Culture's Influence on the Origins and Ontology of Science and Knowledge, and their consequential impacts on the constructions of gender norms in Academia

In the first section, I will explore the ways in which researcher biases, specifically on animal behavior associations or animal studies, can contribute to the solidification and naturalization of certain notions of "human relations" (patriarchy, misogyny, racial discrimination and othering) and vice-versa. More fundamentally, I argue that it is with these frameworks that most of Academia still operates from; thus, it is essential to critically assess whether our "scientific" concepts of nature and consciousness are truly "scientifically objective", "acultural" or "apolitical". Then, I will discuss some relative progress in contemporary Animal Studies (trans ecologist, ecofeminist, critical race and decolonial theorists) that counter the dualist and binary tendencies of early foundations of science.

Section I

I cannot count on my fingers exactly how many times I have heard naturalization of male supremacy through references in Animal Studies, more specifically, on observations of orangutans, chimpanzees, lions, etc.: be it in classrooms, animal documentaries on televisions, or articles. Relationships observed often denote notions like "alpha male" and the "yielding female". Unfortunately, these are narratives bred by researcher biases on animal behavior and studies that contribute to the solidification of patriarchy, which I will address further in the latter sections.

Academia, as a discipline, relies heavily on scientific observations of nature, including plants, humans, animals, etc., their properties, and behaviors to make deductions about "consciousness" and the experience of it. Much of the early "discoveries" and frameworks of Science are significantly latched into Western norms, values, and worldviews. While the earliest traces of Science as we know it today came from the ancient Greeks having recorded Aristotle's works in biology, chemistry, cosmology, and philosophy¹; parallel activities of scientific inquiry have long existed in many non-Western societies. However, these did not reach as much "mainstreaming" powers like the West has in part due to the historical ills of colonialism, which entailed erasure and strategic silencing of the colonized.

https://www.stockton.edu/hellenic-studies/documents/chs-summaries/pearcy 90.pdf.

¹ Lee Pearcy, "Where Did Science Begin - and How Do We Know It? - Stockton University," stockton.edu, accessed May 15, 2023,

During the European imperial era, that inherently came with the colonial agenda, which at that time framed the global hegemonic status quo, also meant a "boom" in early scientific research. By the 17th century, scientists, mobilized by their imperial sources, were now able to "expand" their research observations overseas. The accumulation of many behavioral, social, and biological research on "foreign" races and ethnicities during the 18th-19th century gave birth to Eugenics by the early 20th century². According to the National Human Genome Research Institute, "eugenics is an inaccurate theory linked to historical and present-day forms of discrimination, racism, ableism, and colonialism..."³.

As eugenics is such a large, all-encompassing umbrella of the topic, I will focus mainly on the researcher biases on animal behavior associations or *animal* studies and their implications on Academia, especially on solidifying heteronormativity and reprocentricity. More specifically, I will tackle how the earliest notions of what was "natural" and "unnatural" or what was "genuine" to nature and not, were shaped by "cultural fantasies" but were masked under the guise of "science". Then, I will concurrently discuss the implications of the "natural" and "unnatural" in the Academia discourse, especially referencing Western 17th-century philosophy that still influences our contemporary understanding of consciousness today.

I once had a philosophy professor who insisted on using a "He/She" as a "teaching device" in making distinctions between Descartes as a "character" (she) and as a "writer" (he) in the *Meditations*. The professor then went on to state negative attributes to the "she" and positive attributes to the "he". For instance, the "he" knew everything and was rational, and the "she" knew nothing and was empirical, emotional, and irrational. Though I emailed him later to tell him how I felt uncomfortable during the class and that the "teaching device" perpetuates a negative learning environment that can reinforce gender stereotypes. After a long process of reports, the result was only that the professor said he would "reconsider" the teaching device he used. As he was protected by the "Academic Freedom" policy and upon knowing it was his final semester before retirement, I decided not to take things further as I already felt extremely uncomfortable with the whole confrontation.

This mandatory philosophy class during my undergraduate was the beginning of an incessant and excruciating work to figuring the mind-body "problem". Descartes conceived of the mind-body problem as inherently and

² 1. National Human Genome Research Institute, "Eugenics and Scientific Racism," Genome.gov, accessed May 14, 2023.

https://www.genome.gov/about-genomics/fact-sheets/Eugenics-and-Scientific-Racism#:~:text=Eugenics%20is%20the%20scientifically%20erroneous,ills%20through%20genetics%20and%20heredity.

⁴ Nell Irvin Painter, *The History of White People* (New York: W.W. Norton, 2011).

necessarily absolved through the very same "dualist" lens. This necessitated individuation of the mind from the body and naturalized the presumed "distinctiveness" of each from the other. Similarly, Descartes' dualist tradition imprinted the disembodiment of humans from nature, consequently creating an ever-lasting dualist narrative we still hold today—that "man" is "separate" from nature⁵. The further underlying debate here is between the objective versus *empirical*. While the body is presumed to be prone to many deceptive appetites and desires, the mind is deemed more functional in acquiring the true and the good.

While Descartes was deemed more "egalitarian" than his philosopher counterparts at that time, which presumed a lot of gender affairs and politics, Descartes was deemed uninterested in such talks⁶. Notably, he argued that the capacity for knowledge (at least for humans), is "universal", thus, connoting that it is "sexless". However, the dialectics and language of Descartes' work, tracing "man" as "superior" to nature for "his" ability to have rational thoughts, does not vindicate him from the cultural context and notions of gender around his time. More overtly, the romanticized notion of complete objectivity as a highly intellectual practice and gain was problematic for identities deemed and systematically made "unable" to access such prowess.

Susan Bordo, a feminist philosopher, argues that it has been false conditioning that in philosophy, we are able to "...identify, interpret, or appreciate philosophical arguments, so long as they are viewed as timeless, culturally disembodied events8". Interestingly, while much of what we know about the "conscious" experience is literally abstracted from our empirical observations through Science, especially through Animal Studies, it is ironic and arguably self-defeating to grant that empirical faculties are substandard and estranged from our "rational" faculties.

The dualist tendency is very prominent in early Western philosophy, with deep roots in philosophers like Descartes. This notion has a strong sense of individuation and othering wherein differences are problematically made as "justifications" for hierarchy in nature and human relations. As Cameroon Butler argues, it is crucial "interrogating the frameworks through which nature is conceived and discussed [because it] reveals what is included and excluded..."9.

⁵ Andrea Nye, "Feminism and Modern Philosophy," Routledge & CRC Press, June 17, 2004, https://www.routledge.com/Feminism-and-Modern-Philosophy/Nye/p/book/9780415266550.

⁶ ibid

⁷ ibid

⁸ Susan Bordo, "The Flight To Objectivity," State University of New York Press, 1987, https://sunypress.edu/Books/T/The-Flight-to-Objectivity.

9 Cameron Butler, "A Fruitless Endeavour," *Routledge Handbook of Gender and Environment*, 2017,

^{270-86,} https://doi.org/10.4324/9781315886572-19.

Transecologists, critical race theorists, and ecofeminists are now calling out the dominant views on "nature" and "consciousness" to assess the roots of oppressive structures such as racism, patriarchy, and transmisogyny.

Naturalization of heteronormativity and reprocentricity

For scientists, even the earliest stage of research and arguably the "basic" act of choosing what animals, behaviors, or phenomena to study, already significantly tells us what species or subjects are deemed "worth" studying or those that take "priority" more than others. Perhaps this tells us why we were able to create missile rockets as early as the 1930s¹⁰, yet we only first began testing male *hormonal* birth control in the 1970s¹¹. Certainly, it matters that depending on the availability of technology only certain scientific queries can be pursued, however, scientific researches are also largely motivated by society's priorities and agendas.

As Butler argues, "our notions are formed through a cultural lens, shaped by our perspectives, held beliefs and positionalities"¹², similarly, our conduct of "science" and research, especially in their earlier conceptions and practice, undoubtedly possess some of these tendencies. The "dualist" or "binary" tradition transcends the mind-body problem. For instance, the notion of the objective (mind) versus empirical (body/senses) and the invented separation and hierarchy between humans (rational) and nature (as one that is to be controlled).

Patriarchal frameworks became more ingrained through the dualist and binary mindset. Women in early Western civilization were made to be oppositional to male qualities under the dualist mindset. Women were deemed "secondary" or "substandard" to men and were claimed to have little to no capacities for rationality. Interestingly, especially in early pieces of Western arts, literature, and philosophy, women were claimed to be "empirical", "emotional", "irrational", and characteristically made "closer" to the concept of "nature"; one that needs to be "tamed and controlled". On a larger picture, we view the disenchantment of nature as one of the signifying moments of the boom in Scientific and technological advancements; however, we must also consider how the dualistic and hierarchical view of nature and humans paved the way to the creation of power dynamics surrounding gender and race. Instead of a holistic view of nature, ascribing the human as a humble part of nature's sentience,

¹⁰ "The V-2 Missile," Military Origins of the Space Race, accessed May 14, 2023, https://airandspace.si.edu/exhibitions/space-race/online/sec200/sec210.htm.

Pandia Health, "Does Male Birth Control Exist? Definition, History, and New Developments," Pandia Health, June 17, 2022, https://www.pandiahealth.com/resources/male-birth-control/.
 Cameron Butler, "A Fruitless Endeavour," Routledge Handbook of Gender and Environment, 2017,

¹² Cameron Butler, "A Fruitless Endeavour," *Routledge Handbook of Gender and Environment*, 2017, 270–86, https://doi.org/10.4324/9781315886572-19.

nature became a source of mere empirical judgment, observation, and a space "meant to be" controlled by the "curious" and egotistical human mind.

In the following section, I will focus primarily on the binary frameworks of sex and gender, the creation of the "natural" versus "unnatural" gender relations as purported by early "Scientific" animal studies plagued by colonial and patriarchal agendas. The early foundations of Animal "Science" or studies, as we know them today, are inextricable from patriarchal and colonialist worldviews. What is viewed as "normal" and "natural" is viewed from the human experience, which is elementally influenced by the social cultures and contexts of the observer.

According to Butler, notions of heteronormativity, "the positioning of heterosexuality as natural and normal"; cisexism, "the conflating of gender and sex and positioning of cisgender people as natural and normal"; and reprocentricity "the positioning of reproduction (or procreation) as being central to all people's lives" are embedded in defining the course of animal behavior, norms, and relations in animal studies¹³. Ecofeminists and trans ecologists now claim that there is a "wide range of different forms of sexual activity and gender roles that exist outside of a cissexist male/female binary among nonhuman animals"14, yet these remain disregarded between the larger Social Sciences and Animal Studies discourses on sex and gender. Among many examples, there are the male bottlenose dolphins are highly bisexual and have certain "periods of exclusive homosexuality" and the bluehead wrasse fish that characteristically have three genders that fluidly change over time¹⁵. Also, it has been observed that certain non-human mammals, like female bonobos, use tree branches and leaves as sex toys for masturbation¹⁶, thus, debunking our notions of necessitated reprocentricity for animal sexual behaviors. These more recent discoveries and observations on animal gender and sexual identities challenge heteronormativity and reprocentricity yet this evidence remains highly secluded.

The damaging omission of animal studies that do not fit the "natural" heteronormative animal observation can be traced back to the researcher's biases. According to Baghemil, the process of exclusion and purposive dismissal, and ignorance over homosexual and non-reproductive sexual activities in the animal world shows homophobia¹⁷. The selectiveness of supposedly "objective" scientific research on animal behavior is then put into question. By no means is

13 ibid

¹⁴ ibid

¹⁵ ibid

¹⁷ Bruce Bagemihl, *Biological Exuberance: Animal Homosexuality and Natural Diversity* (New York: St. Martin's Press. 1999).

heteronormativity a "universal" concept even in the human world. The pre-colonial Navajo's held the notion of four genders: "men, women, masculine female-assigned people, and feminine male-assigned people"18. In matriarchal Mohave society, gender transformation and fluidity was encouraged wherein "a young male-assigned person may decide to become an alpha, and partake in a ceremony to change their gender, adopt a traditionally feminine name, and wear feminine clothing" 19. However, despite the long existence of Indigenous cultures around the world with nonbinary, matriarchal, and gender-fluid relations, more often than not, they are understood as cultural practices of either the "uncivilized past" or groups with "oddities" and "mythological" views. Thus, again, the narrative of othering and the intentful discarding of those that do not fit the "scientific", "objective", and "rational" heteronormative views immediately become "substandard", "unscientific", and full of "fantasy". As queer and feminist ecologists discuss, these are extensions of "transmisogyny" that can be observed in the sciences, which transpose "negative attitudes, expressed through cultural hate, individual and state violence, and discrimination that are specifically targeted toward trans women and transfeminine people"²⁰.

If the dualist metaphors and frameworks that arise from the colonial and patriarchal view of nature and gender are embedded in animal studies, how exactly is Academia, as a field, inflicted by such? I would argue that it is co-constitutive: how we define the relationship between our body and mind, the human and nature, along with the existing human culture and norms, can co-constitute Academia. It is implicated within the wider Academic discourse to whom we grant rationality, consciousness, and in turn, "personhood", and respect. Thus, it is highly important that we question the origination of the "fundamental" views we take for granted. By determining the social construction of the expulsive inventions of the kinds of entities to whom we designate the ability to reason and to those whom we retract rationality from, we are able to re-investigate our sources of knowledge and hopefully be able to re-construct them "more objectively".

While we have come far from where we started and much has been done to effortfully challenge the racist, ableist, and sexist foundations of early science, more specifically, Animal Studies and, consequently, Academia it seems that a long-term deconstruction and unlearning still needs to be pursued on a larger scale to truly undo the repressive tendencies of certain world views we were conditioned to grant.

¹⁸ Laura Houlberg, "The End of Gender or Deep Green Transmisogyny?," Routledge Handbook of Gender and Environment, 2017, 473–86, https://doi.org/10.4324/9781315886572-33. 19 ibid

²⁰ ibid

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