

Adaptive value of homosexual behavior sociology essay



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Studies into the evolution of humans and essentially any organism in the world clearly prove that the concepts and tenets of Evolutionary Theory are much more complicated than the common, simple idea of “survival of the fittest”. The subject of homosexuality is no different in this distinction; even into modern society, human behavior has been in heated debate to uncover whether it is more a result of heredity or environmental factors.

Homosexuality as a biological concept and the definition I will be using refers to same-sex sexual behavior between members of the same gender.

Understanding Evolution, and natural selection as an extension of it, will help to clarify and comprehend how homosexuality fits into this framework of ideas. Modern evolutionary theory incorporates both Charles Darwin’s observation that there is heritable variability in traits and that variants best suited to an environment are more likely to be passed on (natural selection) as well as Gregor Mendel’s work on how that variation is inherited to further generations. Most importantly natural selection acts on phenotypes which are observable and often measurable expressions of a trait (Stinson, Bogin and O’Rourke 824). Phenotypes are not purely a result of genes; they also include (most importantly) the influence and interaction with the environment. When individuals have a phenotype that is advantageous in an environment, often this results in an adaptation where their genes are most likely to survive and they are able to reproduce to contribute alleles to the next generation (Stinson, Bogin and O’Rourke 7). Behaviors, as we are seeing with the increasingly developing field of Sociobiology, are often a result of both biological and social components. As clinical psychologist Frank Muscarella points out when “behaviors commonly exhibited by humans can be expected to have contributed to survival and reproduction in <https://assignbuster.com/adaptive-value-of-homosexual-behavior-sociology-essay/>

the evolutionary past” those genes that influence the behavior will spread (Muscarella, Fink and Grammer 394).

In regards to homosexuality, and male homosexuality specifically, this behavior fits well into this model because there is increasing evidence that there are both genetic and social aspects that predispose individuals to homosexual behavior. A common misconception about homosexual behavior is that it is both a rare occurrence and it is inherently deleterious because same-sex sexual acts do not result in offspring; yet the commonality of homosexual behavior in itself indicates that there is an evolutionary factor selecting for it. In reality homosexual behavior is and can be seen in countless species in the world. Biologist Bruce Bagemihl in his compilation of studies on animal homosexuality shows that “ homosexual behavior occurs in more than 450 different kinds of animals worldwide, and is found in every major geographic region and every major animal group” (Bagemihl 12). Similarly biodiversity specialist R. C. Kirkpatrick in his research cataloged the geographical distribution of forms of homosexual behavior in a variety of human populations around the world (Kirkpatrick 387). So it is safe to presume that there are other factors that play into the adaptation of homosexual behavior, some may have more of a physical evolutionary basis, while others more related to social evolutionary mechanisms but many theories have become potential explanations of this seemingly paradox of evolution that occurs quite often within and between species.

The important distinction is that homosexuality, like many traits, isn't attributed to one model or theory. Multiple theories attempt to help to explain how a behavior attributed to something as seemingly ironic as <https://assignbuster.com/adaptive-value-of-homosexual-behavior-sociology-essay/>

nonreproductive sex contributes to an adaptive advantage in human evolution. One of the first and oldest hypotheses revolves around the theory of kin selection where selection is made for increasing inclusive fitness by increasing the reproductive fitness of kin (since parents and siblings share fifty percent of their genetic material). Another similar theory revolves around the ideas of reciprocal altruism and an adaptive advantage of homosocial behavior. Lastly, a more recent theory proposes a more physical genetic basis revolving around sexual antagonism, the theory being that the same genes that promote homosocial behavior in males is beneficial to the reproductive potential of relatives.

II) Kin selection Theory

Kin selection theory operates on the assumption that there is some genetic basis for homosexuality and genes for it are maintained in a population by homosexuals increasing their inclusive fitness by contributing to the reproductive success of relatives, in theory “ these kin would then have a better chance of reproducing and of carrying forward genes common to both the homosexual and his kin” (McKnight 129). Unfortunately I believe lack of data has led to this hypothesis being prematurely discredited by many researchers. On the other hand inconsistencies and the lack of data as I’ve seen is more due to the types of environments the studies are being done in. A study on the role of homosexuality in males using data from London residents found that “ there were no significant differences between heterosexual and homosexual men in general familial affinity, generous feelings (willingness to provide financial and emotional resources), and benevolent tendencies” (Rahman and Hull 462). However modern western

and industrial societies are vastly different than the historical environments where much of human evolution has taken place. Taking into account the length of time we can track homosexual behavior has persisted, it's most likely that this adaptation is a result of a specific type of environment and cultures that are more representative of ancestral environments will likely give us a better case study. A great case study by evolutionary psychologists Paul Vasey and Doug VanderLaan also tested this theory Samoan Pacific Islanders; within Samoan culture there is a gender category of men called fa'afafine that tend to be exclusively attracted to other adult men, an excellent parallel to exclusive homosexual behavior (Association for Psychological Science). They found that " the fa'afafine are much more altruistically inclined toward their nieces and nephews than either Samoan women or heterosexual men" (Association for Psychological Science). On the surface it doesn't seem like kin selection alone is enough to offset the costs of forgoing direct reproduction, yet more and more data is becoming evident that a combination of biological and social mechanisms may contribute to offset these costs. Again specialist Kirkpatrick helps us understand the forces that may be at work; kin selection operates on three basic assumptions "(1) that homosexual behavior reduces individual reproductive success, (2) that lineages with homosexuals have greater reproductive success than lineages without, and (3) that homosexual behavior is typically seen in individuals of low reproductive potential" (Kirkpatrick 391). The third observation that this behavior is seen in individuals with low reproductive potential is an important aspect of our next theory.

III) Reciprocal Altruism and Homosocial Behavior

Altruistic behavior is essentially any behavior of an individual that benefits another unrelated individual at a cost to its own reproductive fitness. As an extension of this, reciprocal altruism assumes that this cost is offset by the likelihood of the return benefit (Trivers 35). Applied with research on homosexual behavior there is strong evidence that this type of behavior is an evolutionary benefit for social relationships and is closely linked with survival. This theory has become known as the “Alliance Theory” and supposes that same-sex “sexual behavior may have reinforced same-sex alliances, which contributed directly to survival and indirectly to reproduction” (Muscarella, Cevallos and Siler-Knogl 771). An important and vital aspect of this theory is to recognize that homosexual behavior does not discount the occurrence of heterosexual behavior. In fact as Muscarella points out individuals in many species including humans both heteroerotic and homoerotic behavior have been important social aspects for most of our evolutionary history (Muscarella, *The Evolution of Homoerotic Behavior in Humans* 53). Same-sex sexual behavior in humans likely contributed to survival by reinforcing social alliances; by forming social ties, overall survival of members would be directly increased as well as lower status individuals increasing their reproductive fitness by gaining access to mates through a higher ranked member. Average reproductive success increases by adapting to include a moderate level of homosexual behavior (Kirkpatrick 389). This type of relationship can be seen in both chimpanzees and gorillas where lower status males that form same-sex alliances with higher status males both increase their survival potential and in many cases increase

reproductive potential due to the higher status male allowing reproduction
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with female members (Muscarella, The Evolution of Homoerotic Behavior in Humans 61); (Kirkpatrick 397)). It's likely that genes predisposing behaviors for altruistic behavior, which are a clear adaptive advantage especially in complex social species, are at least to a certain extent the same genes that influence homosexual behavior.

IV) Antagonistic Pleiotropy

Genetics in particular are a complicated study because in many cases genes have multiple effects, these can be based on stages of life and even have separate effects regarding different sexes of the same species. Regarding antagonistic pleiotropy, being the concept that a beneficial effect to one group can have detrimental effects in another, there are two situations that revolve around the same concept. In the first theory it assumes that there is some reproductive advantage to having 'homosexual alleles' in heterosexual or bisexual men, while at some point this becomes a disadvantage as reproductive potential passes the peak level. Likely this advantage relates to "an immediate reproductive advantage by directly enhancing sex drive or some other aspect of sexual performance" (McKnight 76). This creates a great environment for case studies and twin studies in particular are excellent to examine whether this is a plausible explanation. In a twin study carried out on a large number of participants "heterosexuals with a non-heterosexual twin tended to have more opposite-sex partners than do heterosexual twin pairs" indicating that genes responsible for homosexual predispositions likely have a reproductive benefit in heterosexuals (Zietsch, Morley and Shekar 424). Similarly, the next situation proposes that the same genes responsible for homosexual behavior in men

are also responsible for higher fecundity in female relatives. Using pedigree demographics comparing both the maternal and paternal line of 98 homosexual and 100 heterosexual men and their relatives, evolutionary psychologist Andrea Camperio-Ciani found that “ female maternal relatives of homosexuals have higher fecundity than female maternal relatives of heterosexuals and that this difference is not found in female paternal relatives” (Ciani, Francesca and Capiluppi, Evidence for Maternally Inherited Factors Favouring Male Homosexuality and Promoting Female Fecundity 2217). This along with a second study that found this trend in even first time mothers supports the theory of homosexuality as antagonistic selection where the same genes selected for higher fecundity in females promote homosexual behavior in males (Iemmola and Camperio-Ciani 393).

V) Conclusions

It's obvious that the evolution of male homosexuality as an adaptation has many facets, understandably it's just as complicated as any human social behavior, but we are gaining ground on understanding the genetic and social implications of behavior and how evolution has shaped these in humans. Overall however it's becoming more and more evident that “ the survival of a human predisposition for homosexuality can be explained by sexual orientation being a trait that is influenced by a number of pleiotropic genes” (Miller 45). For this reason a singular theory is highly unlikely to be sufficient to explain something as complex as homosexuality; multiple theories then likely contribute to the overall model. A gene for altruism, and as an extension homosexuality, likely plays a very important role in Kin selection theory; and it is also probable that sexual antagonism helps offset the cost of

non reproductive behavior. No one theory will be sufficient, but with the combined perspectives and research of genetics, sociobiology, psychology and other disciplines the adaptive benefit of this behavior will become more understandable.