

Games of sexual selection: static and dynamic aspects

Pierre Bernhard*

Pierre.Bernhard@sophia.inria.fr

WEB: www-sop.inria.fr/comore/Personnel/Pierre.Bernhard/

We propose different versions of a model of sexual selection directly inspired by Grafen's models (Grafen 1990a and 1990b). We investigate them within the theory of Games of Signalling. All our models admit closed form solutions for both male and female equilibrium strategies. Our first model shares with Grafen's the unwanted feature that males' quality cannot be allowed to be arbitrarily close to zero. We offer an explanation, different from Grafen's, of this feature, and propose a slightly different model where it does not show up. Going beyond equilibrium strategies, we attempt an analysis in terms of adaptive dynamics, and obtain, inter alia, a new interpretation of the impossibility to let quality range close to zero in the first model.

This is a joint work with Frédéric Hamelin, of Agrocampus Ouest, Rennes, France.

*COMORE, INRIA-Sophia Antipolis-Méditerranée, Domaine de Voluceau, Rocquencourt—BP 105, Bangalore, Cedex, FRANCE.