By Christopher H. Rosik*

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Physicians J. S. McIhaney and F. M. Bush have written this short but fact-filled book, aptly titled *Hooked: New Science on How Casual Sex Is Affecting Our Children* (Chicago, IL: Northfield Publishing, 2008), to make the general public aware of emerging scientific understanding of brain development as it pertains to adolescent sexuality. The authors give clear and easy-to-read insight into how nature has intended human beings to function optimally and why sexual behavior is reserved for marriage.

A unique contribution of the book is the authors' assertion that in addition to pregnancy and STDs, a third risk of casual sex among youth has to do with how sex affects the development of the brain. Defining sexual activity as "any intimate contact between two individuals that involves arousal, stimulation, and/or a response by at least one of the two partners" (p. 16), they then describe research into the crucial effects of dopamine, oxytocin, and vasopressin following sexual activity.

Dopamine is the neurotransmitter that causes a person to feel good when he or she does something exciting or rewarding, such as engage in sex or undertake dangerous, thrill-seeking behavior. It helps guide human behavior through reinforcement, particularly in the brains of adolescents. However, as the authors note, dopamine is also values-neutral—when released in response to sexual activity, it promotes emotional bonding whether the context for that sexual activity is a one-night stand or a lifelong mate. This consequently leaves young people unwittingly at risk for becoming attached (thus "hooked") to an undesirable partner.

Meanwhile, oxytocin, a hormone in the brain that promotes bonding in females, exerts a powerful influence via sexual activity. The authors observe:

When two people touch each other in a warm, meaningful, and intimate way, oxytocin is released into the woman's brain. The oxytocin then does two things: (1) increases a woman's desire for more touch and (2) causes bonding of the woman to the man she has been spending time in physical contact with. (p. 37)

This bonding is so influential that it can cloud the woman's judgment regarding her partner.

If a young woman becomes physically close to and hugs a man, it will trigger the bonding process, creating a greater desire to be near him and, most significantly, place greater trust in him. Then, if he wants to escalate the physical nature of the relationship, it will become harder for her to say no. (p. 39)

Once established, this connection cannot be undone without great emotional pain.

The neurohormone vasopressin does for men what oxytocin does for women except it not only bonds the man to his mate, but also promotes his attachment to his children. From their analysis of modern neuroscience, McIhaney and Bush conclude that, in a manner similar to females, male adolescents and young men who engage in casual sex

do not realize that this pattern of having sex with one woman and then breaking up and then having sex with another woman limits them to experience only one form of brain activity common to humans involved sexually—the dopamine rush of sex. They risk damaging a vital, innate ability to develop the long-term emotional attachment that results from sex with the same person over and over. . . . The individual who goes from sex partner to sex partner is causing his or her brain to mold and gel so that it eventually begins accepting that sexual pattern as normal. The pattern of changing sex partners therefore seems to damage their ability to bond in a committed relationship. (p. 48)

The authors then provide a clarifying metaphor for this process: the inability to bond after multiple sexual relationships is akin to trying to use the same strip of adhesive tape repeatedly; after repeated uses, the tape is no longer sticky enough to adhere to anything. The kind of attachment damage that occurs after repeated sexual encounters is, in many

respects, more pernicious than pregnancy or STDs, because it typically goes unperceived by affected individuals while causing ongoing difficulties in establishing a lifelong and satisfying relationship. Weighing all of the scientific evidence, the authors conclude that human sexuality is thus designed to function best when a man and woman come to marriage without having worn away their brain's "adhesive potential" through a history of past sexual partners.

Hooked does *not* imply that a woman who shows affection for a man once or even several times will experience such a flurry of neuro-hormonal reactions that unchangeable attachment to this man will invariably result. A single hug in itself is unlikely to forever change her neuro-chemistry and behavior toward all of the future men with whom she may interact. Rather, the book suggests that one hug is more like taking a drink of alcohol than like having a lobotomy.

For most if not all women, the effect of giving and receiving affection is more like drinking alcohol—in other words, the effect is real, but initially it is only temporary. However, staying with the alcohol metaphor, consuming enough alcohol over time may cause a lobotomy-like reaction in the brain—making it extremely difficult, if not impossible, to undo the effects, at least without great emotional pain. Transferring that to a sexual context, the more often a man and woman engage in physical intimacy, the more intensely the woman is likely to become attached to the man. Of course, some individuals may be more or less prone to such neuro-hormonal reactions, depending on their unique bio-psycho-social endowment, something that includes their past relationship history.

Overall, McIhaney and Bush have done a great service by putting this information into the hands of the general public, thereby providing scientific support for traditional sexual morals that have been taught for millennia. In addition to commentary on the effects of sexual behavior, the authors offer sound practical advice to parents and those who are entrusted with guiding youth through the "land mines" of emotional, relational, and sexual development. The authors stick solely to the science of the matter and do not

193

engage in moralizing or religious persuasion, making this book ideal for high school or college health teachers—and even religious leaders—who want a scientific basis for their faith-based values surrounding sexual behavior.

Clinically, reading *Hooked* promises to enable therapists and their clients to better understand the biochemical reasons why prior non-marital sexual activity of any kind creates difficulty in achieving committed relationships and faithful marital sexual relations.