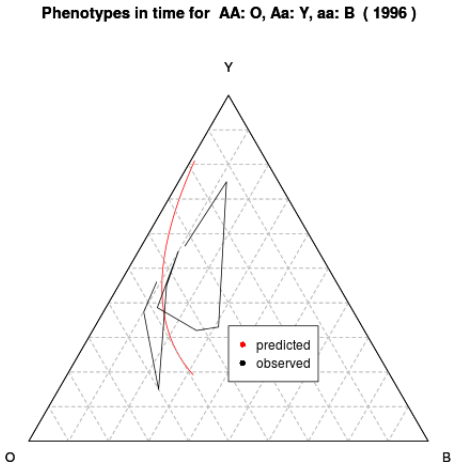
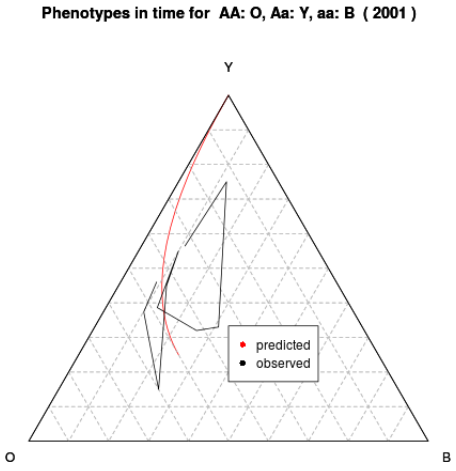
Exercise 2

Payoff matrix of 1996

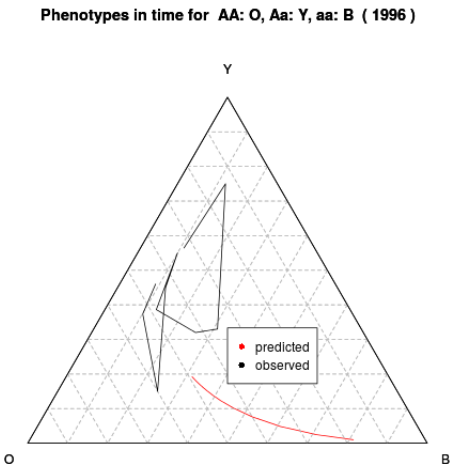
0.1 Function = 1

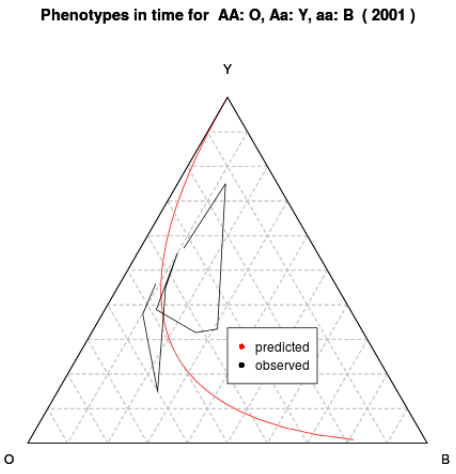
For the 1996 dataset, when the heterozygote corresponds to the yellow phenotype, all three phenotypes will remain in the population. This is independent of the initial frequency of the A allele. For the 2001 dataset, however, the final population will be monomorphous for blue.





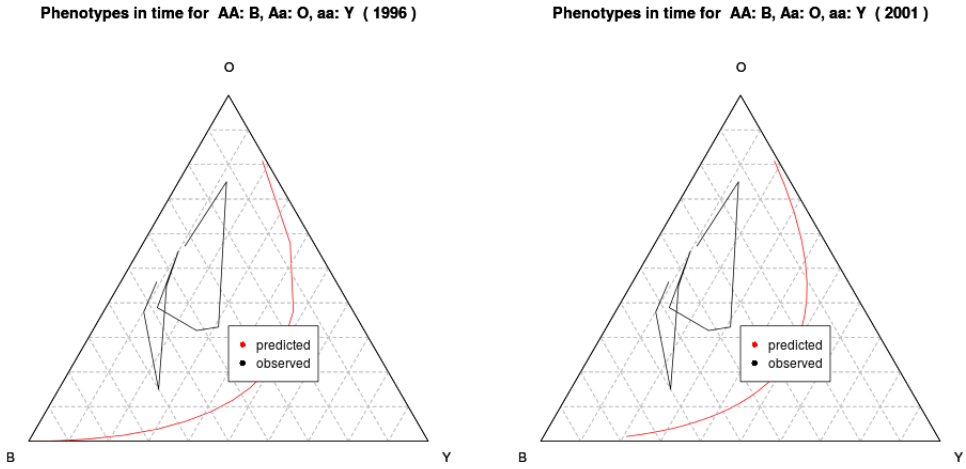
Initial A = 0.9





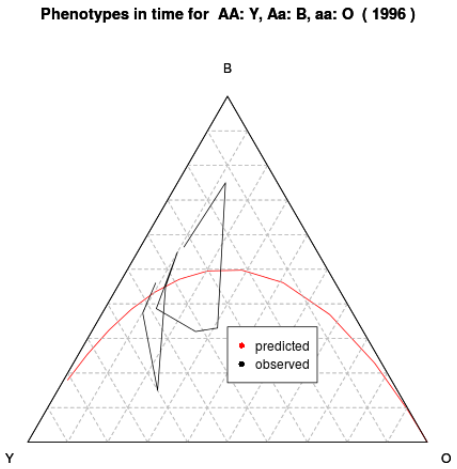
0.2 Function = 2

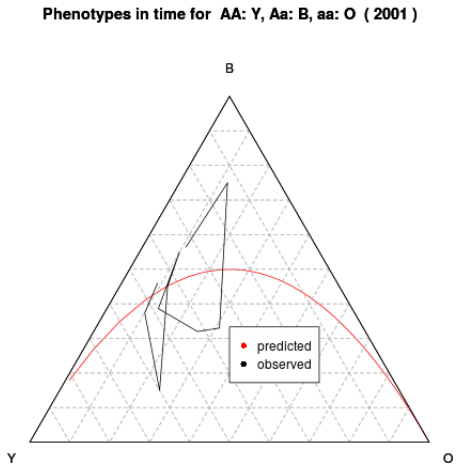
When the heterozygote corresponds to the orangle phenotype, the population will become monomorphous for yellow. This is independent of the initial frequency of the A allele. This behavior is the same for both datasets.



0.3 Function = 3

When the heterozygote corresponds to the blue phenotype, the population will become monomorphous for orange. This is independent of the initial frequency of the A allele. This behavior is the same for both datasets.





Heritabilities

Calculated the heritabilites as Sinervo did