

Kiona Hagen Niehaus

Human Evolution-Final Project Summary

Professor Jensen

19 April 2011

For my final project, I have created a photograph that reflects the theory of homosexual orientation in humans as an evolutionary advantage, a theory best stated by biologist Joan Roughgarden. Roughgarden posits that homosexual behavior in humans is a useful way of building "...alliances through the exchange of pleasure" (261), and these relationships are useful politically, socially and culturally. Also, Roughgarden says, "I conjecture that a polymorphism in sexual orientation may indicate alternative strategies of same-sex relationships that are equally effective in achieving access to net reproductive opportunity." (260-61) Since homosexuals in Westernized countries statistically reproduce at least half as often as heterosexuals (more for female homosexuals) and is present in 5-10% of the human population, it is highly improbable that homosexuality as any kind of genetic defect (given that such a defect is not rare or truly impeding to reproduction). Diversity in the human family is desirable, and the adaptive qualities of homosexual sexuality only contribute to that diversity. These concepts are reflected in the photograph I have created. Though all four figures are connected spatially, the gravity of the image is contained in the connection between the two same-sex couples. This emphasis reflects a respect for this useful and relatively common adaptation within humans. My goals in creating this piece were to emphasize the important adaptive qualities of homosexual relationships as adaptive social alliances and to negate the conception of homosexuality in humans as an evolutionarily defective trait.

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Human Evolution-Final Project Bibliography

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### Bibliography

Roughgarden, Joan, "Same-Sex Sexuality", *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*, Los Angeles, CA: University of California Press, 2009.

In this chapter, Roughgarden discusses the value of homosexual behavior in animals, particularly in forming social alliances, acquiring goods, and reducing hostility. "Natural selection favors traits that increase the average total offspring...which depends on both fertility and survival." (156) This understanding of the way homosexual behavior functions in non-human animal societies is both supplemental and quite valuable to my understanding of human homosexual relations. If homosexual behavior in the animal world has been seen to produce more surviving offspring in some cases, it is helpful to be aware of this in my creation of a piece about homosexuality as an adaptation.

Roughgarden, Joan, "Disease vs Diversity", *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*, Los Angeles, CA: University of California Press, 2009.

The dispute over what constitutes a genetic disease and Roughgarden's argument for homosexuality as diversity rather than as a genetic defect is invaluable to my final project. According to Roughgarden, homosexuality fails to meet the criteria for a genetic defect because, though at least part of homosexual behavior and identity in humans has been found to be likely genetic (twin studies), homosexuality is not deleterious to an individual's survival and is more

common than a genetic defect would be given the unfavorable qualities of such defects. The frequency with which homosexuality is prevalent within current society (at least five percent) suggests that the diversity provided by homosexuality may have adaptive advantages in many environments, and this idea is crucial to my work. Homosexuality is frequently misunderstood as an evolutionarily maladaptive practice, and I seek to change this perception through my portrayal of homosexual relationships as diverse, valuable and necessary.

Roughgarden, Joan, "The Theory of Evolution", *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*, Los Angeles, CA: University of California Press, 2009.

This chapter contains Roughgarden's disagreements with Darwin about Natural Selection, including Darwin's "elitist" view of species hierarchy, which Roughgarden calls "diversity-repressing". (165) The selection patterns represented in other species do not revolve only around finding the fittest and most aggressive mates, but around finding mates that are best adapted to the environment and will be the best parents, giving their offspring the best chance of survival. If engaging in homosexual behavior or relationships is valuable to the survival of offspring in the long run (alliances, etc), then this diversity is directly evolutionarily beneficial. Diversity's beneficial qualities in evolution are cited in the open and equal manner in which my subjects are shown.

Roughgarden, Joan, "Sexual Orientation", *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*, Los Angeles, CA: University of California Press, 2009.

Roughgarden proposes that genetics, hormones, and environment influence whether or not a person is homosexual, as well as that homosexuality runs in families. Homosexuality is

concluded to not be a choice, based on widespread agreement of the scientific community, and the degree of one's sexual flexibility is highly personal. Additionally, the fact that homosexuals still reproduce in large numbers refutes the idea of homosexuality as evolutionarily defective, especially when it is so common (at least 5%) in humans. Roughgarden puts forward that homosexual bonds may arise where they are socially and culturally useful, and are formed through pleasure. These bonds are valuable to society and adaptive to the individual, and I have depicted these bonds as the healthy, evolutionarily adaptive qualities.