

who lust in their bisexual aggressiveness. His adult males are bisexual as a matter of course. Thus Plautus reveals the prevalence and character of homosexuality in the Roman Republic at the close of the Punic Wars, when, although the civilizing role of Hellenism was just beginning, homoerotic relationships already flourished in uncouth, indigenous forms.

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PLETHYSMOGRAPHY

According to Masters and Johnson, sexual arousal consists (among other things) of the engorgement of the blood vessels in the pelvic region. Scientists can directly measure this physiological engorgement using a technique called plethysmography. A *vaginal photoplethysmograph* records an electronic signal that measures the reflectivity of the vaginal wall, which is correlated with the amount of engorgement of the blood vessels in the region. A *penile strain gauge plethysmograph* records a signal that reflects the circumference of the penis it encircles. A *volumetric penile plethysmograph* reports the total volume of air around a penis it encloses. A *groin temperature thermocouple* reports the temperature at the surface of the skin on the inside upper thighs, a temperature that reflects the rise in warm blood pooling in the groin during sexual arousal in either sex.

The scientific validity of penile plethysmography is no longer much in dispute—it is, after all, practically valid *prima facie*—though it is not settled which of the two kinds of device is more accurate. Vaginal photoplethysmography has almost

attained the same status. Groin temperature reading is a new technique which has not yet been completely tested.

Origins and Basic Procedures.

Plethysmography was first applied to the study of sexual orientation issues by Kurt Freund, a Czech researcher, who was conducting studies of aversion therapy to change the sexual orientation of gay men who came to him for such help. Freund found that these patients' self-reports of "cures" due to the aversion therapy did not last long, and that plethysmography failed to confirm these cures. Accordingly, he stopped performing such aversion therapy and, in Canada, he has popularized the technique in basic research on sexual topics. Other researchers (notably Nathaniel McConaghy of Australia) have also discovered, through plethysmography, that it is very difficult to change sexual orientation in men.

In research on sexual orientation, plethysmography is useful because it assesses which stimuli cause sexual arousal independent of a person's conscious knowledge or reporting thereof. Age preferences can also be roughed out in cooperative subjects.

In a typical experiment, subjects wear a plethysmograph while they watch a screen and/or listen to an audiotape involving a variety of stimuli: some sexually neutral stimuli (as controls), and some depictions or descriptions of situations or objects thought to be sexually arousing. A mixed bag of plethysmographic results will give the flavor of the kinds of experiments conducted. (1) Male cross-dressers who have been erotically aroused by women are also somewhat aroused by stories of themselves wearing women's clothes, while cross-dressers never aroused by women (i.e., homosexual "drag queens") are not. (2) Ordinary heterosexual men who are *most* aroused by pictures of naked adult women sometimes show small but measurable arousal to pictures of naked prepubescent girls, but ordinary homosexual men who are *most* aroused by pictures

of naked adult men apparently do not show measurable arousal to pictures of naked prepubescent boys. (3) Very few if any men show significant amounts of sexual arousal *both* when viewing naked adult women and when viewing naked adult men. (4) Substantial numbers of heterosexual women can be aroused by descriptions of group sex. (5) The best stimuli for separating homosexual from heterosexual men are those in which several members of the preferred sex are shown participating in sexual behavior. Thus, pictures of two women are typically more arousing to groups of heterosexual men than pictures of heterosexual copulation are.

Implications. The use of such studies and techniques in political or social contexts of course cannot be ignored. It is hotly debated among sexologists whether plethysmography is scientifically valid if used on nonconsenting subjects (i.e., pedophiles or others whose sexual fantasies involve acts that remain illegal). Masturbating several times just before the procedure would, of course, make it useless in men and nearly useless in most women. Repressive regimes would also have difficulty using it surreptitiously. Nevertheless, the potential for abuse is clear, and it is fortunate that so many of those who used it in dangerous ways have now disavowed those uses.

Erotic Taxonomy. Scientifically, plethysmography's best successes have been in erotic taxonomy. It has helped show that male-to-female transsexuals can be dichotomized into two groups: those sexually attracted to men and those sexually attracted to women, and that those sexually attracted to women always or almost always have been aroused by cross-dressing. (Asexual and bisexual male-to-female transsexuals are now considered subtypes of the group attracted to women.) It has helped sharpen definitions by showing that certain types of bisexuality are very uncommon in men but not rare in women. In theory, it could be used over

time to establish precisely how (and whether) one's erotic inclinations change as one gets older, and to throw light on situations where one's genitals are doing one thing and one's mind is doing another. And perhaps most important, it has established the validity of talking about one's sexual orientation, since it can establish that it exists independently of what one consciously reports. In so doing, it has challenged the notion that one's sexual proclivities are mere preferences on the level of what route one prefers to drive to work, even as it has made explicit the dangers and consequences of assuming that one's sexual orientation is far more important than one's handedness or one's leggedness.

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PLUTARCH (CA. 50-CA. 120)

Greek eclectic philosopher and biographer. Widely traveled in the Mediterranean, this noble, who became a priest at Delphi but resided at his native Chaeronea in Boeotia, knew many leading Greeks and Romans and may have received appointments from Trajan and Hadrian. He