

Economics and Biology of Contests Conference

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Title:

Socioeconomic success vs. reproductive success: an evolutionary approach to fertility decline in modern competitive societies

Abstract:

Fertility decline is an important research topic not only in social sciences, but also in evolutionary studies. Fertility is a key component for reproductive fitness, so its decline is a paradox in the evolution of human behavior. Biological theories generally predict a positive relationship between one's socioeconomic success and his/her reproductive success. The prediction is supported in pre-industrial societies. On the other hand, researchers found few positive relationships between them in modern developed societies and concluded that a non-positive relationship between socioeconomic status and reproductive success is a great challenge to evolutionary approaches to human behavior (cf. Alvergne & Lummaa, 2014).

In our analyses of empirical data of current Japan, we found no significantly positive relationships between one's socioeconomic success (i.e., high household income or high education level) and his/her reproductive success (i.e., a larger number of children, a higher probability of childbirth, or a larger ideal number of children). In modern developed societies, people tend to invest a large

amount of effort for enhancing their socioeconomic status. However, why they seek high socioeconomic success that does not lead to high reproductive success? One possible answer is that parents keep high socioeconomic status in order to provide much parental investment for their children (e.g., Hedges et al., in press). It is because, in a competitive environment, lower quality offspring tend to lose in a peer competition in labor and mating markets and to result in lower reproductive success. In such an environment, parents should set a high value on parental investment and would aim to produce a smaller number of high-quality children (e.g., Kaplan & Lancaster, 2003, cf. Goodman et al., 2012).

Based on our results and relevant arguments in previous literature, we will discuss the relationship between socioeconomic success and reproductive success, and what constitutes happiness for parents in modern competitive societies.

Disciplines: human behavioral ecology; evolutionary demography

Keywords: fertility decline; demographic transition; reproductive strategy; parental investment; human; Japan