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Book Review

What Our Sexy Past Reveals About Our Erotic Present

A review of John Long, *The Dawn of the Deed: The Prehistoric Origins of Sex*. The University of Chicago Press: Chicago, 2012, 278 pp., US\$26.00, ISBN #978-0-226-49254-4 (hardcover), and Ogi Ogas and Sai Gaddam, *A Billion Wicked Thoughts: What the Internet Tells Us About Sexual Relationships*. Plume: New York, 2012, 416 pp., US\$16.00, ISBN #978-0-452-29787-6 (paper).

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Give yourself a moment to ponder just how bizarre intimate sex through copulation is: one individual inserts a part of its anatomy into a delicate part of another individual. In *The Dawn of the Deed*, paleoarcheologist John Long encourages the reader to examine the oddity of sexual intercourse. He depicts this peculiarity by illustrating that somewhere along the phylogenetic tree, a male of some archaic species physically penetrated his female counterpart. What a strange occurrence that must have been! Inspired by his discovery of the oldest-known fossil demonstrating internal fertilization, *Masterpiscis attenboroughi* (a placoderm fish dated to be 540 million years old), Long takes the reader on a journey through the evolution of sexual reproduction. He uses the discovery of the embryo found within *Masterpiscis attenboroughi* as a starting point for a detailed account of the sexual anatomy and behavior of fish, amphibians, reptiles, birds, mammals, primates and, eventually, humans. Using a combination of evidence found in living species as well as clues preserved in the fossil record, Long provides a thorough account of how and why sexual reproduction might have evolved the way that it did.

Complimenting this detailed history of sexual reproduction is Ogas and Gaddam's *A Billion Wicked Thoughts*. The authors ingeniously use the internet as a digital fossil record to track the footprints of human desire. Drawing their information from millions of individual searches tracked and collected from search engine databases, the authors present unique evidence of the most common—and some of the stranger—sexual desires and preferences. Using this archival information as an unintended survey on human sexuality, Ogas and Gaddam entertain the reader with statistics derived from these searches, in conjunction with personal anecdotes. Using this creative and unique approach, Ogas and

Gaddam address the sexual content sought out by each sex, and discuss the adaptive problems such preferences might have solved over human evolutionary history.

The sexual content searched most frequently by men (and more frequently than by women) reflects the premium that men place on youth and physical attractiveness, with “youth,” “breasts,” and “butts” among the most popular sexual search terms. Women more than men prioritize characteristics such as dominance, protection, and the ability to acquire resources, and these preferences are reflected in their searches for romantic stories that highlight these themes. Against this background, we draw attention to two topics of sexual content addressed by Ogas and Gaddam that we found particularly intriguing and related to ongoing research in our lab: *cuckold porn* and *shemale porn*.

Given the mountain of empirical evidence indicating that men more than women experience jealousy in response to a long-term partner’s sexual (vs. emotional) infidelity (see Buss et al., 1992; Shackelford et al., 1992, Sagarin et al., 2003), it might seem strange that cuckold porn was the second-most popular male heterosexual interest on internet search engines (second only to “youth”). In cuckold porn, a boyfriend or husband usually watches from the “sidelines” as his girlfriend or wife has sexual intercourse with another man. The cuckold, or *bull*, is usually well-endowed, sexually skilled, and extremely masculine. There is also another pattern that seems to characterize the cuckold: he is usually black. Why would it be the case that heterosexual men have such a strong interest in watching their partners have sex with black men?

The answer to this question may be found in an evolutionary history of *sperm competition* in humans. Black men are perceived, by straight men and gay men alike, as possessing a high degree of sexual dominance, often linked to perceptions of a much larger penis. According to Ogas and Gaddam (and see Shackelford et al., 2007; Pound, 2002; Kilgallon & Simmons, 2005), these cues to cuckoldry stimulate male sexual arousal as an adaptation to sperm competition. The perceived sexual prowess of black men might serve as an especially strong cue to sperm competition in the presumably non-black male viewer, thereby intensifying his sexual arousal. Corroborating evidence indicates that men who are at a higher risk of sperm competition and, therefore, at a greater ancestral risk of being cuckolded, are more interested in having sex with their partners, report more vigorous and deeper thrusting during copulation, and produce more sperm in their next copulatory ejaculate (Baker & Bellis, 1993; Goetz et al., 2005).

This special sexual interest that includes black men is also revealed in a genre of cuckold porn that is absent of wives, girlfriends, or any women for that matter: gay porn. In fact, the fourth most popular category of sexual searches by gay men is “blacks.” Among gay men, searches for “blacks” are more frequent than searches for “penis” or “anal.” As for heterosexual men, black men may be preferred as interlopers because they are perceived as particularly sexually dominant. In gay male porn that includes a white man and black man, seven times out of eight the black man assumes the “top” (or more dominant) role during sexual intercourse. Despite the difference in sexual orientation, a set of male psychological mechanisms appears to be activated by similar visual cues to sperm competition. The presence of formidable rivals enhances the sexual arousal of men, even if the sexual target is another man.

Psychological adaptations to sperm competition might also be activated by the sight of a penis. Pound (2002) speculates that the sight of another man's erect penis and of his ejaculate, are cues of sperm competition that stimulate sexual arousal in men. Ogas and Gaddam report that heterosexual men search for *penises* almost as frequently as they search for *vaginas*. On Fantasti.cc, a popular adult website primarily used by men, 21 of the 100 top-rated images feature a close-up of a penis. Furthermore, heterosexual men are particularly interested in *large* penises. On the Alexa Adult List, there are 1,072 websites that feature heterosexual pornography with large penises. This pornographic preference of heterosexual men may be the result of a perceived association of large penises with sexual dominance. As noted above, sexually dominant men may present an especially strong cue to sperm competition in the male viewer, thereby intensifying sexual arousal. Men are also attentive to visual cues of fertility and reproductive value in potential mates, including larger breasts, round butts, shapely hips, and relatively small feet. Therefore, in a creative conglomeration of the visual cues that are sexually arousing to males, shemale porn has become one of the largest and most popular genres of porn among heterosexual males. Ogas and Gaddam propose that shemale porn provides heterosexual men with an "erotic illusion," displaying sexually arousing cues to femininity simultaneous with cues to sperm competition triggered by the sight of a penis. As one fan of shemale porn explains: "I'm enchanted by her figure. It's svelte, and the long hair is really nice and feminine. Plus a sex toy that just kind of pops out in my brain (p. 218)."

Long also addresses sperm competition, but from a different angle. He examines how the selective pressures of sperm competition have influenced the evolution of the male copulatory organ. Long provides examples showing how the male copulatory organ of various species acts not only as a tool of sperm transmission, but also as a device that displaces the sperm of males from previous copulations. Long cites damselflies, ghost crabs, and dunnocks as just a few species that have evolved a copulatory organ that functions to transfer sperm, as well as remove the sperm from other males. Long discusses the North American ground squirrel, which possesses a penis adorned with knife-edge projections designed to cut through or remove the copulatory plug left from a previous copulation with another male. Long also discusses research addressing sperm competition in humans. He reviews the research of Gordon Gallup and colleagues, who tested the hypothesis that the structure of the human penis also may have evolved, in part, to promote displacement of a rival's sperm. Using an array of artificial penises, a latex vagina, and artificial semen, Gallup et al. (2006) found evidence that the human penis, with its unusually large glans, may function as a semen displacement device.

Following the discussion of sperm competition, Long devotes several pages to human female orgasm. He reviews research by Baker and Bellis (1993), which generated preliminary support for the hypothesis that the human female orgasm functions as an "upsuck" mechanism, causing greater retention of the man's sperm. By collecting semen samples from condoms and "flowback" samples from women, as well as securing women's reports of copulatory orgasm, Baker and Bellis found that women who experience a copulatory orgasm retain about 5% more sperm than women who do not. This result is consistent with the hypothesis that female orgasm is a form of cryptic female choice,

whereby women can influence the probability of conceiving with a particular man.

Most of the research addressing human sperm competition and female orgasm has been conducted with reference to long-term, socially monogamous relationships in which men invest relatively highly. Recent research indicates that men report greater interest in their partner's copulatory orgasm when they are at greater sperm competition risk (McKibbin et al., 2010). Given research indicating that female orgasm may function as a sperm retention device (e.g., Baker and Bellis, 1993), men who are more interested in their partner's copulatory orgasm may be more successful in the context of sperm competition (McKibbin et al., 2010). We recently initiated research investigating these phenomena in non-exclusive, uncommitted, heterosexual relationships.

As Ogas and Gaddam illustrate through their explanation of "*The Miss Marple Detective Agency*", women are more attentive to cues indexing whether a man is a suitable long-term partner, such as information about his status, willingness to invest, and resource abundance. Accurate information about a man's qualities can be costly to obtain first-hand in terms of time, effort, and investment. It is *less* costly to obtain this information from a third party (De Backer et al., 2007). The exchange of social information, or *gossiping*, can be employed to avoid some of the costs associated with securing such information from personal experience. Furthermore, regardless of whether women are seeking long-term or short-term sexual relationships, they often are aroused by similar mate quality cues registered by the *Miss Marple Detective Agency*, including cues indicating resource availability, good genes, and protection. Women who gossip about potential mates are using an efficient strategy to obtain important information without incurring the costs of acquiring such information first-hand. Men may be aware of this exchange of social information, which leads us to hypothesize that men's interest in their partner's orgasm, in the non-exclusive, uncommitted context, might be influenced by the potential for gossip. The potential for gossip might be indexed by the number of reproductive-aged female contacts shared by the partners. In an effort to establish and maintain a high-quality mating reputation, therefore, a greater number of shared reproductive-aged female contacts may influence a man's interest in his partner's orgasm. An interest in his sexual partner's orgasm might therefore aid him in securing future mating opportunities.

To conclude, we recommend both *The Dawn of the Deed* and *A Billion Wicked Thoughts* for anyone interested in the science of sex. Long expertly guides the reader through the evolution of sexual reproduction, providing a plethora of examples from extant species and the fossil record. Long's book provides a clearly constructed journey of the phylogeny of sex. His technique of ending chapters with cliff-hanging questions is an effective tool for holding the reader's attention from one chapter to the next. Each question posed is thoroughly investigated in the next chapter. With discussions ranging from barnacle penises and oral sex in female catfishes to traumatic insemination in bed bugs, this is an entertaining and fulfilling read.

As for *A Billion Wicked Thoughts*, Ogas and Gaddam cleverly examine sexual desires through the content that is searched for on the internet. The authors accurately discuss the sexual preferences and desires of each sex, while also providing the reader with a reasonable overview of the diversity of human sexual desires. Using evolution by natural

selection to explain human sexual desires and preferences, Ogas and Gaddam highlight that these desires and preferences have evolved to solve adaptive problems recurrently faced over human evolutionary history. A provocative and informative read, the book showcases the fact that although there are universal psychological adaptations that generate human sexual desires, the output of these adaptations is manifested in a remarkable array of sexual diversity.

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