Neurological Effects of Pornography

The neurological study of pornography is still in its infancy, but neurophysiology provides insight into pornography's power to form the cognitive and emotional habits of the user. As is becoming clear from many different areas of neurological study, repetition of an act establishes new neural pathways, thus facilitating the retention of these behaviors.[1)]

Other research is uncovering the link between dopamine, a hormone that produces feelings of pleasure, and the effect that a pornographic image has. PET scans (a nuclear medicine three-dimensional imaging technique) of both pornography-addicted adults and non-addicted adults viewing pornography show brain reactions for both groups similar to cocaine addicts looking at images of people taking cocaine.[2)] Findings such as these have led scholars to posit that "emotionally arousing images imprint and alter the brain, triggering an instant, involuntary, but lasting, biochemical memory trail."[3)] A small experimental indication of this type of imprinting occurred in one study where participants saw a board of words that were either sexual or neutral. All participants retained more sexual words than neutral words, but pornography consumers retained even higher amounts of sexual words.[4)]

Treatment programs for sex offenders and pornography addicts, designed to break patterns of deriving pleasure from viewing pornography, use a technique called "safeguarding." "Safeguards" are negative thoughts used to interrupt sexual fantasies. Whenever patients have sexual fantasies, they are taught to think of a safeguard; for example, they may produce a mental image of bugs crawling on them, a public address system broadcasting their thoughts, or an image of a police officer watching their sexual behavior. Through this method, participants learn to interrupt their fantasies[5)] and, it is thought, gradually displace the old neurological pathway with a different and safer one.

1)
For instance, see John J. Ratey and Eric Hagerman, *Spark: The Revolutionary New Science of Exercise and the Brain* (New York: Little Brown and Company, 2008).

2)
Mary Anne Layden, Center for Cognitive Therapy, Department of Psychiatry, University of Pennsylvania, (Testimony for U.S. Senate Committee on Commerce, Science and Transportation, November 18, 2004).

3)
President Judith A. Reisman, "The Brain Science Behind Pornography Addiction and the Effects of Addiction on Families and Communities," The Institute for Media Education, (Testimony before the United States Senate, Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, November 18, 2004), 1.

4)
Marie-Elaine M. Corbeil and Stuart J. McKelvie, "Pornography Use and Recall of Sexual and Neutral Words," *North American Journal of Psychology* 10, (2008): 363-84, 380.

5)
Scott Aylwin, John R. Reddon, and Andrew R. Burke, "Sexual Fantasies of Adolescent Male Sex Offenders in Residential Treatment: A Descriptive Study," *Archives of Sexual Behavior* 34, (2005): 231-39, 233-35.

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