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UNITS OF SELECTION

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Units of Selection

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Abstract: This Element introduces the disambiguating project (DP) about the units of selection. By DP, the authors mean the thesis that the expression ‘units of selection’ refers to at least three non-co-extensional functional concepts: interactor, replicator/reproducer/reconstitutor, and manifestor of adaptation/type-1 agent. They present each concept and demonstrate the necessity of their isolation, because each of them responds to a distinct question about the units of selection, and these distinct questions are not always posed in combination in today’s biological research. They further apply the framework to the analysis of the debates concerning the evolutionary transitions in individuality (ETI) and argue that the DP interprets the ETI better than any project rejecting the three meanings of ‘units of selection’. Thus, they claim that the differentiation between at least these three functional concepts is fundamental to clarify some conceptual confusions in biology, which rest on the conflation of these distinct meanings.

Keywords: levels of selection, evolution by natural selection, Darwinian individuality, evolutionary transitions in individuality, kin selection, multilevel selection, adaptationism

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Contents

Introduction	1
1 What Is a Unit of Selection and How Can We Identify It? The Disambiguating and the Unitary Projects	3
2 How the Expression ‘Units of Selection’ Acquired Its Polysemic Meaning or Why the Disambiguating Project Started	10
3 Two Sources of Misunderstanding in Past and Today’s Debates about Units	28
4 The Framework of the Evolutionary Transitions in Individuality: A Challenge to the Disambiguating Project	41
Conclusion	70
Glossary	74
References	76