

ORGASMIC SCIENCE

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Ideas

THE LATE Stephen Jay Gould was quite fond of his nipples. As the Harvard paleontologist wrote in a 1987 essay in the magazine *Natural History*, the fact that male nipples, as virtually all biologists believe, are a mere developmental echo of female nipples — whose purpose in child-rearing is obvious — is no reason to think less of them. "I, for one, am quite attached to all my body parts," he wrote, no matter how useless they may seem.

Gould made that argument as an entree into a touchier one: He went on to suggest that the clitoris, and by extension the female orgasm, also had no purpose in evolutionary terms. In a situation exactly analogous to the male nipple, Gould wrote, the clitoris and the female orgasm were simply developmental echoes of the male penis and orgasm, whose importance to reproduction is obvious. Gould's article (later reprinted under the title "Male Nipples and Clitoral Ripples") ignited a war in the letters column of *Natural History*, though he was not the first to make the argument that the female orgasm serves no evolutionary purpose. After the anthropologist Donald Symons made the same point in his 1979 book "The Evolution of Human Sexuality," the feminist anthropologist Sarah Blaffer Hrdy noted in a review that "a gentlemanly breeze from the 19th century drifts from the pages." The argument that the male orgasm was a naturally selected miracle and the female one a wan copy, she thought, smacked of sexism.

In his essay, Gould said he had been influenced by the writings of a young philosopher of science named Elisabeth A. Lloyd. Now Lloyd, a professor at Indiana University, is coming forward with a full-blown book that brings his argument up to date. In "The Case of the Female Orgasm: Bias in the Science of Evolution," published next month by Harvard University Press, Lloyd summarizes dozens of evolutionary accounts of the female orgasm - and knocks them all down. Like Gould, she thinks the female orgasm is purposeless, which is not to say pleasureless. And she extends the charge of bias, charging that too many scientists take the male-centered view that the female orgasm is closely linked to heterosexual intercourse and reproduction. "The history of evolutionary explanations of female orgasm," Lloyd writes, "is a history of missteps, misuse of evidence, and missed references."

Until the 1970s or so, it was thought that women were the only female primates to experience orgasm, which led some scientists to speculate that in humans the female orgasm served as a sort of replacement for estrus, or "heat" — an encouragement to mate. But sightings of give-away shrieks and grimaces among female primates — which tended, incidentally, to occur more frequently in same-sex encounters, chipped away at this conventional wisdom.

Even in humans, male-female coitus is an iffy route to female orgasm, Lloyd notes in her book. (She declined to be interviewed for this article.) According to research she cites, only 55 percent of women have orgasms more than half the time during intercourse,

while 5 to 10 percent never have them under any circumstances. The "tremendous variation in the manifestation of the female orgasm," says Richard Wrangham, a professor of anthropology at Harvard, "doesn't seem compatible with an evolutionary history in which it is enormously important." But this hasn't stopped other researchers from speculating on the female orgasm's role in natural selection. In his 1967 pop-science classic "The Naked Ape," the Oxford-trained zoologist Desmond Morris argued that the female orgasm evolved to cement the male- female pair bond, which gave offspring a survival advantage.

Furthermore, Morris wrote, when it comes to fertilization "there is a great advantage in any reaction that tends to keep the female horizontal when the male ejaculates and stops copulation." Lloyd wryly points out a couple of problems here. First, connection between the female pursuit of orgasms and monogamy is not exactly self-evident. Second, the link between a "horizontal" position and the female orgasm is also less than ironclad. Lloyd likewise dismisses the explicitly feminist theories of Sarah Blaffer Hrdy, professor emerita of anthropology at the University of California at Davis. Hrdy, who has been tinkering with her theories since the late 1970s, believes that the female orgasm evolved to encourage females to mate with numerous men in pursuit of those elusive fireworks. The evolutionary benefits of multiple partners? Not only would women be more likely to conceive, but men would be less likely to kill the resulting infants, since no one would be sure whose child was whose. According to Lloyd, Hrdy too succumbs to the fallacy that orgasm has a strong link to procreative intercourse, especially given how little attention our ancestor males probably gave to the clitoris (other primate males ignore it).

Hrdy counters via email that an alleged emphasis on penetration in the theory "is [Lloyd's] insertion (no pun intended), not my assumption." The theory would still hold if females supplemented coitus with self- stimulation and other sex play, she contends. Throughout the 1990s, researchers continued to look for empirical evidence that the female orgasm contributed to reproductive success. In 1993, writing in the journal *Animal Behaviour*, Robin Baker and Mark Bellis reported confirmation of the indelicately named "upsuck" theory. After measuring (self-collected) semen that flowed out of the vaginas of 32 women following intercourse, Baker and Bellis concluded that orgasms from one minute before male climax to 45 minutes afterwards increased the amount of semen retained by the female. In 1995, in the same journal, Randy Thornhill, a biologist at the University of New Mexico, and two colleagues announced that female frequency of orgasm correlated with the physical "symmetry" of their partners' bodies, which in many species is a rough proxy for health and reproductive fitness. This finding, they claimed, suggested that the orgasm helped steer women toward mates more likely to produce healthy offspring.

Lloyd sees desperation in the sheer variety of proposed explanations for the orgasm. (She also sees fatal statistical problems in the Baker and Bellis article, which Baker, in an email, disputes.) Meanwhile, her critics see her drive to shoot down all adaptive arguments as quixotic. "If the clitoris is an irrelevant organ," asks the Emory University psychologist and primatologist Frans de Waal, "why in cultures that want to control female sexuality do they have it removed?" But wherever the argument goes, most female onlookers are likely to view their orgasms as the late Professor Gould viewed his nipples. Purpose, shurpose. I'm just going to enjoy them.

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