

Darwinizing sexual ambivalence: a new evolutionary hypothesis of male homosexuality

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ABSTRACT *At first sight, homosexuality has little to do with reproduction. Nevertheless, many neo-Darwinian theoreticians think that human homosexuality may have had a procreative value, since it enabled the close kin of homosexuals to have more viable offspring than individuals lacking the support of homosexual siblings. In this article, however, we will defend an alternative hypothesis—originally put forward by Freud in “A phylogenetic phantasy”—namely that homosexuality evolved as a means to strengthen social bonds. Consequently, from an evolutionary point of view, homosexuality and heterosexuality have entirely distinct origins: there is no continuum from heterosexuality to homosexuality. Indeed, the natural history we propose shows that the intensity of the homosexual inclination has little or no predictive value with regard to the intensity of heterosexual tendencies. In fact, this may be a sound Darwinian way to understand sexual ambivalence. But if sexual ambivalence is a biological datum, one has to conclude that psychodynamic mechanisms are often needed in order to explain exclusive heterosexuality or exclusive homosexuality.*

1. Introduction

The study of homosexuality is multidisciplinary. Feminism, psychoanalysis, developmental psychology, sociology, genetics, evolutionary biology and many other disciplines have tried to give descriptions of homosexual behavior, as well as explanations for this behavior and the underlying tendencies. The fact that homosexuality has attracted the attention of different sciences automatically raises the question whether some approaches provide better material or more adequate methodologies than others for understanding of the phenomenon in question (Geer & O’Donohue, 1987, pp. 3–4). Of course, to a great extent the answer to such a question depends on the view one takes in the “nature-nurture” debate. Genetics, for example, can only be expected to deliver a substantial contribution to the study of homosexuality if homosexuality is “natural,” whereas the social construction theory seems to lose much of its explanatory power if a “gay gene” would be discovered.

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Usually, psychoanalysis is considered to be a theory strongly underscoring the environmental factors involved in the etiology of homosexuality. And indeed, the classic Freudian tale of a strong mother and a weak, or even absent father still turns up in many a psychoanalytic case study of male homosexuality. According to Freud himself, however, both constitutional and experiential factors play a role in the etiology of homosexuality; homosexuality is not out of kilter with the grand plan of nature (Bieber *et al.*, 1962; Thorp, 1992, p. 56). Although this might seem little more than stating the obvious, Freud's natural history of male homosexuality harbours the germs of a sound neo-Darwinian hypothesis, too. Moreover, this hypothesis can correct the current prevailing evolutionary explanations of homosexuality, particularly based on kin selection and superior heterozygote fitness. The alternative put forward by Freud makes clear that homosexuality can be adaptive in its moderate form, i.e. as a means to strengthen social bonds. The Freudian alternative also elucidates how homosexuality actually evolved, i.e. by means of reciprocal altruism.

In this paper, we will argue that the link between homosexuality and reciprocal altruism is relevant for evolutionary biology and its related fields such as evolutionary psychology, but also for the philosophy of sex and psychoanalysis. After all, our "Darwinized" version of Freud's just-so story implies that there is no continuum from heterosexuality to homosexuality, and that exclusive homosexuality—just like exclusive heterosexuality—often needs the mediation of psychic mechanisms, such as identification and repression.

2. Psychodynamics and the homosexual drive

During the last decades, Freud's theory of homosexuality has been criticized by non-analysts and analysts alike. Moreover, several good alternatives have been advanced. These alternatives build heavily on corroborated results of research in endocrinology, genetics and developmental psychology (Friedman, 1988). Present-day theoreticians also point out that the meaning of homosexuality depends on the whole personality structure (Kernberg, 1995) and the socio-cultural context (Foucault, 1980; Thorp, 1992). At the same time, however, current literature draws a distorted and oversimplified picture of Freud's theory of homosexuality. Most theoreticians seem to think that Freud consistently reduced (male) homosexuality to the relation between mother and son. But a close reading of Freud's oeuvre shows that his theory of homosexuality is far more subtle. Not only did Freud acknowledge the importance of biological factors in the etiology of homosexuality, he also used at least four different models to understand the psychogenesis of this "sexual aberration."

The first and best-known model explains homosexual object-choice as the outcome of an identification with the mother. According to Freud, many male homosexuals have a very intense fixation on their mother, which leads to an identification enabling the son to preserve this relation. Adopting the object-choice of the mother, these homosexuals love what they were: cute, boyish men. One can expect the identification and its effects to be stronger if the father is absent from the

family or if he lacks power in the family. Laplanche has shown that this model implies a paradoxical view on object-choice, since the adult homosexuals were highly “heterosexual” in their infancy, whereas adult heterosexuality presupposes an infantile homosexuality (Laplanche, 1980, p. 83) [1].

However, according to Freud, homosexuality is not always the effect of an exaggerated love for (or by) a woman (the mother). Freud claims that an extreme dislike of women can equally “cause” homosexuality. In his article “Some neurotic mechanisms in jealousy, paranoia, and homosexuality,” Freud considers certain homosexual object-choices as a way to flee from women and to take refuge in a sexual relation where the individual can think himself without deficiency. In this view, homosexuality is a defense against the sexual difference (Freud, 1921).

In the same article, Freud proposes a third mechanism that can bring about a homosexual object-choice. This model implies that homosexuality arises from superseded rivalry and repressed aggressive impulses. Because of the competition for the mother’s love, the individual’s rivalry with his brothers can lead to hostility and aggression towards them. However, this hostility and aggression must be countered by tender feelings in order not to lose the love of the mother. Sometimes these feelings have a sexual undertone and as such they can give the initial impetus to adult homosexuality. In a Freudian vocabulary such socialization of hostile emotions is called a “reaction-formation.” The boy starts loving his rival in order not to hate him or because he is not strong enough to hate him. Being afraid to rival, the boy ends up in a passive and feminine position towards the “other.”

Freud’s fourth model of homosexuality is connected with his view on the etiology of paranoia. According to Freud, (a certain kind of) homosexuality and paranoia are both based on a disturbed relation with the father or the father-substitutes. In his case study on the paranoid magistrate Schreber, he suggests that paranoia is the outcome of a resexualization of formerly desexualized social feelings (Freud, 1911). The paranoid individual tries to ward off these (homosexual) feelings by projecting them onto the loved person. He defends himself against a “feminine” position towards a father-substitute, which is called the negative Oedipus complex. In *The Ego and the Id*, Freud writes that this negative Oedipus complex is as such no elaboration of the positive Oedipus complex (Freud, 1923), thus suggesting that homosexual feelings towards the father are embedded in the son’s constitution. In other words, this kind of homosexuality does not necessarily require a psychodynamic account. Such a reference to the congenital nature of homosexuality is not exceptional in Freud’s writings. Even in *Three Essays on the Theory of Sexuality*, he already mentions the possibility of a purely organically determined homosexuality (Freud, 1905, p. 147). Elsewhere, Freud often uses the notion of a “homosexual drive” (or instinct) and connects it with the child’s inborn bisexuality. As Ruse remarks: “Freud always held open the option that the crucial causal factor in anyone’s sexual orientation could be constitutional—what we today might consider a function of the genes” (Ruse, 1988, p. 65).

Admittedly, the essence of “inversion,” as Freud used to call it in his *Three Essays*, is not uncovered by saying that homosexuality is innate. In general, the problem is that there is no good criterion to separate cause(s) and effect(s) in an

etiologiical account of homosexuality. It might well be the case, for example, that the characteristic behavior of a homosexual's parents is not the *cause*, but the *effect* of their children's (homosexual) behavior, which in its turn would be genetically mediated. This would be the case in a model offered by Posner (1992, p. 103), which integrates biological and environmental factors:

Suppose that because of some congenital hormonal abnormality a small percentage of male children are born somewhat deficient in characteristic male attributes such as boldness and aggressiveness (...), and the deficiency will make them when mature relatively unattractive to women, although as yet no one is aware of this. The father is repelled by the boy's effeminacy, his "sissiness", and the boy reacts to this rejection by transferring his affections to, and seeking a role model in, his mother. She may welcome this and treat him like a girl (...). At all events he increasingly thinks of himself in other than typically male terms. At puberty he finds himself indeed unattractive to girls, and this reinforces his aversion to modelling himself on his father. Eventually he discovers that men are his preferred sex objects [2].

Actually, such opinion has already been ventured by Freud himself: "Education will not be trespassing beyond its appropriate domain if it limits itself to following the lines which have already been laid down organically and to impressing them somewhat more clearly and deeply." (Freud, 1905, p. 178; Ruse, 1988, p. 38; Ridley, 1999, p. 305) A second, related problem is that it remains unclear which characteristics are constitutive for homosexuality and which characteristics are just arbitrarily or culturally linked to it. With regard to the etiology of homosexuality, Freud never mentioned any clinical or experimental data allowing for a distinction between experiential and constitutional determinants (Bieber *et al.*, 1962, p. 3). Finally, if a certain kind of homosexuality is actually innate, how did it become hereditary? In other words: if there exists something like a gay gene, how did it enter the human genome?

Obviously, the answer to this question requires an evolutionary approach. Therefore, in the second part of this contribution we will first consider two leading neo-Darwinist hypotheses about homosexuality, notably the kin selection and superior heterozygote hypothesis. In Section 3, we will bring into focus Freud's contribution to the evolutionary approach of homosexuality.

3. Phylogenetic phantasies

Present-day gene hunting has shown it is very difficult to detect a simple isomorphism between a certain gene and a particular behavior or characteristic (Dennett, 1995, p. 116; Ruse, 1988, p. 137). Homosexuality, for example, if genetically mediated, might as well be dependent on a cluster of different genes, perhaps belonging to different chromosomes. Furthermore, according to most evolutionary theorists, an organism's phenotype is the result of an interaction between its own genetic potentiality and the environment (Maynard Smith, 1975, p. 50). As de Waal

(2001, p. 8) says: “[B]y themselves, genes are like seeds dropped onto the pavement: in themselves they are powerless to produce anything.” Therefore, talking about a gay gene seems rather unscientific at first. But, as Maynard Smith (1986, p. 57) notes,

If a geneticist speaks loosely of a “gene for behaviour X”, he does not mean that there is a gene which would cause behaviour X if inserted into any animal. He means that there is a gene which, if it is present in an animal of a given species, along with all the other genes and environmental circumstances characteristic of that species, will make that animal somewhat more likely to do X [3].

In Section 4, for example, we will argue that in fact there need not be an incompatibility between psychodynamic and genetic models of homosexuality.

Allowing for Maynard Smith’s nuanced interpretation, there is in fact reasonable empirical evidence for the existence of a gay gene. Recent twin studies, for example, have shown that 57% of the other half of male homosexual identical twins also reported to be gay, implying that monozygotic twins are more likely to share the same sexual orientation than are dizygotic ones (Whitam *et al.*, 1993; LeVay & Hamer, 1994; Bailey *et al.*, 2000). Other studies have established a connection between sexual orientation and certain anatomical features such as the *hypothalamus* (LeVay, 1991) or the *corpus callosum* (McCormick & Witelson, 1994) [4]. In 1993, Hamer discovered that of 40 pairs of homosexual brothers, 33 shared a marker at the tip of the X chromosome, which is inherited from the mother (Hamer *et al.*, 1993) [5].

Anyway, saying that homosexuality is in some way part of our genetic wiring, implies an account of the way in which the gay gene has entered the human genome, and has been preserved there ever since. Yet, geneticists often forget that proximate reasons always beg for ultimate ones—homosexuality is no exception to the evolutionary theorist’s basic tenet. In other words, one should be able to attach an adaptive value to the gay gene: what advantages does it convey to those carrying it? The fact is that, at first sight, the concept of a gay gene seems quite paradoxical: how can such a gene spread through the population if homosexuals do not reproduce? In general, there are two different kinds of evolutionary accounts of homosexuality: either the gay gene is adaptive in itself (1), or it is a side-effect of another gene which is truly adaptive and somehow connected to the gay gene (2).

3.1. Adaptive genes

“One answer,” as Wilson puts it in *On Human Nature*, “is that the homosexuals’ close relatives could have more children as a result of their presence” (Wilson, 1978, p. 144). Concerning homosexuality, most neo-Darwinists adhere to this hypothesis, which is known as the *kin selection hypothesis*. Kin selection or “inclusive fitness” theory predicts that natural selection favors those characteristics that cause an individual’s DNA to be copied into the next generation(s), regardless of whether the individual concerned is the actual direct ancestor. Indeed, spreading one’s genes need not necessarily be a reproductive matter. Some men rather “prefer” [6] to

protect their close relatives, provided the latter have a significant number of genes in common with them. In other words, “[T]he protecting relative is indirectly propagating his own genes by increasing the likelihood of the relative’s surviving to reproductive age—rather than to form a strong, or perhaps any, attachment to a woman” (Posner, 1992, p. 102). Inclusive fitness thus enables the gay gene to proliferate through collateral lines of descent, even though its bearers do not reproduce at all.

There is some—basically anthropological—evidence supporting this hypothesis. Wilson (1978, p. 146), for example, states that

in some of the more primitive cultures that survived long enough to be studied by anthropologists, male homosexuals were berdaches, individuals who adopted women’s dress and manner. ... They often became shamans, powerful members of the group able to influence its key decisions, or were specialized in some other way, in women’s work, matchmaking, peacemaking, or as advisors to the tribal leaders [7].

However, the kin selection hypothesis has an important deficiency: it cannot account in a satisfying way for the reason why an individual’s homosexuality would contribute to his relatives’ fitness (Levin, 1984, p. 273). Homosexuals might rather be expected to dissipate their resources in (homo)sexual activities, instead of protecting their close genetic cohort. A study of Bell and Weinberg (1978) shows that 75% of 686 then San Francisco area male homosexuals reported having had more than 100, and 43% more than 500 sexual partners. Even if those numbers were cut in half, it is hardly conceivable that homosexuals would still be able to assist substantially in the raising of their siblings.

So the analogy between homosexuals and the well-known sterile workers of the hymenoptera family that gave rise to the kin selection theory (Hamilton, 1964), is at least shaky. If the objective is indeed to assist close kin, frigidity (*anaphrodisia*) would perhaps have been a better solution [8]. Of course, one should be careful not to project today’s homosexuals’ behavior patterns into the history of homosexuality. But the fact is that being homosexual, as we know now, seems to interfere with, rather than stimulate care for kinsfolk. Indeed, recent research shows that homosexual men were no more likely than heterosexual men to channel resources toward family members (Bobrow & Bailey, 2001).

3.2. *Side effects of adaptive genes*

Another Darwinist hypothesis about homosexuality, the so-called *Heterozygote Hypothesis*, is based on the proposition that heterozygotes are superior in fitness to homozygotes [9]. The standard example for the heterozygote superiority effect is sickle-cell anaemia. Geneticists have shown that this disease only occurs in individuals which are homozygotic (*ss*) for a particular locus which we will call *t*, its normal allele being called *S* [10]. Nevertheless, the frequency of heterozygotes (*Ss*) in some African populations is very high. Allison solved this riddle by showing that heterozygotes are generally much more resistant to malaria, which is very common in

some parts of Africa. In short: “[T]he heterozygous individuals are fitter than *ss* homozygotes because they do not suffer from anaemia, and fitter than *SS* homozygotes because they do not suffer from malaria” (Maynard Smith, 1975, p. 160).

When applied to the case of homosexuality, the main question for the heterozygote model is to figure out a possible advantage of combining the gay gene with a “straight” one. One such advantage has been suggested by Kirsch and Rodman (1982): the gay gene could be linked to, or piggyback on, a gene for dominant behavior. As Werner (1998) points out, an organism homozygotic for such a gene would perhaps live no longer than its counterpart, i.e. an organism homozygotic for submissive behavior, since both of them would either get killed for taking too many risks, or die away for taking too few. Therefore, the heterozygotic combination will most likely be selected in and transmitted to future generations, leaving each of them with a certain percentage of “homosexuals” [11].

An obvious demerit of the heterozygote hypothesis is its association with sickle-cell anaemia. Modeling homosexuality on sickle-cell anaemia suggests the former is a disease, being preserved by natural selection only by means of a complex trade-off involving its connection with a particular fitness-enhancing gene. Such statement, however, is incompatible with the well-known Kinsey figures, which indicate that homosexuality is a more or less common male behavior. Indeed, Kinsey *et al.* (1948) have shown that an average of 4% of any given male population is *exclusively* homosexual (though more recent estimates are between 2–5%; Posner, 1992, p. 293). Moreover, Kinsey *et al.* reported that 6% of the same population has been exclusively homosexual during at least three years between the ages of 16 and 55, while 37% has at least had one homosexual contact in their life, involving orgasm. So nearly half of the male population is, or has once been, “opportunistic” or “situational” homosexuals, as Posner (1992, p. 99) labels them. Concerning sickle-cell anaemia, on the other hand, Allison found that the relationship between the percentage of the population found to have a sickling gene in the heterozygous state (“sickle-cell trait”), and the frequency of recessive homozygous individuals, is roughly 20 to 2, at least in areas where malaria is a real and constant threat. Recent studies confirm Allison’s estimate. In some areas of Saudi Arabia, for example, an average of approximately 15% has sickle-cell trait, whereas 1.4% suffers from sickle-cell anaemia. However, since the disease is largely confined to people of African and Middle-Eastern descent, the estimate of the latter’s average incidence throughout all populations of the world will be considerably lower than 2%. In short: homosexuality seems to be a much more common phenomenon than sickle-cell disease.

The fact that the numbers don’t fit is actually relatively unimportant vis-à-vis the fact that the comparison itself is seriously flawed. After all, the heterozygote hypothesis suggests recessive homozygote forms do not reproduce. Though this may be true in the case of sickle-cell anemia—until recently (at least in the West), those suffering from it generally did not make it into reproductive age—it is definitely not true in the case of homosexuals. For all sorts of reasons, for example social pressure, some homosexuals *do* in fact reproduce, and some might actually reproduce *more*

than their heterosexual fellows. Many Middle Eastern countries still pursue a vehemently homophobic policy, the result being that homosexuality is practiced mostly by married men.

In Section 4, we will see that Freud developed his own evolutionary theory of homosexuality which, though in many respects outdated, exhibits similarities with both the above sketched Darwinist hypotheses. On the other hand, it opens up new, and better, perspectives for evolutionary research by associating homosexuality and reciprocal altruism.

4. A Freudian alternative

Freud is especially known for his complex account of the psychodynamics of homosexuality, which we have discussed in Section 1. However, Sulloway has gathered enough evidence to show that Freud, as well as most of his followers, were profoundly influenced by contemporary evolutionary theory, too, in particular Lamarckism and recapitulationism (Sulloway, 1979; Gould, 1977; Kitcher, 1992). In short, Lamarck believed that the characteristics our ancestors acquired during their lifetime can be transmitted genetically to the next generations (“inheritance of acquired characteristics”). Recapitulationism, also known as Haeckel’s biogenetic law, is the thesis that the development of the individual is an abridged version of the genesis of the species (“ontogeny repeats phylogeny”).

Both theories peaked in the 1890s, when Freud was laying the foundations of psychoanalysis, but were soon thereafter torpedoed by Weismann and Mendelian genetics. Freud did not bother about these developments and until the end of his life he remained an obstinate adherent of Lamarckist and biogenetic theory. This is most strikingly illustrated by his “A Phylogenetic Phantasy” (1915/1987), a short article originally entitled “Übersicht der Übertragungsneurosen” [Overview of the Transference Neuroses].

Freud has always been very fond of dramatic stories about the history of mankind, since they might, according to the recapitulationist thesis, explain its present struggles. In “A Phylogenetic Phantasy,” for example, he tries to link up the vicissitudes of our early ancestors with a range of present-day neuroses, including the so-called narcissistic neuroses, i.e. paranoia and schizophrenia. We have already mentioned that, in Freud’s view, paranoia is a defensive reaction against intolerable homosexual feelings. In accordance with his Lamarckist background, Freud speculates that these feelings, if hereditarily transmitted, should have been acquired by some of our ancestors during their lifetime.

In short, and for all its evolutionary oddities, Freud argues that the first primitive hominidae (“primal humans”; Freud, 1915/1987, p. 14) formed a patriarchal horde, dominated by a strong yet brutish male. Enforced to reduce sexual activity because of geological circumstances, in particular the privations of the ice-age, man started to use tools and develop a language. The father, however, claimed exclusive sexual rights to the female members of the group, in exchange for protection of all. Thereupon, he expelled his rebellious sons from the horde by threatening them with castration. Freud (1915/1987, p. 18) speculates that,

[T]he threatened sons avoided castration by means of flight and, allied with one another, learned to take upon themselves the struggle for survival. This living together had to bring social feelings to the fore and could have been built upon homosexual sexual satisfaction.

As in his case study of *Senatspräsident* Daniel Paul Schreber, Freud (1911) supposes indeed that our (ancestors') social feelings and behavior should be considered as sublimations of a homosexual instinct. On the other hand, however, Freud's dramatic scenario suggests that homosexuality might as well be, evolutionary spoken, an adaptive strategy, since it is the raw material of social cohesion. In short: "It is very possible that the long-sought hereditary disposition of homosexuality can be glimpsed in the inheritance of this phase of the human condition" (Freud, 1915/1987, p. 18).

According to Freud, the changing environment has thus acted upon our ancestors' phenotype, but also, in some or other way, upon their genotype or genetic material, so as to enable them to transmit this acquired characteristic to their progeny (Sulloway, 1979, pp. 92–94, 274–275, 497–498). Unfortunately for Freud, there is no evidence for a clear impact of environmental stimuli on the (the properties of an) individual's DNA. And somehow, Freud was aware of the fact that already at his time, Lamarckism was as dead as a doornail:

My position, no doubt, is made more difficult by the present attitude of biological science, which refuses to hear of the inheritance of acquired characters by succeeding generations. I must, however, in all modesty confess that nevertheless I cannot do without this factor in biological evolution (Freud, 1939, p. 100).

We believe the outmoded 19th century evolutionary biological framework of psychoanalysis inevitably affects its current interest. The bulk of Freud's phylogenetic phantasies has indeed become scientifically worthless. On the other hand, some of Freud's intuitions have popped up again in recent evolutionary theories of homosexuality. Both the kin selection hypothesis and Freudian theory are based on the conviction that homosexuality "is above all a form of bonding, ... a device that cements relationships" (Wilson, 1978, p. 144). Yet, though in Freud's view homosexuality originated in a band of brothers, his evolutionary account is based on the assumption that the gay gene evolved by means of reciprocal altruism, rather than by means of kin selection. And the abundant evidence of homosexuality among animals seems to decide in Freud's favor [12]. Whereas some primate species use sexual acts only to express dominance or submission within the group (thereby articulating a particular hierarchy), others, genetically closer to us, e.g. bonobos (de Waal, 1997) and wildlife orangutans (Fox, 2001), employ all sorts of particular sexual rituals to establish friendships, to relax and enjoy each other and, in general, to cement alliances. As Wilson (1978, p. 141) muses:

[H]uman beings are connoisseurs of sexual pleasure. They indulge themselves by casual inspection of potential partners, by fantasy, poetry, and song, and in every delightful nuance of flirtation leading to foreplay and

coition. This has little if anything to do with reproduction. It has everything to do with bonding.

It is surprising, therefore, that evolutionary theorists have never really investigated into the connection between homosexuality and reciprocal altruism [13]. The latter is a complex process whereby, unlike kin selection, non-related or distantly related organisms, and even organisms of different species, can form mutually beneficial arrangements of a kind that is often referred to as “you scratch my back and I’ll scratch yours.” Reciprocal altruism has been observed in vampire bats and sticklebacks, but it is especially common in primates and humans. Indeed, the *quid pro quo* involved in reciprocal altruism requires trust, memory and intelligence and is actually a first step towards the keeping of promises, which is highly necessary to establish some sort of social cohesion [14]. Examples are legion in the animal world: collaborative hunting, fighting alliances, food sharing, grooming, baby-sitting each other’s offspring, rendering sexual favors, and so on (de Waal, 1996, p. 154). Human social life is permeated by reciprocity, too (Trivers, 1971). A nice example of its importance is the common loathing of so-called “moochers” (or “free loaders”)—bumming cigarettes or borrowing money on a regular basis.

According to Freud, homosexuality is just another example of a trait of which the evolution can be understood by means of the concept of reciprocal altruism. In his phylogenetic phantasy each of the band’s brothers would have wished to have all the women, like the father did. Lest such a scenario should end in a Hobbesian *bellum omnium contra omnes*, the brothers agreed, still according to Freud, to institute the law against incest. By this law, they all renounced the women they desired. And Freud (1913, p. 144) concludes:

In this way they [the brothers] rescued the organization which had made them strong—and which may have been based on homosexual feelings and acts, originating during the period of their expulsion from the horde.

Whereas Freud opposed the kin selection hypothesis by suggesting that homosexuality perhaps evolved by means of reciprocal altruism, his phylogenetic phantasies also suggest that, from an evolutionary perspective, homosexuality is a variation on sociality, rather than on heterosexuality. Put differently, homosexuality is situated on a “sociality” continuum, rather than on a “bisexual” continuum. From an evolutionary perspective, homosexuality has little to do with heterosexuality. In fact, it is just an “extreme” expression of social behavior. Moreover, such a view does not contradict Freud’s claim about the universality of a bisexual disposition. After all, this disposition would simply express two adaptive and gene-mediated patterns of behavior: heterosexuality and moderate homosexuality or sociality.

One might argue that so far the only novelty in this paper is the launch of just another hypothesis about the evolutionary origins of homosexuality. Furthermore, the nature of this hypothesis seems in no way different from the ones it is supposed to supersede: they are all so-called “just-so stories.” So before we move on, we would like to say something about the nature of these stories, and the surplus value of the story we have told above.

As Kitcher has shown, even Darwin was charged with easily resorting to telling stories about any feature in the organic world (Kitcher, 1985a, p. 155). “Any believer,” Fleeming Jenkin objected,

can invent trains of ancestors of whose existence there is no evidence; he can marshal hosts of equally imaginary foes; he can call up continents, floods, and peculiar atmospheres. ... Surely with these advantages he must be a dull fellow if he cannot scheme some series of animals and circumstances explaining our assumed difficulty quite naturally (quoted in Kitcher, 1985a, p. 157) [15].

Concerning anatomical features, Darwin, and with him for example present-day paleoanthropologists, could easily refer to the fossil record. When it comes to explaining the evolution of a particular behavior or mental trait, however, one treads on dangerous ground [16]. Even so, most evolutionary theorists claim that simply all scientific models are Kiplingesque just-so stories. The problem is how to discriminate between the good ones and the bad ones. Surely the equilibrium between explanatory and predictive power seems to be an important touchstone. But predictions should be tested, too. And as Dennett (1995, p. 245) notes: “[A]daptationists have been less than energetic in seeking further confirmation (or dreaded disconfirmation) of their stories, [and] this is certainly an excess that deserves criticism.”

Roughly there are three ways to test evolutionary hypotheses: (i) comparing model-based predictions to ‘real world’ data; (ii) designing experiments; and (iii) checking possible analogies (convergent evolution) and homologies. For different reasons of a technical and ethical nature, it is very difficult to design and perform scientific experiments testing the evolutionary history of human characteristics like homosexuality. Yet it is possible by focusing, for example, on certain measurable variables involved in reciprocal altruism. Emotions like gratitude, sympathy, trust, suspicion and guilt, usually associated with reciprocal altruism, can be considered as such variables.

Moreover, we think homosexuality can be treated as a homologous structure. Evidence is growing that homosexuality is in fact a common feature in the animal world, and that, especially among monkeys and primates, it can have a social function (Fox, 2001). The photograph made by Frans de Waal, depicting two male Tibetan macaques mounting each other, speaks volumes (Fig. 1).

No matter how important a theory’s predictive power may be, one should not lose sight of its explanatory power either. Linking the evolution of homosexuality to reciprocal altruism, thus relating it to social selection, has some obvious advantages by comparison with both rival hypotheses discussed above. Besides not contending with these hypotheses’ shortcomings, it can account for the widespread phenomenon of bisexuality (or sexual ambivalence), which the kin selection story or the heterozygote hypothesis cannot. As we have noted above, some homosexuals do in fact reproduce, just as some heterosexuals do engage in homosexual practices.

Based on explanatory power and prediction testing outcome, the rise and fall of successive adaptive explanations of homosexuality should be “a sign of healthy



FIG. 1. Photograph by Frans de Waal

science constantly improving its vision,” rather than “the pathological story-shifting of the compulsive bibber” (Dennett, 1995, p. 249).

5. The psychodynamics of sexual orientation

All this goes to show that a “Darwinized” version of Freud’s Lamarckian ideas on homosexuality might be fruitful for present-day evolutionary theory. At the same time, however, Freud’s evolutionary speculations on homosexuality have an interesting impact on the core of psychoanalytic metapsychology, too. In the last part of this contribution we will analyze this issue. It will be argued, on the one hand, that Freud’s particular views on the phylogenesis and existence of a homosexual “instinct” imply that psychodynamic mechanisms are redundant to explain certain human activities—formerly described as “idealizations” and “sublimations.” On the other hand, we will claim that the above sketched Freud-Darwinian theory does not detract from the importance of psychodynamic mechanisms for the specificity of human sexuality, since an exclusive sexual orientation almost always needs additional psychic mechanisms.

Following Freud’s line of thought, one should conclude that homosexuality is an adaptation only in its moderate form. Indeed, a moderate homosexuality seems necessary to create and maintain strong friendships, which are very useful in the human struggle for survival and reproduction. Maybe homosexual tendencies are not only necessary, but also sufficient conditions for such friendships. For it seems not too far-fetched to suppose that every real friendship has a—more or less explicit—erotic undertone. In fact, this is little more than the traditional Freudian analysis of the phenomena “love” and “friendship,” found in nearly all of Freud’s writings on sociality such as *Group psychology and the analysis of the ego* and *Civilization and its discontents*. However, Freud always added a psychodynamic element in these writings: friendship (or love) is an aim-inhibited form of homo- or heterosexuality. Social activities and attitudes are regarded as the effect of an idealization or sublimation of the homosexual instincts. This point, however, is counterintuitive, especially because it seems highly redundant to inhibit a moderate

(or even less than moderate) homosexuality to reach its goal. Why would one try to inhibit this “quantity” of homosexuality since it is in itself only aimed at fairly innocent aims, such as a pleasant conversation or a few hugs?

In our Freud-Darwinian view, homosexuality is seen as a form of attachment and attachment as something sexual. At the same time, it corrects the Freudian view because it acknowledges that the sphere of attachment is a fundamental dimension of human existence. In short, our interpretation of Freud’s own evolutionary approach repeats in fact Bowlby’s (Darwinian) critique on Freud: attachment is not always a secondary modification of more basic needs (or instincts). Unlike Bowlby, however, we think that Freud is justified in emphasizing the phylogenetic *and* ontogenetic link between sexuality and attachment. Phylogenetically, (certain forms of) homosexuality and (certain forms of) attachment may have the same origin. Ontogenetically, a friendship which is not rooted in some sort of sexual gratification is no real friendship.

Of course, our interpretation of the phenomena of friendship and homosexuality does not imply that the notion of “desexualization” is nonsensical or that psychodynamics never play any (substantial) role in the formation of social bonds. Many hysterical friendships are likely to have repressed genital motives and strong homosexual tendencies probably lie at the origin of many idealizations. Similar reasons account for Freud’s use of psychodynamic models to explain homosexuality. The existence of a homosexual instinct does not dismiss these models as redundant [17]. Especially Freud’s underscore of the narcissistic mechanism of identification remains interesting. We even think that this particular mechanism might illuminate the specificity of human sexuality.

Freud’s psychodynamic models of homosexuality are to a large extent directed at (the explanation of) the behavior and inclinations of *exclusive* homosexuals. Apparently, Freud seemed to think that the size of the population of exclusive homosexuals was bigger than one could expect on purely evolutionary grounds. In a modern vocabulary: the genetic variation of the adaptive homosexual tendencies seemed insufficient for Freud to explain the large number of exclusive homosexuals. In fact, exclusive homosexuality is absent from the animal kingdom. So at least several of the exclusive homosexuals must have reinforced their homosexual instincts through psychic means. In other words, homosexual—but also heterosexual—fastidiousness is often less a matter of inclinations than a matter of attitudes towards these inclinations. In our view, this psychic modification is particularly necessary because there is no such thing as a “bisexual” continuum. Heterosexuality and homosexuality are not the two extreme manifestations of the same adaptive trait. Our position thus predicts that a strong homosexuality combined with an extremely weak heterosexuality must be very rare.

According to Freud, the reinforcement of the homosexual instinct in “exclusive” homosexuals consists of a combination of rejection and identification. In short, the exclusivity of the homosexual object-choice is a matter of narcissism. This narcissism, however, is not the narcissism of conceit, vanity and shallowness, often thought to be connected with homosexuality. It rather concerns the narcissism of the ego ideal and self-respect. It is about the existential questions “*What do I want to be?*”

and “*what do I not want to be?*” Freud’s own account of exclusive homosexuality (and heterosexuality) suggests that the most fundamental answers to these questions were of the form “*I want to be (like) my mother (because I love her)*” and “*I do want to be (like) my father (because I hate him)*.” The emphasis on an Oedipal logic may seem somewhat outdated, but it is probably all the same correct that one’s (*self-*) *image* of sexual identity and sexual orientation is to a large extent derived from the parental ideals, images and attitudes.

The last point illuminates the specificity of human sexuality. According to some psychoanalytic theoreticians (Lacan, 1981; Laplanche & Pontalis, 1967), human sexuality differs from the sexuality of other animals because it has no privileged object. That is why these theoreticians refer to sexuality as a “drive” and not as an “instinct.” We, on the other hand, would like to point out that the underdetermination of object-choice is something human sexuality has in common with the sexuality of (some) other animals. Baghemil’s extremely well-documented book on the variety in the sexual behavior of turtles, hedgehogs, pigeons and the like, shows that a *purely* heterosexual and genital sexuality is certainly not the prevailing standard in the animal kingdom (Bagemihl, 1999). What is typical of human beings, however, is that they feel awkward about the polymorphous character of their sexuality. They are bothered, not by the lack of sexual instincts, as most French psychoanalysts would claim, but rather by the abundance of instincts. As a result, human beings think of sexuality as something that should be “solved.” Most of the time, human beings do not simply accept their sexual ambivalence, but experience it as an existential paradox they should eliminate.

Freud’s psychodynamic account of homosexuality clarifies that the basic “solutions” for this sexual ambivalence are the narcissistic defense mechanisms. But it also shows how this solution inevitably produces symptoms, ranging from misogyny in some “cases” of exclusive homosexuality, to the hate for homosexuals in some “cases” of exclusive heterosexuality. In other words, identification may eliminate one problem (sexual ambivalence), but it is at the same time the source of many new problems. After all, the transformation of homosexual tendencies into a homosexual identity or—as Foucault (1980, p. 43) calls it—a “hermaphroditism of the soul,” implies the immediate transformation of a source of pleasure into a burden.

6. Conclusion

In this paper we have shown Freud’s theory of male homosexuality to be very subtle. Besides at least four psychodynamic models to explain homosexual object-choice, Freud also gives an evolutionary account of a homosexual “instinct.” Despite its Lamarckian background, this phylogenetic “just-so story” proves that Freud is far less environment-minded than is often thought. Moreover, “A Phylogenetic Fantasy” also contains inspiring elements for present-day evolutionary theorists. Indeed, Freud’s suggestions make it possible to construct the hypothesis that, from an evolutionary point of view, homosexuality has more to do with reciprocal altruism than with kin-selection.

From a psychoanalytical point of view, the Freud-Darwinian views on homo-

sexuality illustrate at the same time the importance and the limitations of a psychodynamic approach. On the one hand, our proposal of a continuum between anti-social behavior and homosexuality implies that defense mechanisms are often redundant when it comes to explain social phenomena. On the other hand, several aspects of homosexuality would be quite incomprehensible without the interference of ego-defenses. It may be that the need for defense mechanisms constitutes the specificity of human (homo-)sexuality.

The intertwining of instinct and psychic defenses in homosexual behavior and object-choice also explains Freud's seemingly paradoxical definition of homosexuality as both social *and* narcissistic. After all, Freud seemed to think that the biological function of homosexuality has something to do with bonding (sociality), while he connected exclusive homosexuality with narcissistic mechanisms such as identification. Of course, this double origin of sexual orientation makes it difficult to test the Darwinized version of Freud's own evolutionary hypothesis. But perhaps this is just the price to be paid for a more subtle account of homosexual orientation than the ones that are usually given in neo-Darwinian circles.

Acknowledgements

We would like to thank both anonymous referees, as well as all members of the *Centre for Psychoanalysis & Philosophical Anthropology* (Nijmegen/Leuven) for their critical comments on an earlier draft of this paper. We would also like to thank professor Frans de Waal for permitting us the use of his photograph.

Notes

- [1] Furthermore, this model seems to imply a strong connection between sexual identity and sexual object-choice: if a male identifies himself with his mother, he inevitably identifies himself with a woman. In his *Three Essays on the Theory of Sexuality* (1905), however, Freud pointed out that male homosexuality differs substantially from transsexualism. Stoller (1985, p. 98) rightly indicates that many analysts failed to notice this difference: "Analysts, like less educated folk, sometimes confuse these gender (masculine/feminine) attributes with erotic issues when judging homosexuality, in the inaccurate belief that visible cross-gender impulses inevitably signal homosexual erotic choice, even if the latter is not consciously experienced."
- [2] For evidence about the hormonal nature of homosexuality, see Dörner (1976); Ruse (1988, Chapter 5); LeVay (1996, Chapter 5).
- [3] Applying Smith's statement to homosexuality, Wilson (1978, p. 146) believes that "what is inherited by an individual is the greater probability of acquiring homophilia under the conditions permitting its development."
- [4] More evidence can be found in Posner (1992, p. 296).
- [5] Unfortunately, other scientists were unable to confirm Hamer's findings. See for example Bailey *et al.* (1999).
- [6] It should be noted, however, that Darwinism is not a motivational theory.
- [7] Freud (1905, p. 139) refers to some similar evidence: "Account must be taken of the fact that inversion was a frequent phenomenon—one might almost say an institution charged with important functions—among the peoples of antiquity at the height of their civilization."
- [8] For the moment we disregard the fact that natural selection is restricted by constraints resulting in sub-optimal design traits.

- [9] Most of the genes located on one set of chromosomes have a mate on the other, and if both of these so-called “alleles” are identical their vehicle, the organism, is said to be homozygotic for that particular chromosome site.
- [10] Capitals (“S”) and lower cases (“s”) respectively refer to dominant and recessive alleles. As a rule, recessive alleles produce no phenotypic effect, except in homozygotic condition, i.e. when not associated with its dominant counterpart.
- [11] It will be clear that this account suggests that homosexuality is a possible phenotypic effect of one or more genes for submissive (or, in general, “female”) behavior. Similar accounts can be found in Miller (2000), LeVay (1996), and Posner (1992).
- [12] As Werner (1998) shows, there are in fact many forms of animal homosexuality, each related to a particular phylogenetic stage and closely connected with the evolution of complex social behavior. In some reptile and insect species the mounting of males by other males is part of an ingenious deception strategy enabling one male to enter the other’s territory without being noticed. By mounting the former, the latter then “wastes” his sperm, so as to enable the former to fertilize the female. However, primate behavior bears most resemblance to the different forms and activities of human homosexuality, such as for example mounting with anal penetration, mutual masturbation and fellatio (Sommer, 1990). See also Bagemihl (1999) for an excellent overview of animal homosexuality, and de Waal (2001, p. 104) for some comments about homophobia in scientific literature on animals.
- [13] Though Wilson (1978, p. 143) notes that, “Homosexuals may be the genetic carriers of some of mankind’s rare altruistic impulses,” he only refers to the kind of altruism involved in the process of kin selection.
- [14] Generally, there are three necessary preconditions for reciprocal altruism to evolve: (i) repeated pairwise interactions between benefactor and beneficiary; (ii) the benefit of receiving favors must exceed the cost or returning a favor; and (iii) the individuals involved must be able to recognize each other and remember each other’s previous actions.
- [15] As yet, this criticism has been repeated endlessly (e.g. Gould & Lewontin, 1979).
- [16] For a critical scrutiny of human sociobiology, see Kitcher (1985b).
- [17] As Lloyd and Nesse (1992, pp. 610–614) point out, the psychodynamic mechanism of identification might be an adaptive strategy, too.

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