by Michael Devitt**

The article by Michael Devitt is dedicated to the idea that all the Linnaean taxa have essences, which are guided intrinsic properties, which are mostly genetic. According to the biology philosophers, such theory is wrong and contradicts Darwinism, but in the article the author argues that biological generalizations drawn about the certain properties of species need structural explanation, adverting to the essential properties. In the most widespread approach, thus, the way an organism feels lie in a particular kind is ignored. As a result, Devitt shows how essentialism can integrate the Darwinism features that are associated with change and variation.

Such consensus between the two approaches – essentialist and the one of philosophers of biology is possible due to the evidence presented by the author. First of all, it is explained why members of a species do not share a distinctive set of properties in genetic aspect. In fact, the species can be identified by their history, and in particular, by the historical connection between the members.

The first reason for believing intrinsic biological essentialism is that the properties of essential nature can be found with the help of various genome projects. The nature of species is discovered in the course of the research, which allows the author to claim that there is a certain essential nature in all the species. The next reason is deeper than the first and is based on the people's generalizations made on the basis of different peculiarities of the species. Devitt presents many examples of such generalizations, saying that they demand an explanation – why certain peculiarities are assigned to the given species? From the traditional evolutionary perspective, we can find

reasons leading to the reality that such generalizations are true. But from the essentialist perspective, we should try to find what makes them true. All the explanations that describe such generalizations lead to thinking about a certain nature or essence peculiar to the species.

According to the author, it is always informative to know what species the organism belongs to, and thus the classification can be called the information store. But in fact, it is not only informative, but also explanatory. Thus, when biologists divide organisms on the basis of similarities, they do it, because they believe that such similarities can be explained by the group's intrinsic underlying nature. The first positive argument in defense of the intrinsic biological essentialism is that the structural explanations demand that the kinds have essential intrinsic properties.

After this, the author presents the species concepts currently existing in the science. Such definition of concepts makes essentialism untenable, because the species are all relational. Devitt then shows a crucial distinction that forms a basis of his essentialism defense. It is made between two problems – the essence of being a group under the biological taxa and the essence of being a species, subspecies, etc. Thus, according to this distinction, there are two ways, in which it is possible to answer the question of what is a species. The first is about what it means to be a species actually, and the second – of the nature of any group that can be called a species. Thus, the author draws the second important defense point for the essentialism – that essentialism related to the second approach of definition, while relational species concepts relate to the first.

Influential phylogenetic-cladistic concept (P-CC) is considered. In particular, it

is shown that this concept can give answers in both cases (the approaches to the question answering presented above), but it would still be explanatorily inadequate. Essentialism can use the P-CC view, according to which species are historical entities. But there are certain P-CC aspects, which cannot be agreed with by essentialists. It is the view that when a species has a daughter, it has to go extinct and that it rejects anagenesis.

Devitt also stated that essentialism is not undermined by the general Darwinism features. The third point in the essentialism defense is that it can be perfectly compatible with variation within the species once it is understood that the essence of the species doesn't necessarily need to be tidy and neat. The fourth defense point was that there is a certain indeterminacy in the species, which should be accepted in any of the approaches, as biology faces a sorites issue.

Thus, the article addresses the main objection to the essentialism nature that the author found in the literature. There is always a possibility to find other objections, but the main ones were effectively described and discussed by the author in this article. I believe that the arguments presented are properly chosen and allow the reader to understand the intentions of the author. Thus, it is possible to draw a conclusion that the goals of the article set by the author are reached, which is why it can be called successful and definitely deserves attention.