

CONSENSUS STATEMENT ON THE PRESIDENTIAL SCIENTIFIC COMMITTEE ON HOMOSEXUALITY

Introduction

The Question: What is the scientific or genetic basis of homosexuality and can it be learned or unlearned? In other words, is homosexuality an abnormality or a habit?

To answer these questions ultimately begs for the scientific basis of homosexuality. However, to address the issue of homosexuality demands a background discussion and understanding of its practice.

Definitions:

Sex is a natural phenomena in all life forms and is the basis for the production and perpetuation of life, though some lower forms of life may have asexual reproduction. Sexuality is determined by biology (anatomy, physiology, biochemistry) and how one relates to others which is a function of psychology, sociology, and the culture in which one lives, the latter including anthropology, religion and other environmental factors. Ultimately, these functions are determined by genes and their interactions with the environment i.e. epigenetics. What, therefore, constitutes normal sexual behavior in any given society (learned sexual practices) is a function of one's biology, psychology, sociology and culture, the last three being dynamic and often changing. Sexuality, on the other hand, depends on four interrelated factors: i) sexual identity (XX or XY karyotype that will determine the sex phenotype), ii) gender identity (the psychological feeling of being male or female and the accompanying gender roles),iii) sexual orientation (ones inner sexual attraction impulses: heterosexual – to opposite sex, or homosexual – to same sex), iv) sexual response (Desire, Excitement, Orgasm, Resolution). Homosexuality refers to a person's overt sexual behavior, sexual orientation and identity in being directed to those of the same sex.

Background

Homosexual behavior has existed throughout human history including in Africa. Judeo-Christian religions (Judaism, Christianity and Islam) condemn it but not all religions of the world condemn it. Many Western-based evangelistic missionaries and Arabs penetrated Africa and influenced her people with their views on homosexuality. This continues today. However, different cultures practice their sexualities differently and these practices have often changed with times. Homosexuality existed in Africa way before the coming of the white man. However, most African cultures controlled sexual practices, be them heterosexual or homosexual, and never allowed exhibitionistic sexual behavior. Almost universally, they contained homosexual practices to such a point that overt homosexuality was almost unheard of. Indeed there are undeclared homosexuals in Africa who may not even know it because their cultures never give room for the expression of such behavior. Many non-sex practicing individuals exist throughout African societies. No one has done any study to unpack their sexual orientations. The present fad of sexual exhibitionism, both heterosexual and homosexual is alien and repugnant to most African cultures.

The Scientific Basis of Homosexuality

All studies of human sexuality in all races throughout the world and throughout human history have documented of the presence of homosexuality. Studies in the animal world have also shown homosexual practices to exist in animal and insect species. Genetic studies have attempted, though unsuccessfully to pinpoint a one specific homosexual gene. A singular determinant for sexual orientation has not been demonstrated. As a result, many scientists hypothesize that a combination of genetic, hormonal, psychological, environmental and social factors determine sexual orientation.

Studies in sexology have shown that sexual phenomena exist on a normal distribution continuum like most human attributes e.g height – most people are in the middle but others may be taller or shorter. Thus also in sexuality, there are spectrum of sexual behaviours. Some

people are less fixed in one form of sexuality than others. Thus sexuality is a far more flexible human quality than used to be assumed in the past, demonstrating the biological variability within the human race. Sexual expression is the function of biology, psychology, sociology and anthropology, the latter including cultural and religious influences. . Ultimately, all sexual functions are determined by genes and their interactions with the environment i.e. epigenetics/epigenomics. Thus the causes of homosexuality can be traced to biological, social, environmental, psychological or a combination of them (biopsychosocial). These influence each other. Reparative therapies to change people's sexual orientations have not proven successful and their scientific validity has remained questionable. Religious dogma regarding these issues has often been very apocryphal.

Homosexuality is sexual orientation (not a disorder) involving sexual attraction to people of the same sex. Like all behaviours, its causes can be traced to either biological, social, psychological or a combination of them (biopsychosocial). Interventions for a given behaviour that take the cause into consideration have good outcomes. **Biological causes of homosexuality** imply that the cause is genetic or is a result of anatomical or physiological differences. Twin studies show a higher concordance for homosexuality in monozygotic than dizygotic twins. A study among Swedish homosexual men, heterosexual women and heterosexual men found that the hypothalamus in both homosexual men and heterosexual women was activated by androgen containing odours. All brains of the three groups processed other odours similarly. These findings imply that homosexual men have a different brain response to male odours compared to heterosexual men but they respond to other odours like heterosexuals. It is not clear whether this differing physiological response exists at birth or developed after homosexual experience later in life. The conclusion from the current body of scientific evidence is that there is no single gene responsible for homosexuality and there is no anatomical or physiological data that can fully explain its occurrence. **Psychosocial causes of homosexuality** imply that it may be learned through experiences in life. Previous disastrous heterosexual encounters (eg. erectile dysfunction, premature ejaculation) lead to aversion towards heterosexual intercourse. A chance homosexual encounter in early life may be associated with sexual pleasure leading to

homosexual relationships being associated with pleasure. The increasing influence of Western culture provides homosexuality as a choice one can choose, it's therefore seen as a socially acceptable option for a few. In conclusion, homosexual tendencies can be taken up based on the person's judgement on what is pleasurable for them. Why this happens to some people is not clear. Whereas some homosexuals may take up the behaviour as an open choice, for others it may be due to indoctrination. In summary, homosexuality has no clear cut cause, several factors are involved which differ from individual to individual. It is not a disease that has a treatment.

Genetically, homosexuality represents one of the “sexual orientation” variants possible in the same species. As is the case for many human behavioural variants, the evolution and emergence of one's self identity as a ‘homosexual—be it gay or lesbian’ must be governed by nature and nurture. Ironically, an argument for a purely structural-genetic basis of the origins of homosexuality contravenes the essence of sex, which is that of procreation. Specifically, the essence of homosexuality would be an antithesis for the Darwinian evolution of sex in species largely because homosexuality does not offer an opportunity for the self-propagation of the species. This has been a critical and fundamental argument by some scholars against the non-genetic basis of homosexuality. However, the counterargument has been for group survival, that some individuals in a group not overburdened by reproduction responsibilities would be available to give a hand to weak members of the group (e.g the elderly and children) as happens in social animals. In our view, at least from existing knowledge and literature, there is no basis for a single, definitive structural genetic basis of homosexuality. That said, the influence of the largely unstudied processes of epigenetics—which involves non-structural modifications of the genetic code, and represent one of the ways by which we learn many of our acquired traits that we can even pass on to our off-springs, cannot be ruled out. Further still, the ever evolving and shifting paradigm regarding the intertwined dynamics and networked function of structural genomic variants, could tilt this view. This is the world of behavioral genetics.

Chromosome linkage studies, based on linking a single gene loci to a physical trait, previously identified a position on the female chromosome X (denoted Xq28) as a possible influence (Hamer, 1993). A preponderance of gay relatives on the maternal side, was also stated. Subsequent studies however, failed to replicate these findings, and possibly unveiled new markers. More recently, a group from the American Societies of Human Genetics have used a genome-wide study to replicate Hamer's Xq28. In animal model studie, in Drosophila, a model for brain development and sexual orientation exists. In Korea a scientific team induced attraction to urine of the same sex mice by deleting a single gene. The practice of homosexuality in animals is, however, uncommon as are many physical deviants. Brain structure, again provides another area of controversy, with reports of homosexual versus heterosexual variations at the suprachiasmatic area and more recently the hypothalamus.

Summary of the research evidence of the biopsychosocial factors associated with homosexuality

Factor	Meaning	Examples	Implication
Biological	The cause is genetic, or is a an anatomical or physiological difference	Concordance for homosexuality is higher in monozygotic than dizygotic twins The hypothalamus of homosexual men is activated by androgens but not in heterosexual men implying that the two respond to sex hormones differently.	Homosexual males are less likely to be attracted to females. A genetic predisposition is possible but there is no definitive gene. The twin studies suggest biological predispositions as present at birth.
Psychological	The cause could be a result of a different thinking style or learned behaviour	Homosexual encounters in early life could lead a person associating same sex partners with pleasure. A chance homosexual encounter maybe associated with pleasure and hence repeated.	Some homosexual tendencies may be learned through indoctrination, forcefully exposure or chance. Not all human behaviour is explained by specific brain structures e.g. prayer.
Social	The cause could be due to the social environment and acceptance or instilled into a person	Cultural and environmental influence can not be ruled out in the factors associated with today's increased homosexual fad. The option of homosexuality as a choice is now very clear and open.	Societal attitude towards homosexuality may determine the likelihood of one taking it up as a sexual option. It may thus be taken up by choice or indoctrination.

The Need To Regulate Sexualities

Throughout the world, human activity is regulated to safeguard citizens, especially the weak and vulnerable, against the dangers inherent in human activities e.g. economic activities. Thus human sexuality also needs to be regulated especially as it is the core of the family and hence the nation. At any one time rules and regulations are based on the current prevailing knowledge and understanding of that to be regulated. This knowledge and understanding may change depending on the times and circumstances. Today the world zeitgeist has come to the realization that indeed homosexuality is a minority sexual expression practiced by some few members of the community. But, like heterosexuality, it needs to be regulated. No country, in the world today, has come up with a successful way to regulate human sexuality, hence the daily scandals and rapes of this world including sexual and gender based violence or human trafficking for sex. That vulnerable populations (including children, minorities, refugees, the poor, the elderly, mentally ill etc) need to be protected against sexual (and other) exploitations is not in question. African cultures had contained sexual vices without recourse to jails and killings. May be we need to revisit them to re-contain the present fire of overt and coercive homosexual activity with the exploitation of our young children

Conclusion

- a) There is no definitive gene for homosexuality
- b) Homosexuality is not a disease
- c) Homosexuality is not an abnormality
- d) In every society, there is a small number of people with homosexual tendencies
- e) It can be influenced by environmental factors (e.g. culture, religion, information, permissiveness)

- f) The practise needs regulation like any other human behaviour, especially to protect the vulnerable.
- g) There is need for studies to address sexualities in the African context.

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APPENDIX: Composition of the Presidential Scientific Committee on Homosexuality

