

Misreading Darwin on Reproduction: Reductionism in Evolutionary Theory

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In formulating the concept of natural selection, Darwin introduced the idea of “reproductive success”—the survival and reproductive outcome of whole organisms. Over the last hundred years evolutionary mechanisms have narrowed dramatically from this focus on whole organisms to a focus on the survival and replication of genes from one generation to the next. In addition, the traditional emphasis on male reproductive success, which also began with Darwin, has profoundly affected theoretical formulations of primate reproduction and reconstructions of human evolution. Most recently an emerging critical consciousness about cultural influences on scientific theory has illuminated the genesis as well as the limitations of these theories. Following a discussion of Darwin, I review here how reproduction was represented in evolutionary theory in the 1940s, in sociobiology in the 1970s, and in reconstructions of human evolution.

Because sexual reproduction is the linchpin of vertebrate evolution, it has necessarily been a consistent theme in discussions of primate, including human, evolution. Yet the theoretical framework remains focused as much on males today as it did more than a hundred years ago, when Darwin proposed the evolutionary mechanism of sexual selection, even though females and males contribute equally to fertilization; female mammals gestate and nurture the fetus and feed the newborn animal; and female primates, like all mammals, lactate and, in addition, carry the infant after birth and continue to promote its survival even after weaning.

This chapter continues the discussion of biological reproduction through case studies in primatology and human evolution. I speculate about the persistent focus on biological paternity in evolutionary theory by examining dual cultural trends: (1) the historical exclusion of women

as participants in science and the historical characterization of women in science (for example, Schiebinger 1989, 1993; Noble 1992); and (2) tenets of monotheism that define women's reproduction and the social relationship between women and men (for example, Delaney 1991).

Finally, this chapter should be understood as part of a larger argument that characterizes science as a masculine activity, challenges its objectivity, emphasizes the contributions of women, and documents how cultural ideologies and historical practices can influence interpretation of research findings (for example, Birke 1986; Bleier 1984, 1986; Borchert 1985; Delaney 1986; Fausto-Sterling 1985; Fedigan 1986; Flax 1990; Haraway 1989; Harding 1986; Keller 1985; Schiebinger 1989, 1993; Landau 1991; Noble 1992). More specifically, I extend the multilayered perspective on reproduction put forth by Ginsburg and Rapp (1991) by exploring the intersection of evolutionary theory and empirical research with cultural practices in scientific and religious discourse.