

Q1 : If dominants never help subordinates, what is the value of c_d and b_s ?

Q2 : Assume the population has an equal number of dominants and subordinates so that $\sigma = 1 - \sigma$ (ie. turkey lekking pairs). Simplify the model equation given this assumption and the assumption that dominants never help subordinates.

Q3: Which of the following would you infer given these results, and why?

- A) the evolution of eusociality was influenced more by ecological selective pressures on altruism than by relatedness among individuals of a population***
- B) the evolution of eusociality was influenced more by relatedness among individuals of a population than by ecological selective pressures on altruism***

Q4: What behaviors could be modified to support eusocial versus solitary or group lifestyles? And how, at a proximate level, could these modifications be achieved?

Q5: What do these studies imply about the inheritance of altruist and selfish genes/alleles? Are altruist and selfish likely different alleles of the same gene(s)? Or are the two phenotypes likely controlled by different (sets of) genes?