

Can We Learn from Animal Models: Scientific Research on Asexual Phenomena in Non-Human Animals

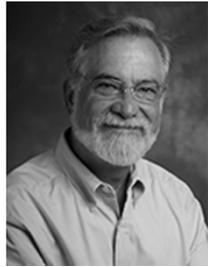
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It's obvious that humans are unlike all animals. It's also obvious that we're a species of big mammal, down to the minutest details of our anatomy and molecules (Jared Diamond, *Third Chimpanzee*, 1).



Thanks to Dr. Kim Wallen, Yerkes Researcher,
Samuel Candler Dobbs Professor of Psychology
and Behavioral Neuroendocrinology

Asexuality

AVEN definition: “An asexual is someone who does not experience sexual attraction.”



Defining the Problem in Scientific Terms

- Is asexuality related to current hormone levels?
- If asexual individuals take testosterone, is this likely to influence their levels of sexual interest?

Research in Humans

Research on circulating hormones and human sexual interest:

No clear relationship between circulating hormone levels and levels of sexual interest in “non-clinical” and “clinical” populations.

No research on asexuality and current hormone levels.

Animal Models?

What can animal models tell us about human sexual response?

Animal models can be used to study the neuroanatomy, neurochemistry, and pharmacology human of sexual behavior (Pfaus, Kippin & Coria-Avila 2003).



“Traditional” Feminist and Queer Approaches to Research on Non-Human Animals

- This scholarship has demonstrated the importance of critiquing the assumptions about gender and sexuality that are influencing the research on non-human animals.

Critiques of the Research on “Homosexuality” in Non-Human Animals

- Ethical and political concerns
- Confusion between same-sex acts, sexual orientation, and sexual identity
- Human sexuality qualitatively different



Responding To These Critiques

- Ensure that scientific findings are not used to eradicate asexuality.
- Recognize the difference between acts and orientations.
- Question the assumption that we know what human sexuality is.



New Materialist Feminist Approaches to Research on Non-Human Animals

“The diversity of sex and sexual behavior amongst (known) species is much greater than human cultural notions typically allow. This diversity confronts cultural ideas about the family, monogamy, fidelity, parental care, heterosexuality, and perhaps most fundamentally, sexual difference” (Hird 2006, 39).

Animal Models: Defining the Object of Study

- Asexual phenomena in non-human animals: Animals who, as part of their species typical behavioral repertoire, do not engage in sexual activity with either male or female conspecifics when given the ability to do so and when given the ability to control their own sexual activity.



Research Questions Again

- Do asexual phenomena exist in non-human animals?
- Are these phenomena related to circulating testosterone levels?
- Can these phenomena be altered through altering testosterone levels?

The Research

Animal	Study	Terminology	Findings
Male rats	Whalen, Beach & Kuehn 1961; Portillo and Paredes 2003; Portillo et al 2006	"non-copulating"	Approximately 3% of male rats do not express sexual interest in either male or female rats. Non-copulating male rats have circulating levels of T that fall within the species-typical range.
Male Guinea Pigs	Harding and Feder 1976	High-drive, medium-drive, low-drive	High drive and low drive guinea pigs do not differ in their resting levels of T.
Male Gerbils	Clark, Tucker & Galef 1992; Clark and Galef 2000	"studs" and "duds"; asexual	Differences in sexual and reproductive behavior are correlated with circulating levels of T.

Animal	Study	Terminology	Findings
Male rabbits	Agmo 1976	High levels and low levels of sexual activity	A low level of sexual interest in male rabbits is correlated with circulating androgen levels, however blood T concentration alone cannot explain the individual variation between male rabbits.
Rams	Katz 2008; Roselli et al 2002; Roselli and Stormshak 2009	female-oriented (FOR), male-oriented (MOR), asexual (NOR)	The rate of asexuality among ram populations varies from 12.5%-18.5%. Differences in circulating T levels do not explain the expression of "low libido" in rams.
Male Rhesus Monkeys	Phoenix and Chambers 1988	Low levels of sexual performance	The circulating T levels of these males were within the species-typical range and treatment with exogenous TP did not change sexual nonresponsiveness.

Answers to Research Questions

- Yes, asexual phenomena exist in non-human animals.
- In some animals it was correlated with circulating testosterone levels; in most it was not.
- In most animals, administration of testosterone did not increase sexual interest/activity.

Scientific Contributions?

- Recommend against the prescription of testosterone to men who have experienced a relatively stable, lifetime lack of other-directed sexual interest, even if some men are distressed by this lack



Critiques

- Derogatory terms (duds, sexually “sluggish,” “sub-standard sexual performance”)
- Research almost entirely focused on male animals
- Lack of interest in variation within species



Using Animal Research to Question
Assumptions about Human
Sexuality/Asexuality?

Thoughts?