

# Conspicuous consumption and female choice: How sexual selection shaped economic growth

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## Summary

The evolution by sexual selection of the human propensity to engage in conspicuous consumption contributed to the emergence of modern levels of economic growth.

Males who engaged in conspicuous consumption had higher reproductive success than those who did not, as females responded to the costly and honest signal of their underlying characteristics. The prevalence of males in the population who engaged in conspicuous consumption increased, along with the level of economic activities conducted to fund conspicuous consumption. The increased economic activity associated with rising conspicuous consumption provided a basis for modern levels of economic growth.

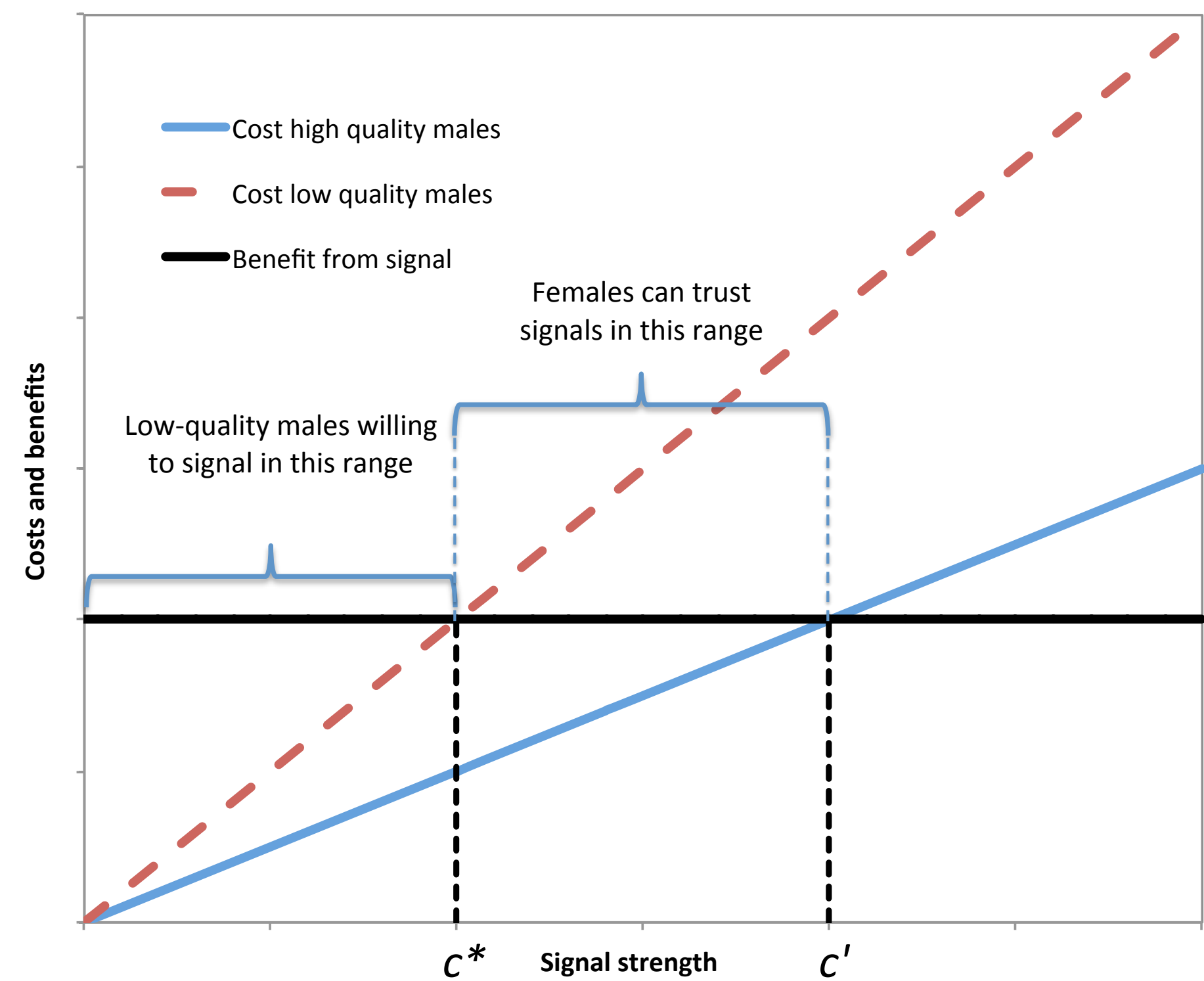
## Concept

Conspicuous consumption is an honest and costly signal to females of a male’s underlying characteristics (Miller 2001).

In this model (building on models by Grafen (1990) and De Fraja (2009)), high-quality males obtain a higher wage for labour (they are more productive). High-quality males can engage in more conspicuous consumption than low-quality males for the same sacrifice of time allocated to subsistence activities that increase survival probability.

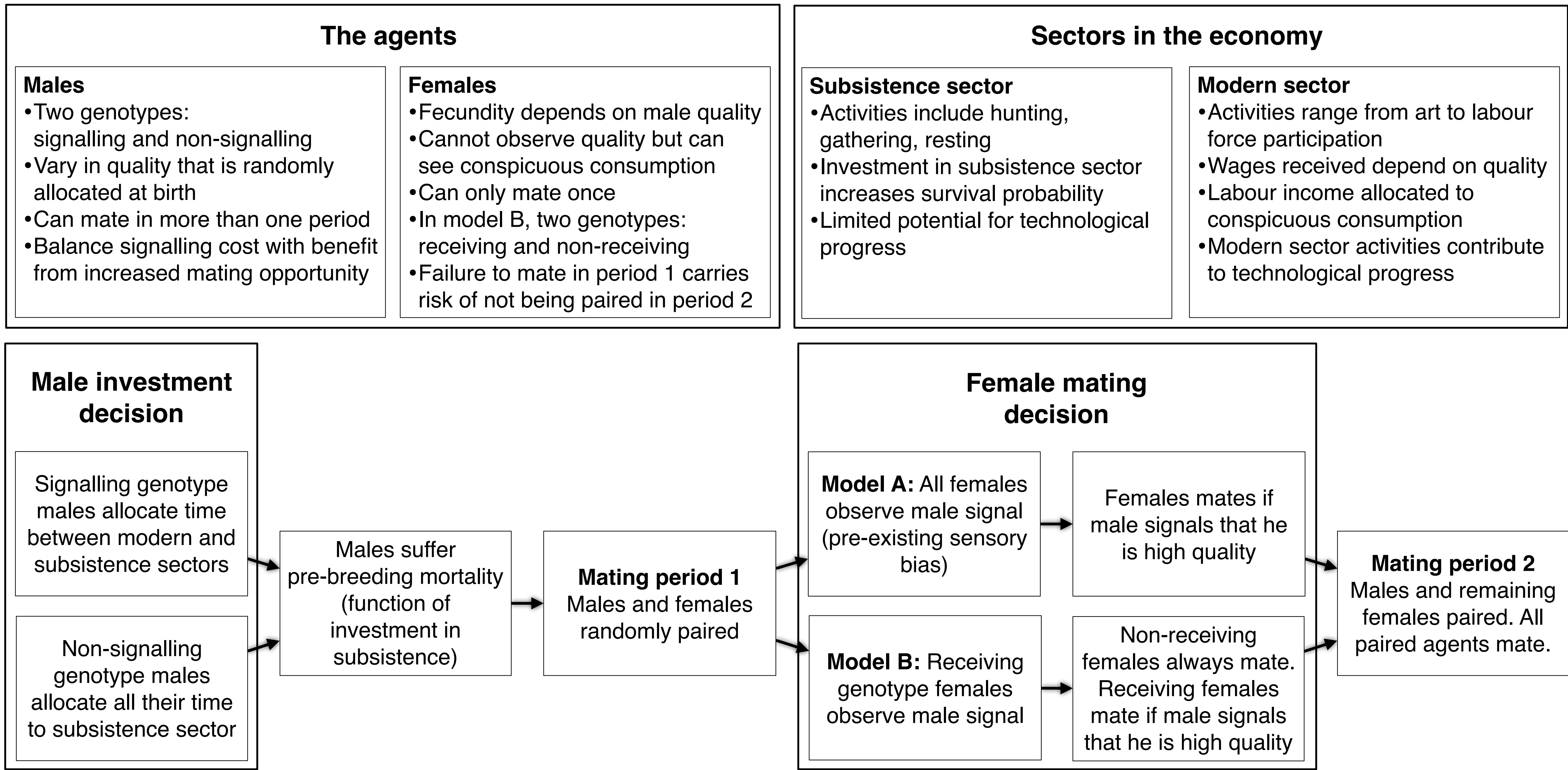
With differential costs to different quality males, there exists a range of conspicuous consumption for which the female can trust that the signaller is of high quality (as in Figure 1). A separating equilibrium exists if the cost of conspicuous consumption for high quality males is outweighed by the benefits from increased mating opportunities.

Figure 1. Signalling equilibrium



Conspicuous consumption requires that males undertake a range of potentially innovative activities. The major source of long-term economic growth is ideas, which increase with the number of people producing them (Kremer 1993).

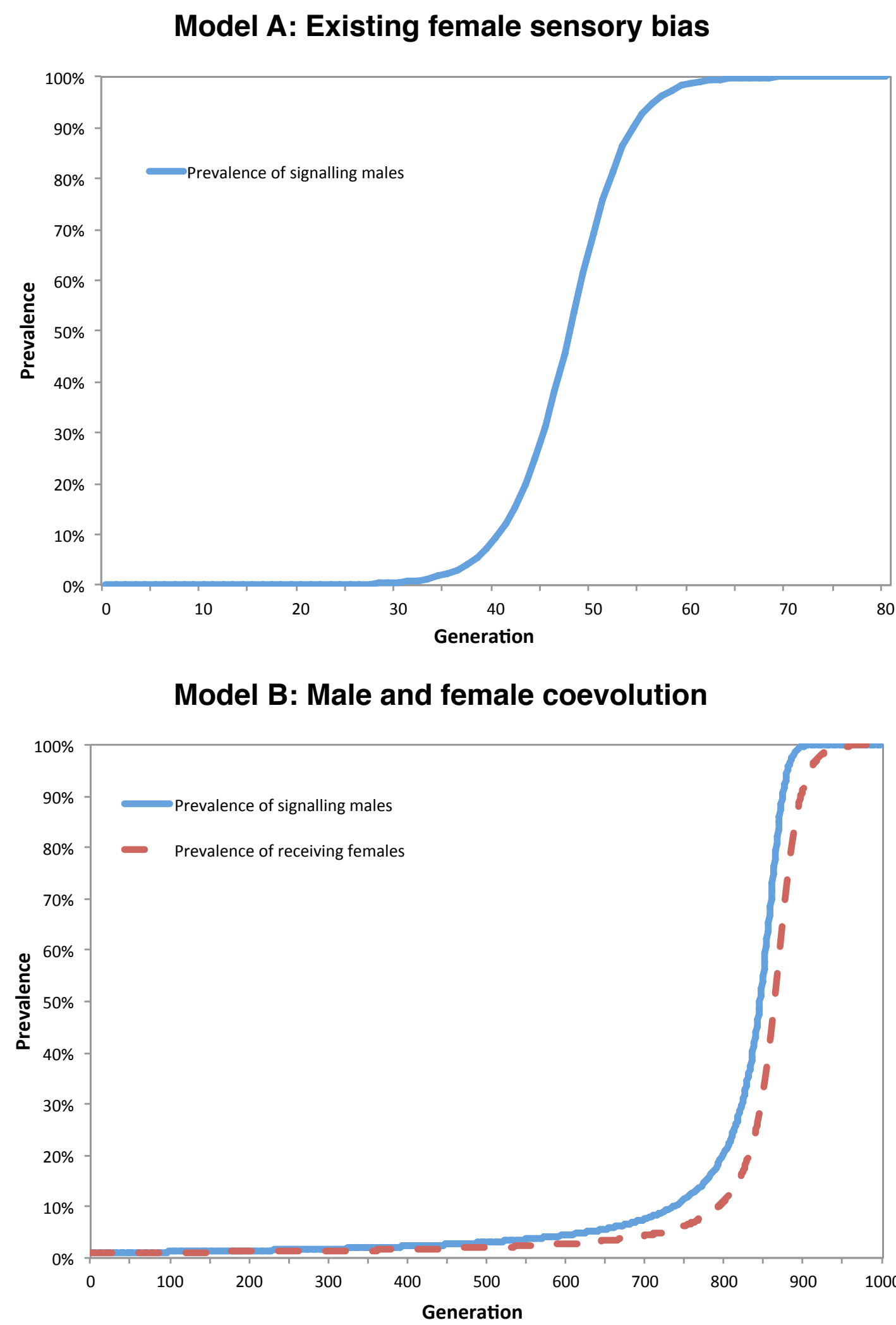
## The Model



## Evolutionary dynamics

In a separating equilibrium, signalling genotypes increase in prevalence. In model B, receiving genotypes increase in prevalence if higher expected male quality outweighs the risk of not being paired in the last period.

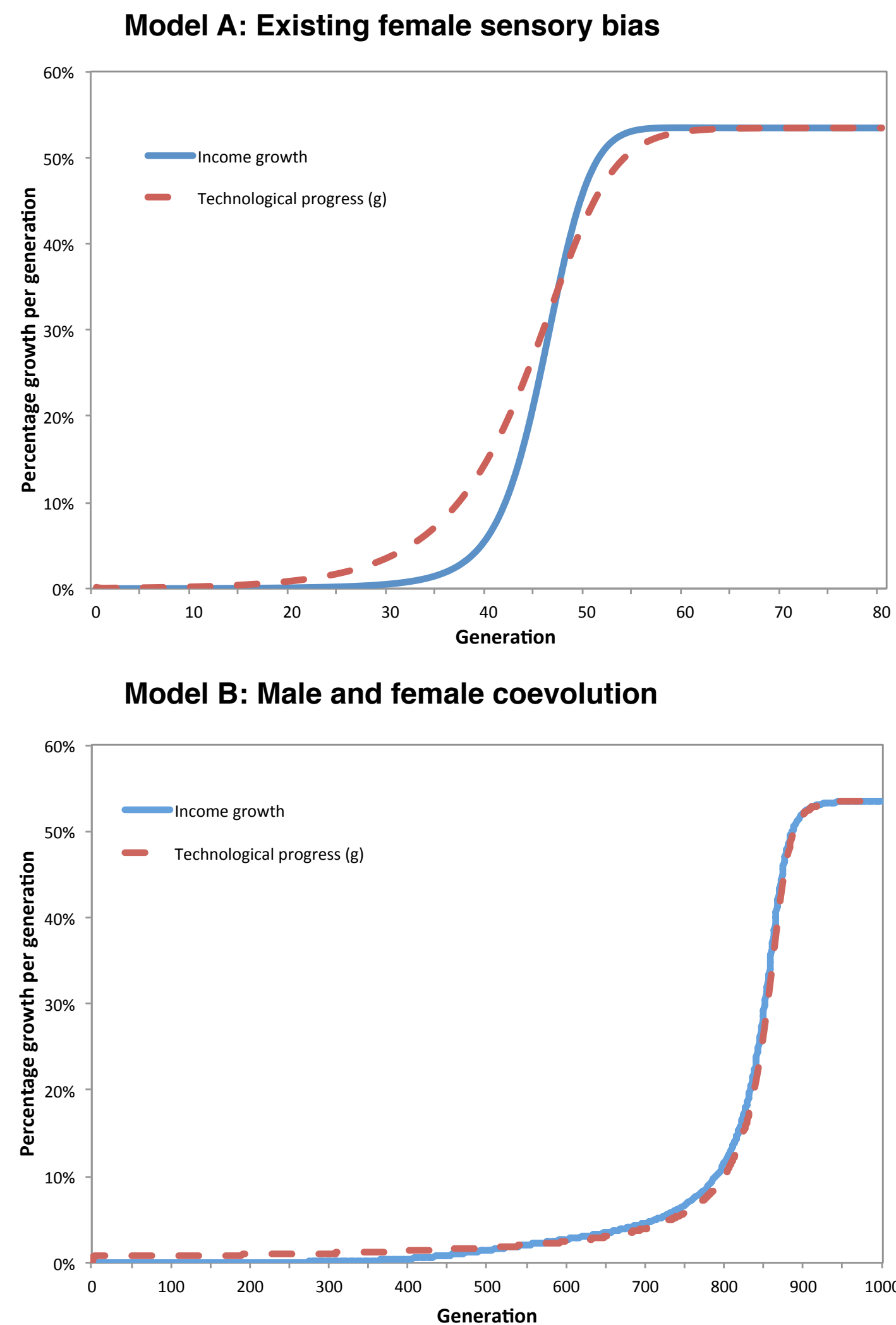
Figure 2. Genotype prevalence



## Economic dynamics

As signalling behaviour increases in the population, there is an increase in the activities that are required to support the conspicuous consumption.

Figure 3. Economic outcomes



## Conclusion

Modern levels of economic growth are driven by behaviour necessary to signal quality to potential mates. Males engage in innovation, labour and other productive activities in order to consume conspicuously. These activities contribute to technological progress and economic growth.

Which of the two models presented is more realistic is unclear. Positive responses to Rolexes or BMWs, to which females have had limited exposure in our evolutionary history, suggest significant flexibility over short timeframes in human perception of what is a reliable signal. Conversely, anthropological evidence and the ubiquity of conspicuous consumption in human society suggest a deep evolutionary basis to this trait, which has developed over significant time.

As it is likely that other evolutionary changes to humans are relevant to economic growth, it is not proposed that the desire to engage in conspicuous consumption is the sole “trigger” for modern economic growth. Rather, the model provides a basis for the observation that males engage in work effort and consumption at levels above that required for survival (or at a cost to survival) and proposes that these behaviours have significant economic effect. The need to signal quality to choosy females is an important, but not sufficient, foundation for economic growth.

## Literature

De Fraja, G., 2009, “The origin of utility: Sexual selection and conspicuous consumption”, *Journal of Economic Behavior & Organization* 72(1), pp.51-69  
Grafen, A., 1990, “Sexual Selection Unhindered by the Fisher Process”, *Journal of Theoretical Biology* 144, pp.473-516  
Kremer, M., 1993, “Population Growth and Technological Change: One Million B.C. to 1990”, *The Quarterly Journal of Economics* 108(3), pp.681–716  
Miller, G.F., 2001, *The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature* New York: Anchor.

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## Further information

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A working paper with the model will be posted on my blog soon.

