

MODELING PARADIGM SHIFTS IN CULTURAL EVOLUTION

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Cultural transmission is a process of innovation and interaction between individuals that brings about changes in societies. These changes can occur either smoothly and gradually or suddenly and abruptly. Abrupt changes are collective phenomena referred to as ‘paradigm shifts’. Paradigm shifts, as well as some mechanisms responsible for them, have been described in Social Sciences. An example of such mechanisms is the interaction between cultural elements, that is, how the presence of an element facilitates or inhibits the presence of a second one¹. Here, we present a cultural population model, in which we explore how the interaction between cultural elements changes the dynamics of cultural transmission to the extent that it can explain the occurrence of paradigm shifts.

[1] Enquist, M., Ghirlanda, S. and Eriksson, K., 2011 Modelling the evolution and diversity of cumulative culture. *Phil. Trans. R. Soc. B* 366, 412423.