

Philosophy and the Biology of Male Homosexuality

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Abstract

This paper is a review of how biological as well as other scientific theories, concepts and findings have been used to answer philosophical questions regarding the nature of male homosexuality. We argue that while these sciences are certainly relevant for present philosophical debates, few of the different philosophical issues surrounding male homosexuality can be settled by science alone. In the first section, we introduce a number of various essentialist and constructivist views on (male) homosexuality. The second section focuses on the innateness debate over homosexuality. In the last section, we assess the typically constructivist critiques of biological research into homosexuality.

Introduction

Biological research into the causes of sexual orientation not only attracts the attention of scientific journalists, but the attention of the general public as well. Philosophers across different schools and areas of interest have also shown an interest in this kind of research. Generally speaking, philosophers' interest in this subject is the result of a perceived relevance of such research for the ethics and metaphysics of sexual orientation.

The general ethical interest in this research stems from a perceived relation between the etiology of homosexuality and gay liberation. Many non-philosophers have interpreted recent scientific findings about homosexual orientation as evidence that homosexuality is 'innate' and 'natural' (LeVay 10–13), and thereby not morally problematic (Haslam and Levy 471–72). Philosophers, however, are well aware of the problems that surround both of these notions and the

moral implications that people tend to read into them. Moreover, continental and analytic philosophers alike have offered caution in light of this interpretation by contending that biological research may in fact be grounded in heteronormativity (Stein 277–300; Suppe 250–53). On their view, heteronormativity is problematic because it causes the projection of (moral) norms unto our biology, such that the questions that are asked can be misleading and have morally objectionable consequences. For example, David Hull writes that this research usually suggests that

[h]eterosexuality is the normal state programmed into our genes. It needs no special explanation. [...] Homosexuality, to the contrary, is an abnormal deviation which needs to be explained in terms of some combination of defective genes and/or undesirable environments.
(7)

The ethical debate on the biological study of sexual orientation is often intimately intertwined with metaphysical interpretations and criticisms of such research. Social constructivists criticize the assumptions of (much of) the scientific inquiry into the causes of homosexuality because this work is seen as assuming homosexuality to be a natural kind (Stein 135–140). Conversely, essentialists (and other realists) tend to use biological and psychological literature to bolster their view that homosexuals really are a different kind of people (Balthazart 104 & 156).

The focus of this article, then, is this perceived relevance of biological research on male homosexuality with respect to a variety of philosophical issues. We have several reasons for focusing on male homosexuality. First, most of the biological, psychological, sociological and historical theorizing concentrates on male homosexuality. Second, there are quite strong indications that male homosexuality and female homosexuality follow different biological and non-biological rules (Mustanski, Chivers and Bailey 127–29). We will present both the philosophical essentialism–constructivism debate (metaphysics), and the nature–nurture debate on homosexuality (philosophy of science), in order to discuss to what extent biological or other scientific evidence may support any one of these positions.

1. Essentialism–Constructivism

Since the 1970s, philosophers, historians and social scientists have argued that modern homosexuality is a socially constructed phenomenon (Epstein 135–38; Plummer). Many of them contend that during the 19th century a new way of thinking about same-sex sexuality was ‘constructed’. This new way of thinking also led to the construction of a new phenomenon: being homosexual (Halperin 95–99). Although everybody agrees that certain forms of same-sex sexual behavior existed in other (current or past) cultures, social constructivists about male homosexuality argue that the modern way of thinking about same-sex sexuality and the modern way of being homosexual is rather unique, such that there was no homosexual before the 19th century (Foucault 43). Essentialists deny this claim and maintain that homosexuals can be found in all cultures, current and past.

However, rather than one point of contention, there are actually three different debates between constructivists and essentialist schools of thought. In the rest of this section we will first distinguish the three different constructivists’ positions, after which we will elaborate on the essentialist critique of them.

On a first, very weak, reading, the constructivists’ claim that there were no homosexuals before the 19th century is only a claim about the so-called nominal essence of homosexuality. That is, on this reading, constructivists merely claim that the term ‘homosexuality’ does not refer to anyone before the 19th century, based on the semantics of this term. If ‘homosexual desire’ refers solely to the experience of same-sex desire by an individual who attributes this desire to his/her identity and sees this identity as based upon the expertise of psychiatrists and its reinforcement by activists (Halperin 100–108), then of course, there were not any ‘homosexual desires’ in antiquity. One could argue that this is an empirical issue and that the extent to which our term ‘homosexuality’ applies to other cultures can be informed by historical and anthropological studies, such as Murray’s. Yet, since nobody really denies the relevant historical and cultural variation (for example, that

psychiatric thinking was in the 19th century much more influential in the Western world than elsewhere), this particular debate is fueled almost entirely by differing theories of meaning and reference, and their application to the term 'homosexuality' (Mallon and Stich 136).

On a stronger, 'epistemological' reading, constructivists sometimes argue that social forces are the cause behind the classification of homosexuals and heterosexuals as two distinct kinds of people. This conceptualization of all people as either belonging to the homosexual or heterosexual kind is specific for the modern way of thinking about (homo)sexuality. It is only since the 19th century, constructivists maintain, that the sexual preference of men or women was thought of as a central part of one's identity, as exclusive and as unchanging during one's lifetime. Homosexuality is, for instance, no longer thought of as age-structured as it was in ancient Greek cultures, where prepubescent and adolescent boys were loved by older, generally married men (Murray 22–26). Furthermore, although becoming gay or being bisexual is not conceptually impossible nowadays, constructivists claim that since the 19th century people are generally thought of as being either gay or straight. Thus, people no longer become homosexual; rather, they discover that they have been homosexual all along.

According to the epistemological constructivist, this new way of conceiving exclusive homosexuality as an expression of one's unchanging identity, and the accompanying classification of people into two distinct kinds, is socially caused. According to Foucault, for instance, the psychiatric category of the invert or homosexual should be thought of as part of a capitalist attempt to banish all activities that are unproductive. Keep in mind, of course, that these histories about the causes of our allegedly new classifications can only be indirect arguments against the cross-cultural reality of the homosexual kind. They offer an alternative explanation as to why we started using such classifications, and developed the beliefs about them that we did, usually assuming that these beliefs were false and the kinds did not really exist. However, these theories about the history of our classifications cannot show or prove that these kinds really did not exist.

Constructivists can also make a stronger, ontological claim, by arguing that variable and contingent social forces, such as the classificatory practices themselves, lead individuals to have the properties typical of (modern) homosexuality. In the modern West, they argue, people's sexual preference has really become exclusive and an unchanging part of one's identity. According to this ontological account, homosexuals and heterosexuals now constitute different kinds, but that has not always been the case. Very often, the epistemological constructivist is also an ontological constructivist, like Foucault, who argues that the newly constructed categories of 'homosexual' and 'heterosexual' are what caused new kinds of people to come into existence. However, epistemological constructivism does not need to result in ontological constructivism. If the new category of 'homosexuality' failed to create a new kind of human being, the ontological constructivist is simply wrong.

Of course, there are also less bold ontological claims, according to which only some characteristics typical of modern homosexuality are socially constructed, like say, the meaning one attributes to certain sexual acts or the existence of a homosexual subculture. Constructivists have considered everything from the gay community, the homosexual act itself, to desires or even sexuality itself as constructed (Vance 161). So, if you meet someone who claims that she's a constructivist about homosexuality, you first have to ask her what aspect of homosexuality she actually sees as being constructed. Once she has answered that question, you still need to know to what type of constructivism she subscribes – semantical, epistemological or ontological. After all, there is a considerable variety of constructivisms, and we think that a great deal of confusion has been caused by not being clear enough about this.

Essentialists argue against all three types of constructivism. They are first and foremost cross-cultural realists about homosexuality. As such, they argue that bold ontological constructivism is false. Secondly, they contend that the term 'homosexual' also refers to the same kinds of people in other cultures. Thirdly, they deny that histories about the conceptualization of homosexuality imply

anything about the reality of the kind.

Thus, essentialists primarily argue that homosexuals are cross-culturally real kinds. They tend to support this cross-cultural reality by reference to the essential nature of homosexuality. First, kind essentialists believe that all homosexuals not only share a 'nominal' essence, but also a 'real' essence; one property (or set of properties) that causes everyone's homosexuality. Second, individual essentialists maintain that homosexuality, or kind-membership, is not an accidental but essential property of an individual. This second type of essentialism is rarely distinguished from the first type. For example, in his long and sophisticated treatment of essentialism and constructivism about sexual orientation, Stein (93–115) does not even mention this distinction, probably because very few people explicitly defend individual essentialism regarding sexual orientation. Nevertheless, the intuition that there is only a distinction in kind between individuals when they belong to their kind essentially rather than accidentally, fuels the insistence of essentialists that homosexuality has always been an exclusive and unchanging part of one's identity, even though one often had to hide it. Essentialists aim at consolidating the value of biological approaches to homosexuality. They also tend to believe that biological findings are the best tool to undercut the constructivists' position. Yet, some of the scientific critiques of social constructivism are unaware of the different types of constructivism, which can lead their criticism astray (Gangestad, Bailey and Martin 1109–1110).

This raises the question to what extent science can actually settle the ontological constructivist claims. Clearly, anthropological and psychological research is at least relevant for these theses. This research shows that there is variation in the ways that different individuals experience, give meaning to and perform their sexuality (Murray 1–13). It also proposes that this variation is, at least partially, the result of social forces. A closer look, however, suggests that such research cannot definitively show that peoples' preferences, or the exclusive and lifelong nature of these preferences, are socially caused (Halwani 45–49). Evidence of cultural variation among homosexual practices alone is not enough to conclude that homosexual preferences cannot be found across

different times and cultures. An essentialist can respond to such evidence as follows. First, she could distinguish homosexual behavior from a homosexual preference/ orientation and argue that although there were always people with a lifelong, exclusive homosexual orientation, this was repressed due to pervasive homonegativity. According to this point of view, homosexual preferences can be found everywhere, but people could not always act on it (Rahman and Wilson 1339). Second, one could also argue that those people who engaged in homosexual behavior for only a certain period of their life, did not really have a homosexual preference/orientation but simply lacked the opportunity to have sex with women (Balthazart 99–100). According to this interpretation of the cultural variation, it is still cross-culturally true that some people really do belong to the kind homosexuals, defined by a lifelong sexual preference for partners of their own sex, while others practice homosexuality without having the ‘essential’ preference/orientation. This kind of essentialism about sexual orientation could only be refuted by constructivists if they could provide evidence that individuals who bear the alleged essence of modern homosexuality would not be homosexual in at least some of the cultures in which human (homo)sexuality is organized differently. However, the necessary cross-cultural, longitudinal studies on the influence of social information on sexual desires and preferences are – to the best of our knowledge – non-existent. In part, this is due to the fact that such experimental studies are for obvious ethical and practical reasons very difficult to conduct.

In short, many of the stronger ontological claims of social constructivist theories are hard to prove (Halwani, Jaeger, Stramel, Nunan, Wilkerson and Murphy 449–53). That being said, strict ontological kind essentialism with respect to homosexual desires and homosexual orientation is easy to disprove. In order for there to be any real essence of homosexuality, there must be a property (or set of properties) that is sufficient for universally determining who is and who is not homosexual. This is very unlikely as biological theories on homosexuality attest to the very complex etiology of homosexual desires and orientation (see the following section). This also explains why

such strict essentialism is rarely entertained by biological researchers. They generally do not believe that there is one unique cause of homosexuality (LeVay; Balthazart). What these researchers hold instead is either of two claims. Some distinguish different types of homosexuals, each with their own potentially different biological etiology (Balthazart 159). In that case, they affirm the cross-cultural and cross-historical reality of different possible types of homosexuality that constructivists deny (multiplicity of homosexuality). Yet, there are also researchers who maintain that there is only one type of homosexuality, but that this one type has different etiologies (multiple etiology of homosexuality).

Often, the essentialism label is used (even) more broadly, and stands for the 'nativist' view on homosexuality, whereas constructivism refers to the 'environmentalist' view. Note, however, that the nativist/anti-nativist debate is primarily about the causes of homosexuality, whereas essentialism/constructivism is about the cross-cultural reality of a homosexual kind of people (Mallon 99). This means that even though the causes of homosexual desires and preferences are relevant to the ontological debate(s) that have been sketched so far, both environmentalists and nativists can assume the cross-cultural and cross-historical reality of the kind that needs explaining. For example, some environmentalists are in fact essentialists, because they claim that there is a single etiology that can explain all homosexuality, such as a particular family dynamic (Halwani, Jaeger, Stramel, Nunan, Wilkerson and Murphy 452), and that all homosexuals have a particular set of traits in common – say 'behaving like a little hurt boy' (Nicolosi 22) – because of this shared family dynamic. Still, nativism is often interpreted as being just another type of essentialism. According to many constructivists, even when biological researchers do not talk about discovering the 'essence' of (one type of) homosexuality by claiming that homosexuality is innate, they support – and build upon – many of the folk biological intuitions that lead people to treat homosexuals and heterosexuals as essentially different kinds of people.

2. Is Homosexuality Innate?

Paul Griffiths argues that the innateness concept just captures the same set of folk biological beliefs that are also termed 'folk essentialism'. These include the beliefs that a trait is developmentally fixed, typical for a natural group of organisms, as well as teleological. According to Griffiths, however, no biologically useful account of innateness can capture all of these aspects. For Griffiths and many of his colleagues, the term is 'irretrievably confused', and we are better off replacing any talk of 'innateness' with scientifically more useful concepts (Griffiths 70; Mameli and Bateson 180–84; Griffiths, Machery and Linquist 618–22).

Other philosophers disagree and argue that 'innateness' does refer to a (single) biological property. Of course, not all of their proposed definitions are equally relevant for the debate on the innateness of homosexuality. Because of the supposed moral implications surrounding homosexuality, developmental fixity or non-malleability seems to play the most central role in the debate. When someone claims that homosexuality is innate, one generally intends this to mean that homosexuality cannot be changed or that it would have developed in any environment. Keep in mind, however, that controversies over the universality ('typicality') and the evolutionary history of homosexuality ('teleology') also take place under the innateness-umbrella.

Heritability is one measure that can be used to define innateness and that tells us something about the extent to which a trait is mutable by changing the environment (within the examined range of environments). According to this definition of innateness, homosexuality would be innate if it is highly heritable. Heritability expresses to what extent the variation of a phenotype (homosexuality/heterosexuality) in a particular population is determined by genetic variation, rather than by environmental variation. In the case that all phenotypic variation is determined by genotypic variation, the heritability of a trait will be one, while if none of the variation is determined by genotypic variation, the heritability will be zero. It is important to realize that heritability is a measure that says something about one particular population in one particular environment. This

means that the heritability of homosexuality could be much higher (or lower) in different environments (societies). In general, if the environment is very uniform, then heritability will be high. After all, if there is little variation in the environment, it is likely that phenotypic variation will result from genotypic variation. Reversely, if a different environment is much more varied, then the heritability of the same trait will likely be lower. To determine heritability, behavioral geneticists use twin studies. Roughly, they compare the concordance rate of homosexuality in monozygotic (MZ) twins (who share 100% of their genes) with the concordance rate in dizygotic (DZ) twins (who share 50% of their genes). If genes are responsible for the phenotypic variation, the concordance rate should be higher in monozygotic twins, given that they have identical genes. If the shared environment (elements of the environment that people growing up together will share because they grow up together) between twins is important, concordance rates should be high for both MZ and DZ twins. If the unshared environment (environmental influences that are unique to an individual) is important, concordance rates should be low, both for MZ and DZ twins. Heritability estimates vary between 0.25–0.65 for men (Mustanski, Chivers and Bailey 114–115; Långström, Rahman, Carlström and Lichtenstein 78). These heritability studies also suggest that shared environment explains very little of the observed variation in sexual orientation.

Although interesting, there are some problems with this type of research. First, heritability studies of sexual orientation tend to have low statistical power. It is often difficult to find sufficient gay twins in the databases that are used for heritability studies, which implies that in heritability studies of sexual orientation, the probability that a test correctly rejects the null hypothesis (or the statistical power; Cohen 99) tends to be low. This is usually acknowledged by behavioral geneticists. However, what they fail to acknowledge, is that when power is low, only exceptionally and spuriously large effects will be detected by the test, thus leading to an overestimation of the effect of interest (Button, Ioannidis, Mokrysz, Nosek, Flint, Robinson, and Munafò 366). Therefore, given the low statistical power of these studies (usually well below 30%), it is likely that the true magnitude

of the genetic contributions to the variation in sexual orientation is smaller than these studies report. Second, because many twin studies, like the famous studies of Kallman (1952a; 1952b), are family studies that use twins who were raised in the same homes, it is hard to disentangle the contribution of genetics and the environment. Furthermore, it is assumed that the environment of MZ and DZ twins are equal, but it is quite possible that parents treat MZ twins differently, which could cause the higher concordance rates of MZ twins (Stein 146). This can be resolved by studying MZ twins that were reared in different environments (adoption studies), but of course, such samples are hard to find (although see Eckert, Bouchard, Bohlen and Heston). Finally, and most importantly for us, heritability studies say little about the developmental fixity of a trait. Heritability is a property of the population, not of an individual. It expresses to what extent the fact that some people in a population are more homosexual than others is the result of genes rather than the environment. Nevertheless, this says very little about the development of homosexuality in individuals. Nor does it say to what extent someone's homosexuality is immutable or irreversible: heritability scores for a trait tend to vary over lifespan (intelligence, for example, has a higher heritability in adults than in teens). In fact, the heritability of a trait only shows how much of the variation in the population can be changed by changing the environment (within the range of environments used to measure heritability).

Focusing on the ontogeny of homosexuality and its developmental fixity, then, Ariew's proposal to define 'innateness' in terms of 'developmental canalization' is more promising. According to Ariew, the degree to which a trait is innate for a given genotype is the degree to which its developmental pathway will lead to the trait regardless of variations in the environment (19–20; see Griffiths and Machery for a discussion of canalization). One problem with Ariew's proposal is that it does not distinguish between disturbing the development of the trait (mutability) and changing the trait after it has developed (reversibility). In the ethically charged debate on the innateness of homosexuality in particular, this distinction is quite relevant. Proponents of so-called

conversion therapies, for example, can maintain that these therapies 'do in fact help people' to become heterosexual again, while also admitting that their therapy cannot prevent the emergence of homosexual preferences (Spitzer 407). A second and bigger problem, though, is that even if strong canalization was the best possible way to conceptualize the innateness of homosexuality, there are no studies available that measure this canalization. Of course, there is a lot of biological research that identifies biological causal factors in the development of homosexuality (for a review, see Rahman and Wilson). The birth order effect, for example, is a very robust finding. In a series of papers, Ray Blanchard and his colleagues show that for every older brother, a boy's chance of eventually becoming gay increases with 33%, from 2% with no older brothers (Blanchard 74-79). According to them, the explanation of this fact lies in the immune systems of pregnant women, excluding other explanations that refer to environmental factors after birth. After all, the effect even holds for brothers raised in different families (Bogaert 10773). Note that the influence of the pre-natal environment does not fit the intuitive distinction between innate and environmental causes very well. Other studies also refer to the effect of pre-natal hormones in the etiology of homosexuality. Although it was known quite early that there are no hormonal differences between adult homosexuals and heterosexuals, attention shifted to the effect of pre-natal hormonal differences on the developing fetus. These theories aim to show the influence of sex hormones (mostly androgens) that affect the fetus after its biological sex has developed, but before other gender characteristics, such as sexual preference, develop (Martin and Nguyen 31-39). All of these studies, however, only show rather small effects in the overall development of homosexuality in the population. Moreover, such research does not exclude the possibility that particular (social) environments are needed for these biological factors to have any effect. As one of these researchers admits, current biological knowledge does not rule out the possibility that 'all the biological factors that I have described only produce a predisposition to become homosexual, and [that] these predispositions can only develop in a specific set of psychosocial contexts that are not yet identified'

(Balthazart 159). Therefore, these biological studies entail little about the canalization of homosexuality. Knowing to what extent the development of a trait is impervious to environmental variation – that is knowing to what extent a trait is canalized – requires experimentation that cannot be performed on humans for obvious ethical reasons. Hence, the existing hormonal, genetic and neuro-anatomical studies on male homosexuality mainly show that the ‘philosophical’ debate on the innateness of homosexuality is hard to map onto the (current) biological research into the causes and nature of homosexuality, even though some scientists still maintain that science has now shown that homosexuality is ‘innate’ (Levoy).

3. Constructivists Against the Biology of Homosexuality

Constructivist critiques typically target the essentialist assumptions of scientific research on human homosexuality. They aim to expose such assumptions in the description of the researched topic, the formation and formulation of hypotheses, the selection of subjects, the data collection, and the interpretation of the findings. According to Stein, for example, at the heart of much of the biological research on homosexuality and sexual orientation is the claim that ‘a person’s biological makeup at birth or at an early age [...] determines (or strongly constrains) whether a person is attracted primarily to men or women’ (Stein 124). The conclusion of constructivist critiques, then, is that the research is either partially or completely flawed. This claim is usually based on the idea that this research can only ‘support’ the essentialist position because it starts from an essentialist premise (Futuyma 1156; Fausto-Sterling 163). Apart from these typically constructivist critiques, constructivists use other, more mainstream critiques against biological research into the nature and causes of male homosexuality. For instance, they also stress the well-known difficulties and perils of heritability studies. Illustrative of the anti-essentialists’ critiques is their censuring of the term and concept of ‘homosexuality’ in the context of animal research. As we already mentioned, many constructivists believe that the term ‘homosexuality’ is appropriate only when referring to a very

specific set of same-sex sexual behaviors, desires and emotions that occur primarily in industrial and post-industrial Western European and North American societies. Given that constructivists deny that human same-sex sexual behavior before the 19th century lies within the extension of the term 'homosexuality', it also follows that they deny the existence of animal homosexuality. After all, it would seem quite absurd to maintain that both post-19th century Westerners and animals can be homosexual, whereas pre-19th century and non-Western humans engage in something quite different (for example, same-sex sexual behavior). Therefore, it is not surprising that constructivists have objected to the continued use of the term 'homosexuality' and its derivations such as 'gay' in the literature on non-human same-sex sexual behavior. Using the same word for animal and human same-sex sexuality would erroneously suggest that there are deep similarities between animal and human homosexuality, and that homosexuality – human and non-human – is primarily a biological phenomenon. Typically, critics of the 'essentialist' program then propose to denominate animal same-sex sexual behavior as 'unisexual', 'sociosexual' or 'ambisexual' (Gowaty 631; Stein 166).

We doubt that constructivist proposals like this one should be adopted. Indeed, it remains to be seen whether or not there really are any theoretically relevant similarities between animal and human homosexuality. If constructivists correctly complain that the use of one and the same term for human and animal homosexuality falsely conflates the two, it is also true that the use of different terms may overlook the possibility of important similarities between (some types of) animal homosexuality and (some types of) human homosexuality. Furthermore, and somewhat ironically, the use of an alternative term for animal homosexuality – say 'unisexual' – may convey the impression that all forms of animal homosexuality are fundamentally the same; an essentialist suggestion that is blatantly at odds with the beliefs of nearly every specialist in the field (Poiani 35). Although we think of many constructivist critiques of biological research as being correct, the example earlier clearly shows that constructivists need to be careful not to make two common mistakes. A first, and obvious, mistake is that they often read essentialism into research that may

not be essentialist at all. A second mistake is their belief that replacing essentialist assumptions with constructivist ones will necessarily lead to better scientific research. More generally, in this article we have argued that when debating constructivism or essentialism about homosexuality, one must take care (1) to define which type of constructivism or essentialism is being debated, (2) to realize that current biological research does not settle the constructivism and innateness questions, and (3) not to assume that all biological research into homosexuality is essentialist.

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