"*It's a boredom thing.*" Arousal Habituation

The Coolidge Effect

- The male brain spikes dopamine to novel (new) sex partners seen in porn.
- This triggers a long-lasting protein called "Delta PhosB" which promotes binging.
- In turn the male develops a numbed response to routine sexual opportunities.
- Develops hyper-reactivity to pornography.

Morton and Boris B. Gorzalka (2015) explain the *Coolidge Effect* and *Arousal Habituation*.

> The effect on sexual functioning of partner novelty versus partner familiarity has been examined in nonhuman species, often driven by the potential for extrapolation to human behavior. In laboratory studies, a male typically copulates with an estrous female several times and then stops. When the original female is replaced with a new estrous female, the male begins to copulate with the novel female (Symons, 1979). This phenomenon of renewed sexual interest in response to a novel female is referred to as the Coolidge Effect (Wilson, Kuehn, & Beach 1963), and has been the focus of a large number of studies in nonhuman species. . . It is clear from the literature in nonhuman species that having a novel partner increases the motivation of several species to engage in copulatory behavior. (pp.593-594)
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> . . . Sexual behavior is clearly fundamental to evolutionary theory, given that evolutionary success is based upon producing the maximum number of descendants. Consequently, an important focus of evolutionary theorists has been to determine which mating strategies best accomplished this goal for our ancestors. It is clear that in most modern societies, men and women are no longer trying to produce the maximum number of offspring possible. However, modern humans have inherited the adaptations that led to their ancestors fulfilling this goal. (p.594)
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> . . . Most laboratory studies in this area have employed similar methodology. During habituation trials the same erotic stimulus (e.g., an erotic film clip) is shown repetitively, it is then followed by a novel stimulus (e.g., a different erotic film clip), and then again followed by the original stimulus. Both physiological and subjective arousal are measured throughout. Parallels are often drawn between exposure to familiar versus unfamiliar erotic stimuli and familiar versus unfamiliar sexual partners. (p.597)
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> The majority of this research has been conducted with male participants. Habituation of sexual arousal in response to a familiar stimulus has been found to occur in response to a number of different forms of sexual stimuli (Lalumiere & Quinsey, 1998; O'Donohue & Geer, 1985; Zillmann & Bryant, 1988). . . Studies have also consistently found a reinstatement of sexual arousal in the novel stimulus trial. This has been primarily reported to occur with erotic film stimuli (Both, Laan, & Everaerd, 2011; Kelley & Musialowski, 1986; Koukounas & Over, 1993, 1999, 2000). The presence of this effect in response to sexual fantasy, however, has been less consistent (Koukanous & Over 1993; Smith & Over, 1987). (pp.597-598)
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> A small number of studies have examined habituation of female sexual arousal. Laan and Everaerd (1995) found no differences in changes to sexual arousal between women presented the same erotic slide, and those who were shown different slides. They attributed this to a floor effect, as the slides yielded low levels of sexual arousal. Replication of this

study with the inclusion of film stimuli and a greater number of trials resulted in lower levels of physiological arousal in the constant condition, and in increase in subjective and physiological arousal with the introduction of novel stimuli. However, participants in the constant condition still showed considerable subjective and physiological arousal. Other research has found repeated presentations of erotic film clips, as well as repeatedly engaging in the same sexual fantasy, reduces subjective and physiological arousal in women, and novel presentations of the stimuli lead to a recovery of sexual arousal (Both et al., 2011; Meuwissen & Over, 1990). (pp.597-598)

There is preliminary support for the hypothesis that familiarity reduces sexual arousal and desire. Laboratory studies have found a clear reduction in sexual arousal in response to familiar sexual stimuli in men (Both et al., 2011; Kelley & Musialowski, 1986; Koukounas & Over, 1993, 1999, 2000, 2001; Lalumiere & Quinsey, 1998; O'Donohue & Geer, 1985; Zillmann & Bryant, 1988). This also appears to be the case in women (Both et al., 2011; Meuwissen & Over, 1990). . . Several areas of research provide support for the hypothesis that novelty produces increases in sexual arousal and desire. The laboratory studies consistently revealed that novel stimuli produced increases in sexual arousal in men (Both et al., 2011; Kelley & Musialowski, 1986; Koukounas & Over, 1993, 1999, 2000, 2001; Lalumiere & Quinsey, 1998), and women (Both et al., 2011; Meuwissen & Over, 1990). . . In regards to sex differences, both men and women habituate to repeated stimuli and exhibit increased arousal to novel stimuli in laboratory studies (Both et al., 2001; Kelley & Musialowski, 1986; Koukounas & Over, 1993, 1999, 2001; Lalumiere & Quinsey, 1998; Meuwissen & Over, 1990). (pp.602-603)

This material is quoted from the following study:

Role of partner novelty in sexual functioning: A review.
Morton, Heather. Gorzalka, Boris B..
Journal of Sex & Marital Therapy, Vol 41(6), Nov, 2015. pp. 593-609.
Abstract:

This review investigates whether sexual desire and arousal decline in response to partner familiarity, increase in response to partner novelty, and show differential responding in men and women. These questions were considered through the perspective of two leading evolutionary theories regarding human mating strategies: sexual strategies theory and attachment fertility theory. The hypotheses emerging from these theories were evaluated through a critical analysis of several areas of research including habituation of arousal to erotic stimuli, preferences regarding number of sexual partners, the effect of long-term monogamous relationships on sexual arousal and desire, and prevalence and risk factors associated with extradyadic behavior. The current literature best supports the predictions made by sexual strategies theory in that sexual functioning has evolved to promote short-term mating. Sexual arousal and desire appear to decrease in response to partner familiarity and increase in response to partner novelty in men and women. Evidence to date suggests this effect may be greater in men.

Additional research on Arousal Habituation includes:

Focusing 'hot' or focusing 'cool': Attentional mechanisms in sexual arousal in men and women.
Both, Stephanie. Laan, Ellen. Everaerd, Walter.
Journal of Sexual Medicine, Vol 8(1), Jan, 2011. pp. 167-179.
Abstract:

Introduction: Knowledge about the regulation of sexual emotion may add to the understanding of

sexualproblems such as diminished sexual desire and hypersexuality. Aim: To investigate the regulation of sexualarousal by means of attentional focus in healthy sexually functional men and women. Method: Using a habituation design with attentional strategies, it was investigated whether a focus on hot, emotional information of sexual stimuli would sustain or amplify sexual responses, whereas a focus on cool, cognitive information would weaken sexual responses. Main Outcome Measures: Genital response (in women measured by vaginal photoplethysmography assessing vaginal pulse amplitude, and in men measured by mechanical penile strain gauge assessing penile circumference) and subjective report of sexual arousal and absorption. Results: Attenuation of sexual feelings by attentional focus was observed, with stronger sexualfeelings under the hot focus condition than under the cool focus condition. Also, sexual feelings diminished during repeated erotic stimulation, and increased with the introduction of novel stimulation, indicating habituation and novelty effects. Contrary to the expectations, the hot attentional focus did not preclude habituation of sexual arousal. Conclusions: Attentional focus has substantial regulatory effects on subjective sexual arousal. Taking a participant and emotion-oriented focus rather than a spectator and stimulus-oriented focus while viewing erotic stimuli, enhances feelings of sexual arousal. Implications for the treatment of hypoactive sexual desire, sexual arousal disorder, and hypersexuality are discussed, as well as future directions for studying regulation of sexual emotion.

Habituation of male sexual arousal: Effects of attentional focus.

Koukounas, Eric. Over, Ray

Biological Psychology, Vol 58(1), Sep, 2001. pp. 49-64.

Abstract:

Three experiments are reported with a total of 24 men (aged 18–31 yrs) demonstrating that levels of penile tumescence and subjective sexual arousal are greater when men employ participant-oriented rather than spectator-oriented attentional focus while viewing an erotic film segment. Under each instructional set, there was a reduction in sexual arousal during repeated erotic stimulation. As sexual arousal habituated, the men reported feeling less absorbed during erotic stimulation. When these associated changes in attentional focus (absorption) were partialled out through analysis of covariance, sexual arousal remained relatively stable over trials, suggesting that sexual arousal is less likely to habituate if attentional focus remains constant during repeated erotic stimulation. Further directions for studying associations between habituation of sexualarousal and cognitive processing are discussed.

Changes in the magnitude of the eyeblink startle response during habituation of sexual arousal.

Koukounas, Eric. Over, Ray

Behaviour Research and Therapy, Vol 38(6), Jun, 2000. pp. 573-584.

Abstract:

Modulation of the startle response was used to examine emotional processing of sexual stimulation across trials within a session. Eyeblink startle was elicited by a probe (burst of intense white noise) presented intermittently while men (mean age 22.8 yrs old) were viewing an erotic film segment. Repeated display of the film segment resulted in a progressive decrease in physical & subjective sexual arousal. Habituation of sexual arousal was accompanied by a reduction over trials in the extent the Ss felt absorbed when viewing the erotic stimulus and by an increase over trials in the magnitude of the eyeblink startle response. Replacing the familiar stimulus by a novel erotic stimulus increased in sexual arousal, absorption and reduced startle (novelty effect), while dishabituation was evident for all 3 response measures when the familiar stimulus was reintroduced. This pattern of results indicates that with repeated presentation an erotic stimulus is experienced not only as less sexually arousing but also less appetitive and absorbing. The question of whether habituation of sexual arousal is mediated by changes in attentional and affective processing over trials is discussed, as are clinical contexts in which eyeblink startle can be used in studying aspects of sexualfunctioning.

Allocation of attentional resources during habituation and dishabituation of male sexual arousal.

Koukounas, Eric. Over, Ray

Archives of Sexual Behavior, Vol 28(6), Dec, 1999. pp. 539-552.

Abstract:

A secondary-task probe (tone) was presented intermittently while 16 men (aged 18–30 yrs) viewed erotic film segments across a session involving 18 trials with the same film segment (habituation), then 2 trials with different film segments (novelty) and 2 trials with reinstatement of the original segment (dishabituation). Reaction time to the tone (an index of the extent processing resources were being committed to the erotic stimulus) shifted during the session in parallel with changes that occurred in penile tumescence and subjective sexual arousal. The decrease in sexual arousal over the 1st 18 trials in the session was accompanied by a progressively faster reaction to the tone, novel stimulation led to recovery of sexualarousal and a slower reaction to the tone, and on trials 21 and 22 sexual arousal and reaction time levels were above the values that prevailed immediately prior to novel stimulation. Results are discussed with reference to the relationship between habituation and attention.

Pavlovian conditioning of sexual interests in human males.

Lalumière, Martin L.. Quinsey, Vernon L.

Archives of Sexual Behavior, Vol 27(3), Jun, 1998. pp. 241-252.

Abstract:

Pavlovian conditioning of the human male sexual response may be involved in the ontogenetic development of sexual interests and may be responsible for individual differences. The authors attempted to demonstrate Pavlovian conditioning of sexual interests in a nonclinical sample of 10 adult male college students. Ss were exposed to 11 pairings of a slide of a moderately attractive, partially nude female target and a highly arousing videotape depiction of heterosexual sexual interactions 10 other Ss were exposed to 11 presentations of the target alone. Ss exposed to both the target and the videotape contingency showed a 10% relative increase in sexual arousal to the target. Ss exposed to the target alone shoed an 11% relative decrease in sexualarousal to the target. This group differences in interpreted as resulting from both conditioning and habituation.

A clinical investigation of the possible effects of long-term habituation of sexual arousal in assisted covert sensitization.

Plaud, Joseph J.. Gaither, George A.

Journal of Behavior Therapy and Experimental Psychiatry, Vol 28(4), Dec, 1997. pp. 281-290.

Abstract:

Presents a case study of a 24-yr-old male sexual offender that investigated the possibility that at least part of the clinical effects of a widely used behavior therapy technique for sexual deviations, covert sensitization, may directly involve habituation processes. At 30- and 90-day followup to completion of 6 sessions of covert sensitization treatment, the S clearly showed clinical progress in both his physiological and self-report of arousal toward sexually deviant stimuli (female child coercion and fondling, and male child fondling). However, while expected decrements in sexual arousal to sexually inappropriate stimuli were observed, decrements in sexual arousal and self-report were also observed for sexually appropriate stimuli which received no aversive consequences, only repeated stimulus presentation over time. It is argued that habituation processes need further empirical investigation as a potential behavioral mechanism in the beneficial clinical effects usually noted in covert sensitization procedures.

The long-term habituation of sexual arousal in human males: A crossover design.

Plaud, Joseph J.. Gaither, George A. Henderson, Susan Amato Devitt, Mary K.

The Psychological Record, Vol 47(3), Sum 1997. pp. 385-398.

Abstract:

Short-term and long-term habituation of sexual arousal was investigated in a crossover design. Nine undergraduate males completed 6 sessions semiweekly for 3 consecutive weeks. Each session consisted of 15 stimulus periods (sexually explicit audio stimuli) and 15 detumescence periods. During one half of the sessions Ss were exposed to 15 different scripts (varied condition); during the remaining sessions Ss were exposed to the same script 45 times (15 trials for each of 3 sessions, the constant condition). The constant stimulus condition was the experimental habituation condition, whereas the varied stimuli served as a control for physiological fatigue. Ss showed systematic decreases in penile responding within the 2nd and 3rd constant stimulus conditions, but no systematic decreases were noted in any of the varied stimulus conditions. Ss evidenced significant long-term decreases in physiological responding only in the constant stimulus condition as well as short-term decreases in subjective report of arousal. Long-term habituation of sexual arousal may be related to molar behaviors such as promiscuity and the spread of sexually transmitted diseases, and may be tied to sociobiological accounts of long-term sexual behavior patterns in human males.

Habituation of female sexual arousal to slides and film.

Laan, Ellen. Everaerd, Walter

Archives of Sexual Behavior, Vol 24(5), Oct, 1995. pp. 517-541.

Abstract:

Examined the habituation of genital and subjective sexual arousal to slides and films in women. In Exp 1, 32 women (18–30 yrs old) were assigned to 1 of 2 conditions: They were exposed either to the same erotic slide on repeated trials, or to various slides. Genital response, subjective sexual arousal and emotional experiences were measured. In Exp 2, habituation responses of 42 women (18–37 yrs old) to erotic film excerpts were assessed. In both studies, repeated erotic stimulation was followed by a novel erotic stimulus, to assess the effect of a novel stimulation in a sequence of uniform stimulations. Results show that slides yielded little sexual arousal; a small decline in genital responding was recorded. Ss sustained significant levels of genital arousal even after 21 trials of uniform stimulation. Zygomatic activity decreased over trials, suggesting decreasing positive effect as a result of uniform stimulation.

Habituation of sexual arousal: Product and process.

Over, Ray. Koukounas, Eric

Annual Review of Sex Research, Vol VI, 1995. pp. 187-223.

Abstract:

Surveys the methodological issues in assessment of sexual arousal habituation, prior to a review of psychophysiological studies in which sexual arousal during repeated erotic stimulation within a single session or across sessions has been measured. Research bearing on cognitive, attentional, and affective states that change over trials in parallel with sexual arousal is then discussed in the context of whether habituation of sexual arousal can be attributed to changes in information processing over the course of repeated erotic stimulation. The authors consider whether identifying the nature of and basis for habituationof sexual arousal has wider implications for understanding sexual functioning.

Habituation and dishabituation of male sexual arousal.

Koukounas, Eric. Over, Ray

Behaviour Research and Therapy, Vol 31(6), Jul, 1993. pp. 575-585.

Abstract:

16 men were tested under conditions where they viewed the same segment of erotic film on many occasions or engaged repeatedly in the same erotic fantasy. Decrements in penile tumescence and subjective sexualarousal over trials were accompanied by reports from Ss that they felt less absorbed in the events depicted in film or fantasy (and in the case of fantasy, that the images they formed became less vivid). Results show that habituation (reduction in physiological and subjective measures of sexual arousal over trials) was less when allowance was made for the manner in which

absorption (and in vividness of imagery in the case of fantasy) changed during erotic stimulation. Increases in sexual arousal when novel erotic stimulation was introduced following habituation, as well as the dishabituation found when the original stimulus was reinstated, also correlated with the extent absorption and vividness of imagery shifted under these conditions

The long-term habituation of sexual arousal in the human male.

O'Donohue, William. Plaud, Joseph J.

Journal of Behavior Therapy and Experimental Psychiatry, Vol 22(2), Jun, 1991. pp. 87-96.

Abstract:

Examined whether long-term habituation of male sexual arousal would occur in response to repeated presentations of a constant eliciting stimulus. Five undergraduate volunteers each had 6 sessions at 1-wk intervals of 15 presentations of erotic audiotapes. For 3 wks, the same audiotape was presented, and for each of the other 3 sessions a different audiotape was presented at every stimulus trial. As indicated by penile plethysmography and self-report, in the constant stimulus conditions the criteria for long-term habituation generally were met. By contrast, responses to variable stimuli remained consistently high. Long-term habituation may underlie low sexual desire disorders and promiscuity in male homosexuals.

Habituation and dishabituation of female sexual arousal.

Meuwissen, Ingrid. Over, Ray

Behaviour Research and Therapy, Vol 28(3), 1990. pp. 217-226.

Abstract:

Measures of subjective and physiological sexual arousal were taken within a session while 8 female undergraduates either viewed the same segment of erotic film on many occasions or employed the same sexual fantasy over a number of trials. For both film and fantasy there were significant reductions in subjective sexual arousal and average pulse amplitude during the course of repeated erotic stimulation. Subsequent presentation of novel erotic simuli led to recovery in sexual arousal. Bases for habituation and dishabituation of female sexual arousal are discussed.