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2 **Sex as Bonding Mechanisms**

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5 **Synonyms**

6 [Affiliation and sexual behavior](#); [Affiliation and](#)
7 [sexuality](#)

8 **Definition**

9 The way in which sexual behavior promotes the
10 formation and maintenance of social relationships

11 **Introduction**

12 Sexual behavior is the means to reproductive suc-
13 cess, the currency of evolution. Sexual behavior is
14 promoted by sexual pleasure and orgasm; both of
15 these, in behaviorist terms, are unconditioned
16 stimuli that reinforce behavior (Fleischman
17 2016). Sexual pleasure and orgasm increase the
18 positive associations of an individual towards a
19 specific conspecific. In species that care for off-
20 spring, sexual pleasure facilitates close bonds and
21 cooperation to care for offspring. In species where
22 only one parent cares for offspring and in species
23 that do not pair bond, sexual pleasure facilitates
24 repeat copulations with a partner who is more

likely to choose them compared with unfamiliar 25
others. Pair-bonded species may develop longer- 26
term preferences than more promiscuous species 27
(Coria-Avila et al. 2016). 28

Biological Mechanisms of Bonding 29

Sexual behavior facilitates pair bonds through a 30
few different mechanisms; these have mostly been 31
extrapolated from work on nonhuman animals. 32
Some of the major facilitators of sexual bonding 33
are dopamine, oxytocin, and vasopressin. In spe- 34
cies of rodents like rats and mice as well as the 35
monogamous **Prairie Vole**, it has been found that 36
oxytocin and vasopressin are necessary for devel- 37
oping partner preferences (Young and Wang 38
2004). In humans, oxytocin and vasopressin are 39
shown to be elevated during sex and orgasm in the 40
blood of women and men, respectively (Young 41
and Wang 2004). In women, oxytocin levels dur- 42
ing sex have been shown to be associated with 43
positive affect and thus also implicated in 44
improved sexual bonding (Meston and Frohlich 45
2000). Dopamine is also implicated in the reward 46
circuitry around sexual behavior and pair bonds 47
and may be maintained by partner proximity 48
showing reinforcing properties through previous 49
sexual behavior. 50

51 **Human Social Bonding Facilitated** 52 **Through Sexual Behavior**

53 Sexual behavior is inherently reinforcing because
54 of its link to reproductive success, but this pleasure
55 **has been** expected to reinforce other kinds of
56 social bonds. In nonhuman primates, same-sex
57 sexual behavior is not uncommon and much is
58 thought to be affiliative (Vasey 1995). For example,
59 female bonobos often have sex with one
60 another and the bonds forged in this way allow
61 them to form alliances to challenge larger stronger
62 males (Vasey 1995). In humans, same-sex sexual
63 behavior or homoerotic behavior may be used to
64 promote affiliation. Progesterone, a hormone
65 associated with affiliation, is associated with
66 greater self-reported desire to engage with others
67 of the same sex, and men who are primed with
68 affiliation related words are more likely to report
69 wanting to engage in homoerotic behavior, but
70 especially when male subjects had higher salivary
71 progesterone (Fleischman et al. 2015). Women are
72 more likely to be bisexual than men and this may
73 have evolved to promote alloparenting, sharing
74 attention, and resources in caring for offspring
75 (Kuhle and Radtke 2013). Similarly, men may
76 have evolved the propensity for same sex behavior
77 for the purposes of affiliation (Kirkpatrick
78 2000). The human propensity to engage sexually
79 with those of the opposite sex, even when there is
80 no possibility of reproduction, may also have the
81 function of promoting and maintaining adaptive
82 social bonds (Fleischman 2016).

83 **Conclusion**

84 Sexual behavior has a number of neurobiological
85 correlates that show evidence for design in the

86 service of forming and maintaining social bonds
87 such as oxytocin, vasopressin, and dopamine.
88 Sexual behavior has rewarding properties that
89 reinforce bonds between people of the opposite
90 sex, often in the service of caring for offspring, but
91 also can reinforce other kinds of social
92 relationships.

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