

## Finding “God” in the Female Orgasm

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In *The Mating Mind*, Geoffrey Miller advances the hypothesis that the human clitoris has evolved as an organ of sexual discernment, and that the female orgasm correspondingly functions as a complex adaptation for appraising fitness indicators in prospective mates, analogous to the visual cortex of the peahen. “[The clitoris] helps to select for males who provide pleasurable foreplay, copulation, and orgasms, and such discriminative power is just what we should expect from an organ of female choice.”<sup>1</sup> Given the prominent role of female mate choice as a transformative force in evolution, this view of the clitoris as an organ endowed with “discriminative power” above and beyond women’s conscious preferences has wide-reaching implications, and not just for human mating behavior. In a self-conscious (though hopefully not self-contradictory) act of EP bricolage, I want to explore the possible impact of this hypothesis on another area of evolved human psychology: superstition and religiosity.

In his usual blithe and pointless-to-dispute manner, Miller advances two “testable predictions” about the clitoris’ discriminative powers. One relates to the organ’s ability to accurately gauge the internal hormonal state of its owner: “The choosy clitoris should produce orgasm only when the woman feels genuinely attracted to a man’s body, mind, and personality.”<sup>2</sup> The second prediction, more problematically, relates to the organ’s ability to accurately appraise mate value: “Clitorises should respond only to men who demonstrate high fitness, including the physical fitness necessary for long, energetic sex, and the mental fitness necessary to understand what women want and how to deliver it.”<sup>3</sup> This latter emphasis on the clitoris as an accurate gauge of a man’s mental fitness presupposes



both the empirical existence of something that might plausibly be identified as “what women want” and also the capacity of the male brain to either consciously or intuitively anticipate and fulfill that desire.

Without falling into the social constructivist trap of arguing for infinite or arbitrary variance of female desires, I propose the existing variance is at least wide enough to preempt any gender-encompassing solutions to female desire fulfillment (notwithstanding the claims of so-called pick-up artists, whose sample-sizes are hopelessly small and self-selecting). Furthermore, I propose that this between-woman (and also within-woman) variation in desire-fulfillment criteria is itself an evolutionary adaptation, a form of phenotypic plasticity maintained by frequency-dependent selection, specifically as a defense against would-be Casanovas eager to forgo parental investment in favor of a one-size-fits-all solution to female desire fulfillment. Even if the solution to “what women want” were to be viewed as a diverse toolkit or complex lock-picking apparatus rather than a skeleton key, selection would still favor the evolution of ever-more-complex locks, combining mechanisms of both physiological and mental cryptography, at least insofar as a man’s attentiveness to the intricacies of any *one* woman functions as a costly signal of time and resources *not* spent on another. If what *any* woman wants is a man’s exclusive attention for  $x$  amount of time (enough time to fulfill her exploratory criteria), then by definition it is impossible to both understand “what *women* want” and also “how to deliver it.”

It is precisely the well-documented extreme variation in female sexual response that has prompted many evolutionists, notably Stephen J. Gould, Donald Symons, and Elisabeth Lloyd, to argue that the clitoris and the female orgasm couldn’t possibly be adaptations, and should be viewed instead as developmental side effects, the equivalent of male nipples. However, as David Barash rightly points out in his entertaining smack down of Lloyd’s anti-adaptationist screed, *The Case of the Female Orgasm*, “A range of variability is definitely not, in itself, evidence that a trait is *not* adaptive. . . . Selection can *favor* phenotypic plasticity.”<sup>4</sup> Miller also acknowledges this aspect of female sexuality in *The Mating Mind*,<sup>5</sup> and I have no desire to criticize him unfairly for what was clearly a turn of pithy prose rather than a statement about the homogeneity of female desire. In fact, his entire book is a moving ode to the “cryptography” model of female sexuality; as Miller cheerfully and evocatively asserts: “The clitoris is only the tip of the iceberg in female choice.”<sup>6</sup>

The adaptive variation of female sexuality is borne out by some recent empirical studies as well. The same year as Lloyd’s orgasm-as-spandrel book was published, a twin study of more than four thousand women in the United Kingdom found moderate to high levels of heritability for the variation in women’s difficulty reaching orgasm both from masturbation and from sexual intercourse (34 percent and 45 percent respectively).<sup>7</sup> Although this study uses the loaded term “orgasmic dysfunction,” it is impossible to rule out the action of a perfectly functional mate-selection mechanism such as the one posited by Miller as the cause of every one of those non-orgasms. One of the key components of the clitoris-as-gatekeeper hypothesis is that its decision-making capacities would have to run on a parallel cognitive system, only partially accessible to the conscious mind, if at all. As Miller puts it: “Human female orgasm depends on an interaction between the clitoris, the hypothalamus (the brain’s emotional center), and the cerebral cortex (the brain’s cognitive center).”<sup>8</sup> The adaptive benefit of a complex and cryptic sexual response organ would be undermined if it were only cryptic to *others* but transparent to oneself, since that information would shortly be communicated in a moment of intimacy. In this context “orgasmic dysfunction” must be understood as

“dysfunction in the context of my current relationship, which I would prefer to keep and complement with frequent orgasms” as opposed to dysfunction in an adaptive sense. In this as in many things, our evolved instincts and our conscious choices can legitimately be at odds.

The idea that female physiological response is opaque to the conscious female mind (especially compared to male sexual response) is also the overwhelming theme of Meredith Chivers’ research at Queen’s University in Kingston, Ontario. Chivers shows a range of videos, some neutral and some erotic, to male and female subjects of various sexual orientations, while simultaneously measuring both their self-reported level of arousal and their level of physiological arousal via genital engorgement. As a *New York Times Magazine* profile piece by Daniel Bergner (aptly titled “What Do Women Want?”) recently put it: “For the male participants, the subjective ratings on the keypad matched the readings of the plethysmograph [genital response measuring instrument]. The men’s minds and genitals were in agreement. All was different with the women . . . especially the straight women, mind and genitals seemed scarcely to belong to the same person.”

An additional kernel of evidence that human female sexual response has evolved to elude the rational predictions of both men *and* women comes from neuroscientist Gert Holstege at the University of Groningen in the Netherlands, whose research subjects men and women to PET scans while their partners bring them to climax. In this research we might actually be seeing a neurological manifestation of Robert Trivers’ predicted “Evolution of Self-Deception” phenomenon. *Male* orgasms in Holstege’s experiments are accompanied by a massive response in the brain’s reward centers “comparable to that induced by heroin.” In *female* orgasms, by contrast: “something unexpected happened: much of her brain went silent.” Some of the most decreased activity was found in the region of the brain associated with self-control, which “might correspond to a release of tension and inhibition.” So far so relaxing, but there was also a decreased response “in the dorsomedial prefrontal cortex, which has an apparent role in moral reasoning and social judgment—a change that may be tied to a suspension of judgment and reflection.”<sup>9</sup> Presumably this would include the kind of reflection or self-monitoring that would help in answering the question: “Wait, how did we just do that?”

The vexed complexity of this topic inspires Bergner to poetic agnosticism on the subject of female sexuality: “The giant forest seemed, so often, too complex for comprehension.” Other writers have opted for a more credulous response. Elisabeth Lloyd’s book-length tirade against adaptationist theories of female orgasm predictably kicked up a media storm, but no commentator was as unintentionally hilarious or insightful as Mark Morford writing in the online version of the *San Francisco Chronicle*. Morford accuses both Lloyd *and* the adaptationists of the same crime, that of thinking scientifically: “Look to science to explain away all our slick needful quiverings as mere rote mechanical factions.” Instead, he argues with all sincerity that the female orgasm has a *spiritual* purpose: “The female orgasm is, quite simply, the Great Mystical Link, the hot divine thing that connects and communicates and interrelates between heaven and Earth, mind and body, soul and sky, dream state and anal bead, Astroglide and God.”<sup>10</sup>

Ironically, Morford’s opinion piece, entitled “Female Orgasm: Proof of God,” may have hit on something truly profound. Evolutionary accounts of superstition and religiosity often describe them as natural psychological responses to an unpredictable world, the products of a mind designed by evolution to err on the side of false positives because of the more severe consequences of false negatives. If this is the case, then superstition and religiosity would logically be intensified in

response to sustained, adaptive, in-built, evasive randomness, at least compared to the kind of low-level environmental randomness usually evoked, such as weather and animal migration patterns. Isn't it possible that superstition and religiosity in humans is a psychological by-product of the baffling variation in female sexual response, which has adaptive value as a mate selection mechanism? If so, then Morford's psychedelic opinion piece has a perfectly accurate title, notwithstanding the missing scare quotes on the word "Proof."

The hypothesis that superstitious beliefs increase in response to sustained, evasive randomness has already been confirmed, if not yet in the context of sexual response. You can *make people more superstitious* in the lab by experimentally increasing the randomness in their environment, evading their predictions of cause and effect. The more tenuous the link between one's actions and their desired outcome, the greater the propensity to link the outcome to uncorrelated causal forces, whether real or imagined. Behaviorist experiments have borne this phenomenon out for decades, a response so deep that B. F. Skinner even demonstrated it in pigeons as early as 1948.<sup>11</sup> The title of a typical article in *The Psychological Record* spells it out nicely: "Superstitious Rule Generation Is Affected by Probability and Type of Outcome." The authors go on to explain, "When asked to solve a task without aid of explicit instructions [i.e., sex], people often create verbal statements describing contingencies that they believe are in place [i.e., saying a "Hail Mary"]. In situations in which outcomes occur independent of particular responses [i.e., a significant percentage of female orgasms], specific descriptions of behavioral contingencies are inaccurate [i.e., "Thank God!"]. Such descriptions have been termed superstitious rules."<sup>12</sup>

Other studies have specifically linked environmental randomness to belief in superstitions and conspiracy theories, and to belief in an interventionist God.<sup>13</sup> Athletes and chronic gamblers generate superstitious beliefs for the same reason, as a response to the arbitrariness of most of their actions in achieving a desired outcome: "Although it is true that hitting jackpots and home runs both entail some very relevant responding, the potential for outcomes to become coincidentally correlated with superfluous and irrelevant behaviors dramatically increases the probability of players generating fallacious rules to guide their behavior in future endeavors."<sup>14</sup> If it's true that female orgasms have design features that make them *effectively random*—at least from the perspective of males who try to trigger them with the least possible costly investment—then female orgasms would be expected to generate fallacious rules in a similar way. These fallacious rules, which correlate outcomes with "superfluous and irrelevant behaviors," are the hallmark of religion.

Of course, achieving the elusive female orgasm also requires *some* relevant responding, but there remains great potential for superfluous and irrelevant behaviors such as prayer or sacrificing a goat to the fertility goddess to become correlated with success (or lack of prayer or bloodshed with failure). Speaking of fertility goddesses, the proposed hypothesis of the (partial) origins of religion is supported by the fact that the earliest symbolic productions of human art appear to be fertility talismans representing the female body, such as the recently discovered Hohle Fels Venus, reliably dated to before 35,000 BCE.<sup>15</sup> This mammoth-tusk ivory carving, depicting intricately detailed and visibly swollen female breasts and vulva, provides a tangible link between human religious devotion and the humbling need to placate, satisfy, or otherwise honor female sexual response. Slightly less persuasive but still interesting support comes from the tendency of both males and females to accompany orgasms with religious salutations such as "Oh, god!"<sup>16</sup>



Only the least predictable gods require propitiation. Venus of Hohle Fels; woolly mammoth tusk, 2.4 inches, University of Tübingen, photo by H. Jensen.

This immediately broaches yet *another* grand debate in evolutionary science, the debate between adaptationist versus by-product theories of the origins of religious behavior. If the cryptic (or strategically random) nature of female sexual response has contributed to human religiosity, it would definitely fall into the side effect camp, but this doesn't preclude adaptationist scenarios. Once established as a by-product of human adaptive learning (or attempting to learn) how to get women off, religiosity could still have spread through the differential survival of human groups, possibly by promoting solidarity or within-group altruism via the content of specific religious beliefs.

My hypothesis also generates some testable predictions, for instance that superstition and religiosity will be higher in men whose spouses or sex partners experience orgasms either very rarely or not at all, compared to men who experience reliable success in conjuring the genie. Women who achieve orgasm more frequently and easily may also be less religious than those whose sexual response is mysterious both to themselves and their partners. In contrast with more serious-minded theories of the evolutionary origins of religious behavior, this factor would seem to play a small, perhaps complementary role. However, given a sufficient degree of evolved complexity in female sexual response, and given the fact that *every single one* of our ancestors had to navigate this labyrinth, we underestimate its psychological sway at our peril.

## NOTES

1. Miller, *The Mating Mind*, 238.
2. Miller, *The Mating Mind*, 239.
3. Miller, *The Mating Mind*, 239.
4. Barash, "Orgasms Bloom," 349.
5. "Because sexual choice often shapes traits to work as fitness indicators, it can also produce traits that show large differences between individuals within the same population." Miller, *The Mating Mind*, 229.
6. Miller, *The Mating Mind*, 240.
7. Dunn, Cherkas, and Spector, "Genetic Influences," 260.
8. Miller, *The Mating Mind*, 240.
9. Portner, "Roots of Sexual Pleasure," 3.
10. Morford, "Female Orgasm: Proof of God."
11. Rudski, Lischner, and Albert, "Superstitious Rule Generation."
12. Rudski, Lischner, and Albert, "Superstitious Rule Generation."
13. Kay et al., "Compensatory Control."
14. Ninness and Ninness, "Contingencies of Superstition."
15. Conrad, "Female Figurine," 248.
16. Another interesting correlation is the presence of "magic to win love" in Donald E. Brown's list of human universals in *Human Universals*.

## BIBLIOGRAPHY

- Barash, David P. "Let a Thousand Orgasms Bloom!" Review of *The Case of the Female Orgasm* by Elisabeth A. Lloyd. *Evolutionary Psychology* 3 (2005): 347–54.
- Beck, Jan, and Wolfgang Forstmeier. "Superstition and Belief as Inevitable By-products of an Adaptive Learning Strategy." *Human Nature* 18 (Spring 2007): 35–46. <http://www.springerlink.com/content/7yv3rmp7mjxjranc/>.
- Bergner, Daniel. "What Do Women Want?" *New York Times Magazine*. January 22, 2009. [http://www.nytimes.com/2009/01/25/magazine/25desire-t.html?\\_r=1&adxnnl=1&pagewanted=all&adxnnlx=1311056787-h3KqNHH0eVcBtIcwIvBfHw](http://www.nytimes.com/2009/01/25/magazine/25desire-t.html?_r=1&adxnnl=1&pagewanted=all&adxnnlx=1311056787-h3KqNHH0eVcBtIcwIvBfHw).
- Brown, Donald E. *Human Universals*. Philadelphia: Temple University Press, 1991.
- Conard, Nicholas J. "A Female Figurine from the Basal Aurignacian of Hohle Fels Cave in Southwestern Germany." *Nature* 459 (2009): 248–52. doi: 10.1038/nature07995.
- Dunn, Kate M., Lynn F. Cherkas, and Tim D. Spector. "Genetic Influences on Variation in Female Orgasmic Function: A Twin Study." *Biology Letters* 1, no. 3 (2005). doi: 10.1098/rsbl.2005.0308.
- Kay, Aaron C., Jennifer A. Whitson, Danielle Gaucher, and Adam D. Galinsky. "Compensatory Control: Achieving Order Through the Mind, Our Institutions, and the Heavens." *Current Directions in Psychological Science* 18 (October 2009). <http://cdp.sagepub.com/content/18/5/264.short>.
- Miller, Geoffrey. *The Mating Mind*. New York: Random House, 2001.
- Morford, Mark. "Female Orgasm: Proof of God." *SF Gate*, May 27, 2005. <http://www.arlindo-correia.com/241005.html>.
- Ninness, H. A. Chris, and Sharon K. Ninness. "Contingencies of Superstition: Self-Generated Rules and Responding during Second-Order Response-Independent Schedules." *The Psychological Record* 49 (1999). <http://www.questia.com/googleScholar.qst?docId=5001267712>.

- Portner, Martin. "The Orgasmic Mind: The Neurological Roots of Sexual Pleasure." *Scientific American Mind*, May 15, 2008. <http://www.scientificamerican.com/article.cfm?id=the-orgasmic-mind>.
- Rudski, Jeffrey M., Mark I. Lischner, and Lori M. Albert. "Superstitious Rule Generation Is Affected by Probability and Type of Outcome." *The Psychological Record* 49 (1999). <http://www.questia.com/google-scholar.qst?docId=5001267718>.
- Vyse, Stuart A. *Believing in Magic: The Psychology of Superstition*. New York: Oxford University Press, 1997.