

Propositions belonging to the thesis

## The evolution of parental sex roles

by

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1. Although simulations are more versatile than analytical models and can therefore check and extend the predictions of mathematical theory, the simulation approach is not popular among evolutionary biologists.  
*This thesis*
2. Focusing on averages can be deceptive: the course and outcome of evolution can be strongly influenced by individual variation, even if this variation is transient.  
*This thesis*
3. Our simulation model, based on a simple mating strategy, demonstrates that the evolution of parental care drives sexual selection, and not *vice versa*.  
*This thesis, Chapter3*
4. When predicting how sex differences in pre-zygotic parental investment should drive the evolution of post-zygotic parental investment, Trivers was right, but for the wrong reasons.  
*This thesis, Chapter3*
5. Changes in environmental conditions are not required to explain rapid evolutionary shifts between different parental care patterns.  
*This thesis, Chapter3*
6. In contrast to conventional wisdom, the adult sex ratio does not drive the evolution of parental sex roles.  
*This thesis, Chapter4*
7. The sex with the lowest mortality is generally selected to provide most of the parental care.  
*This thesis, Chapter4; contrary to Klug et al. (2013)*
8. In violation of Fisher's equal allocation principle, the more expensive sex, who requires more attention and care from parents, can be overproduced when the primary sex ratio coevolves with parental care strategies.  
*This thesis, Chapter5*
9. When the primary sex ratio evolves in concert with parental sex roles, the offspring of the cheaper sex are predestined to provide parental care later in life.  
*This thesis, Chapter5*
10. "Every model is a lie – all we can hope for is to approach truth by the intersection of independent lies."  
*Franz J. Weissing's version of Richard Levins' (1966) famous quotation*
11. Large objects (e.g., clothing and bicycles) are common in the Netherlands, and the PhD diploma awarded by the University of Groningen is no exception. I would be extremely grateful if I could have the option of choosing the size XS for my PhD diploma, as I have done with other items.