My contribution to this Symposium focuses on the links between sexuality and reproduction from the evolutionary point of view. The relation between women's sexuality and reproduction is particularly important because of a vital intersection between politics and biology — feminists have noticed, for more than a century, that women's identity is often defined in terms of her reproductive capacity. More recently, in the second wave of the feminist movement in the United States, debates about women's identity have explicitly included sexuality; much feminist argument in the late 1960's and early 1970's involved an attempt to separate out an autonomous female sexuality from women's reproductive functions.

It is especially relevant, then, to examine biological arguments, particularly evolutionary arguments, to see what they say about whether and how women's sexuality is related to reproduction. We shall find that many evolutionary arguments seem to support the direct linking of female sexuality and reproduction. Yet I will argue that this support is not well-grounded. In fact, I think evolutionary explanations of female sexuality exemplify how social beliefs and social agendas can influence very basic biological explanations of fundamental physiological processes. In this paper, I shall spend some time spelling out a few examples in which assumptions about the close link between reproduction and sexuality yield misleading results, then I shall conclude with a discussion of the consequences of this case study for issues in the philosophy of science.

The fundamental problem is that it is simply assumed that every aspect of female sexuality should be explained in terms of reproductive functions. But there is quite a bit of biological evidence that this is an empirically incorrect assumption to make. This raises the question of
why autonomous female sexuality, distinct from reproductive functions, got left out of these explanations. I shall ultimately conclude that social context is playing a large and unacknowledged role in the practice of this science.

Perhaps the notion of the potential independence of female sexuality and reproduction may be unclear: I suggest thinking in terms of two distinct models, one in which all basic aspects of sexuality are explained in terms of reproduction, and the other in which sexuality is seen as an autonomous set of functions and activities, which are only partially explained in terms of reproductive functions. The difference may seem minor, but the two models have significantly disparate consequences when used in scientific explanation.

Let us begin with a classic and wide-spread model representing the hormonal determination of sexual behavior. In this model, female animals are only willing to have sexual intercourse when they are fertile — their sexual interest and activity are completely hormonally controlled. Typical and familiar examples of this type of set-up include rats, dogs, and cats. When these animals are in estrus, they are willing and eager to mate, otherwise not. Technically, estrus is defined hormonally — that is, estrus is a particular phase of the menstrual cycle, in which the animal is fertile, and certain hormone measures are very high. This model embodies a very tight link between sexuality and reproduction: female sexuality functions completely in the service of reproduction.

Some interesting problems arise, however, in the application of this hormonally deterministic picture to human and non-human primate behavior.

First of all, although estrus is biologically defined as a hormonal state, it is very common for estrus to be defined operationally as the period in which “the female is willing to participate in sex”. In one species, the bonobos, this behavioral definition led to the comic conclusion that this species is in estrus 57—86% of the time. Notice that identifying estrus in this manner amounts to an enforcement of the belief that sexual behavior is tightly linked to reproduction. It becomes impossible even to ask whether these primates have an active sexual interest outside of their peak hormonal periods.

It turns out that when independent studies are made, sexual activity is not confined to the fertile phase for a number of non-human