

# **On the applicability of the identity problem to astrobiology**

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## **ABSTRACT**

We show that the philosophical problem of identity carries over to the definition of life. The identity problem presents a major obstacle for creation of a straightforward definition of life. We superimpose the identity problem to the problem we have previously examined, that of the life forms. We conclude that any definition of life must consider simultaneously these two problems. The definition of life, which we consider, is that life of an individual organism is a sum of its successive life forms, each unique in time and space. The identity of each of the life forms of an individual organism needs to be connected to the identity of the organism. The astrobiological relevance of the identity problem is illustrated on various examples.