

# Propositions - Evolution in a Complicated World

by Christoph Netz

1. The rich fabric of nature holds fertile grounds for all kinds of more or less plausible conceptions of reality. This is the beauty and bane of theoretical biology.
2. The coevolution of movement strategies in predators and prey induces an array of spatial patterns and the rapid transition between these patterns. (Chapter 2)
3. The occurrence of kleptoparasitism in a population of foragers radically alters the abundance of resources, the distribution of foragers and the movement strategies that evolve. (Chapter 3)
4. Individual patch choice gives rise to spatial assortment of unequal competitors above and beyond equilibrium expectations. Spatial assortment in turn can drive the emergence and maintenance of different competitive types. (Chapter 4)
5. If offspring depend on their parents, the force of selection increases during early stages of life. This provides an evolutionary rationale for increased mortality rates during early life either via mutation accumulation or antagonistic pleiotropy. (Chapter 5)
6. Individual-based models are powerful tools for understanding evolution, but they can easily lead into confusion if their ingredients are not carefully scrutinized. (Chapter 6 and maybe others?)
7. Evolution can only be properly understood through a balanced appraisal of selection, drift and the mechanisms underlying variation. Models that focus on single traits and adaptive scenarios may give a wrongful and exaggerated impression of the efficacy of natural selection.
8. The merit of scientific work cannot be established without substantial cognitive effort, and in an environment where fewer and fewer scientists make such investments towards the works of others, supposed indicators of quality become increasingly superficial.
9. Science relies on idealism, and idealism needs space to roam free.
10. Madness is rare in individuals - but in groups, parties, nations, and ages it is the rule. (Friedrich Nietzsche, Beyond Good and Evil)