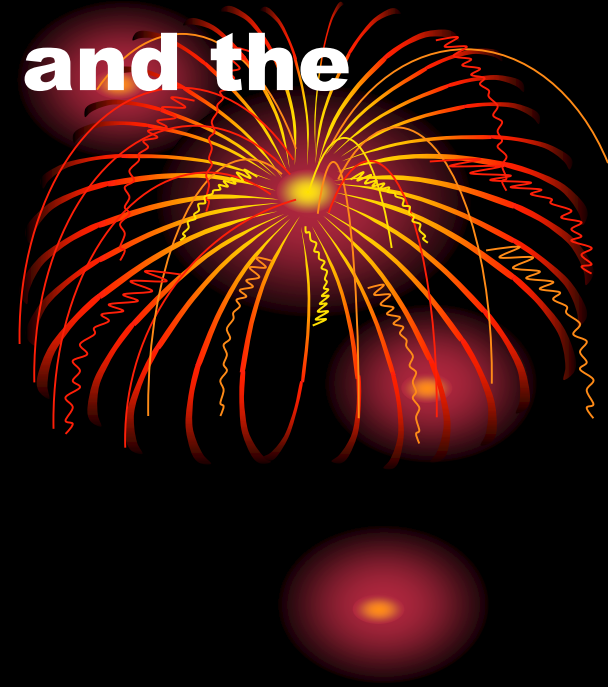



The Ideas of Joseph Knoll and the History of Sexuality

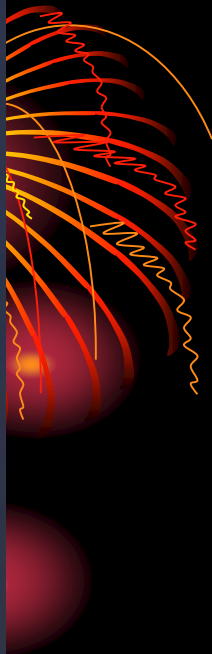
Edward Shorter
Tihany, October 2006



The Brain and Its Self

*A Neurochemical
Concept of
the Innate and
Acquired Drives*

 Springer



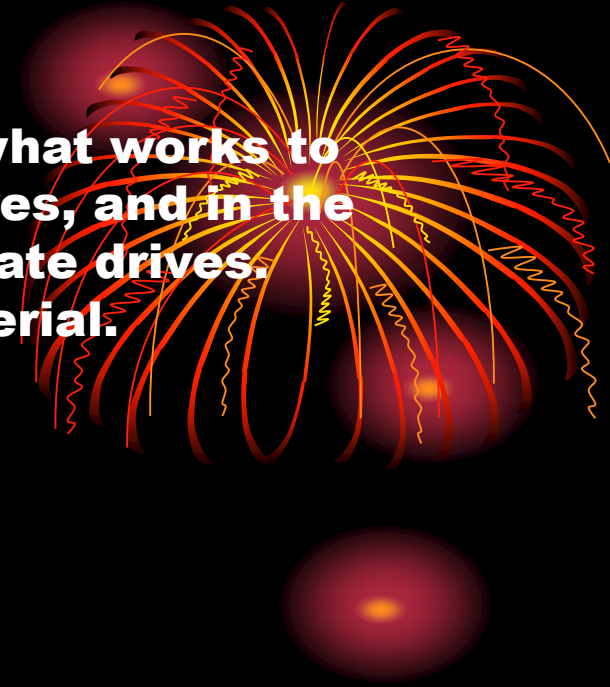
Joseph Knoll



- **The book was published in 2005, and represents one of the great syntheses of our own time. It is an attempt comparable to the Marxist and Freudian syntheses, to explain human behavior, but this time in neurobiological terms, and not in terms of class or intrapsychic conflict.**

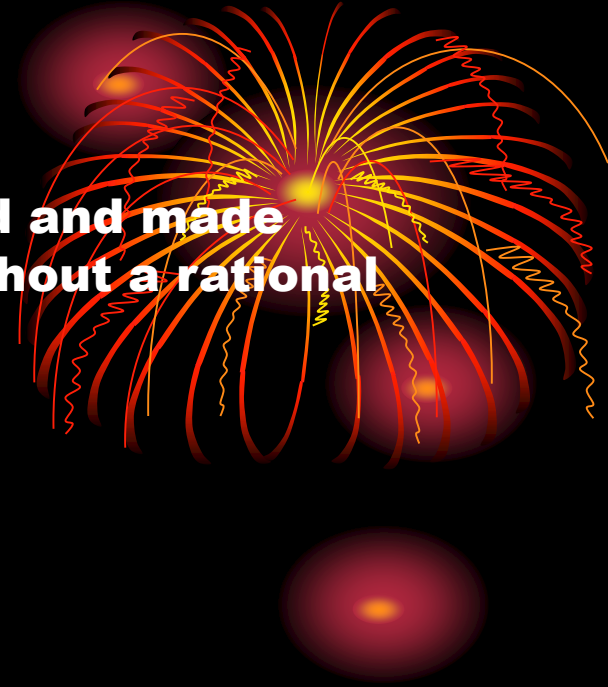
The ideas of Joseph Knoll:

1. The brain learns from the environment what works to maximize survival. These are acquired drives, and in the course of time, acquired drives become innate drives. These become inherited in the genetic material.



Knoll ideas (cont'd)

2. It is mainly good drives that are acquired and made innate. “ . . . Nothing exists in the brain without a rational origin.”



Knoll ideas (cont'd)

3. The whole course of evolution is towards the perfectibility of the species. We will at some point end up with a “rationally organized human society.”

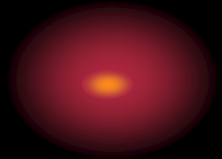


Knoll ideas (cont'd)

How does this happen?

“Specific natural enhancer substances” facilitate this conversion from acquired to innate, such as phenylethylamine (PEA) and tryptamine.

Other enhancers may be synthesized, such as deprenyl and BPAP.



ICRs



- **How does this happen? (cont'd)**

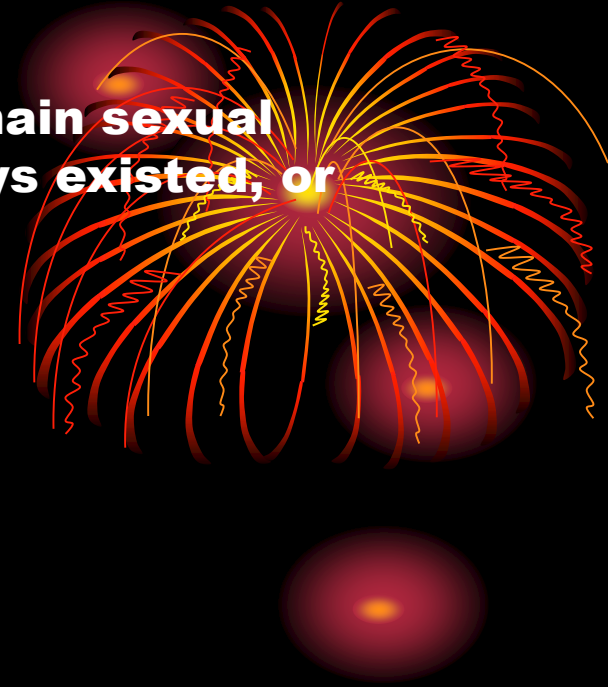
These enhancers act on packets of new knowledge and skill. These packets are called “inextinguishable conditioned reflexes” (ICRs).

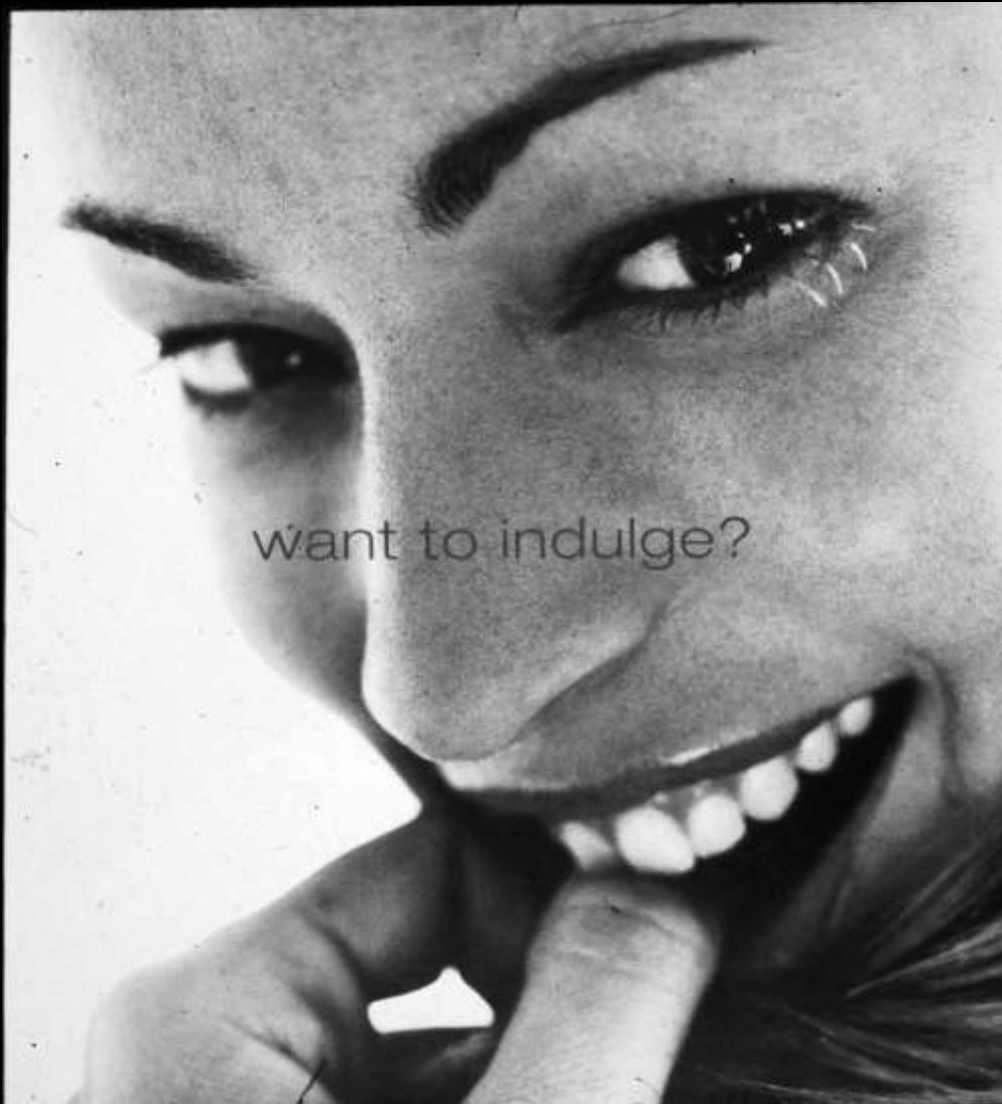
Neurons bearing these ICRs leave their group of origin and “start to reach a functionally higher level of organization.” “It seems reasonable to assume that the acquisition of chains of ICRs or new drives is the physiologically most attractive, most desired, most sought-after state for cortical neurons.”

How do these ideas apply to the history of sexuality?



In the history of sexuality there are three main sexual orientations. These have presumably always existed, or became ICRs very early in human history.



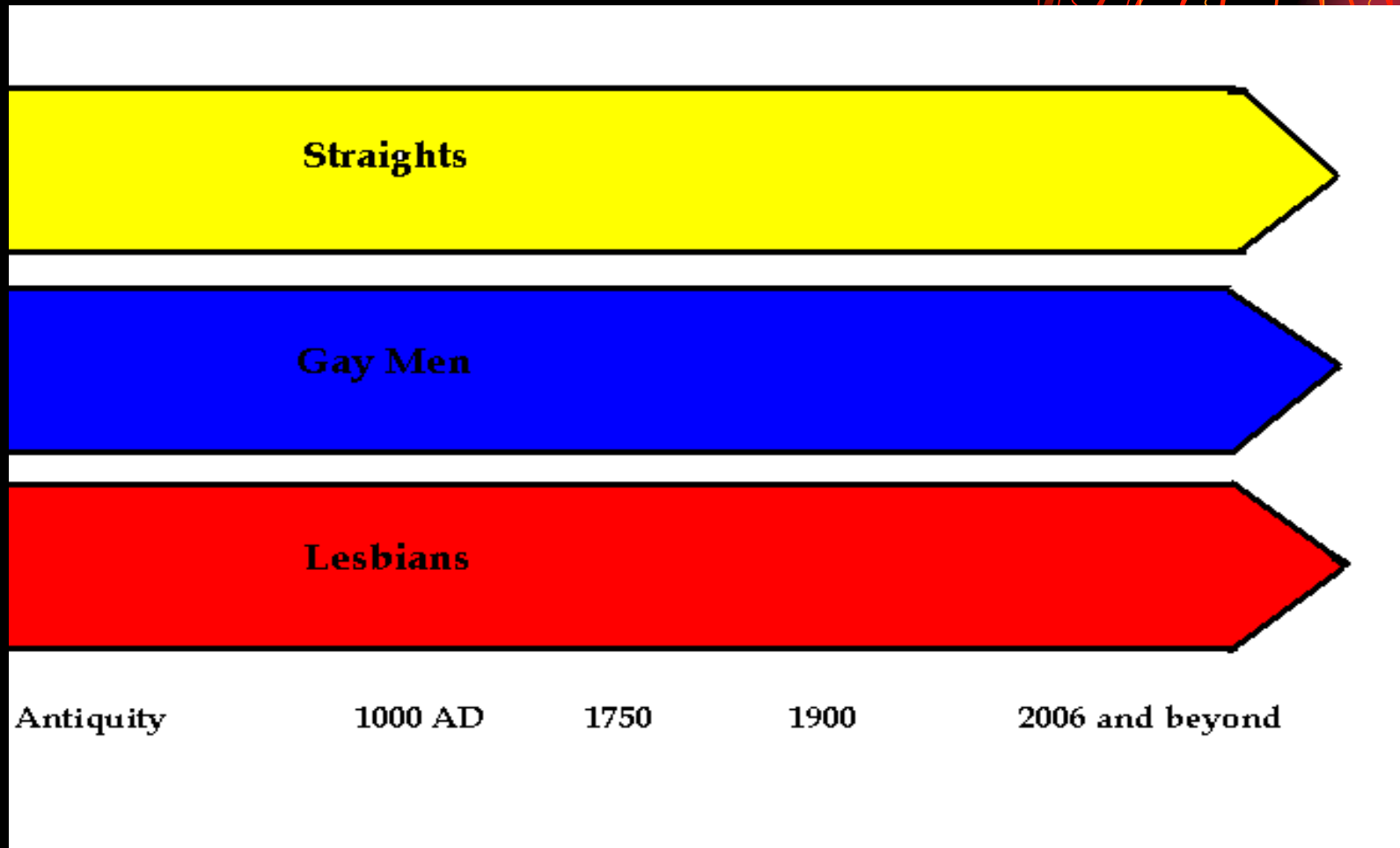


want to indulge?



**Sexual
desire**

Our basic sexual orientations – straight, gay, and lesbian – are driven by biology and not by culture. We're born with them.

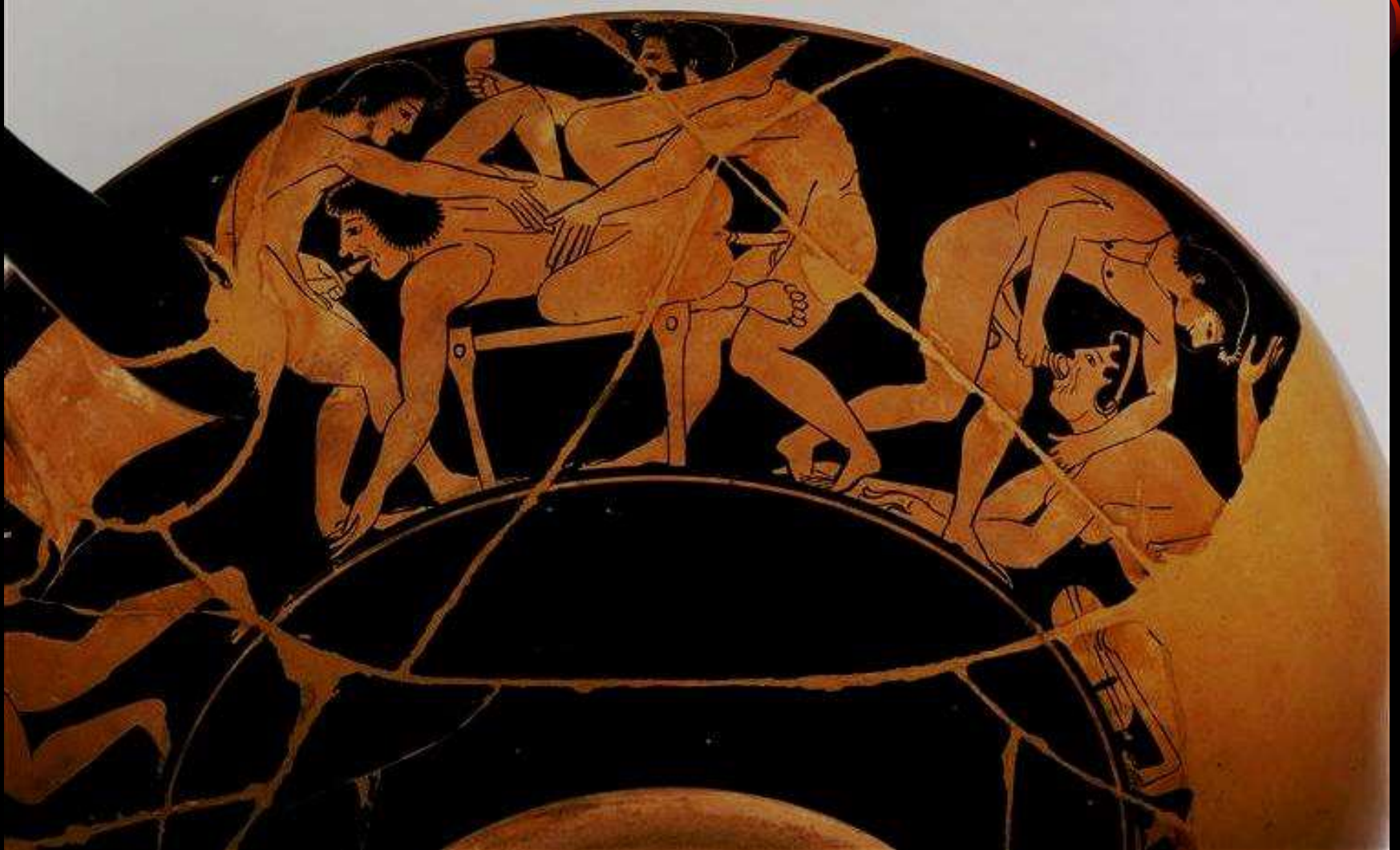




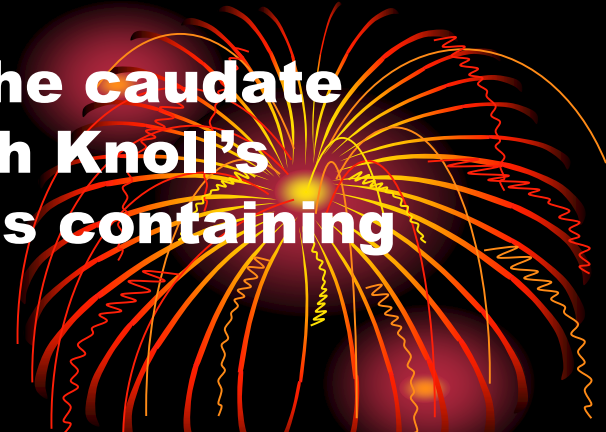
Each of the sexual orientations has roughly the same history

- **Liberation in the Ancient world**
- Repression **in a thousand years of Christian Europe**
- **Then a great breakout at the end of the 19th century**

So the ancient Greeks had more or less the same sexuality that we do. We have the same ICRs.



These “passionate love scores” in the caudate body evidently correspond to Joseph Knoll’s ideas about the migration of neurons containing desirable traits.



Technical note:
We’re looking at activation in the basal ganglia (caudate nucleus), using oxygenated hemoglobin to measure passionate love scores.

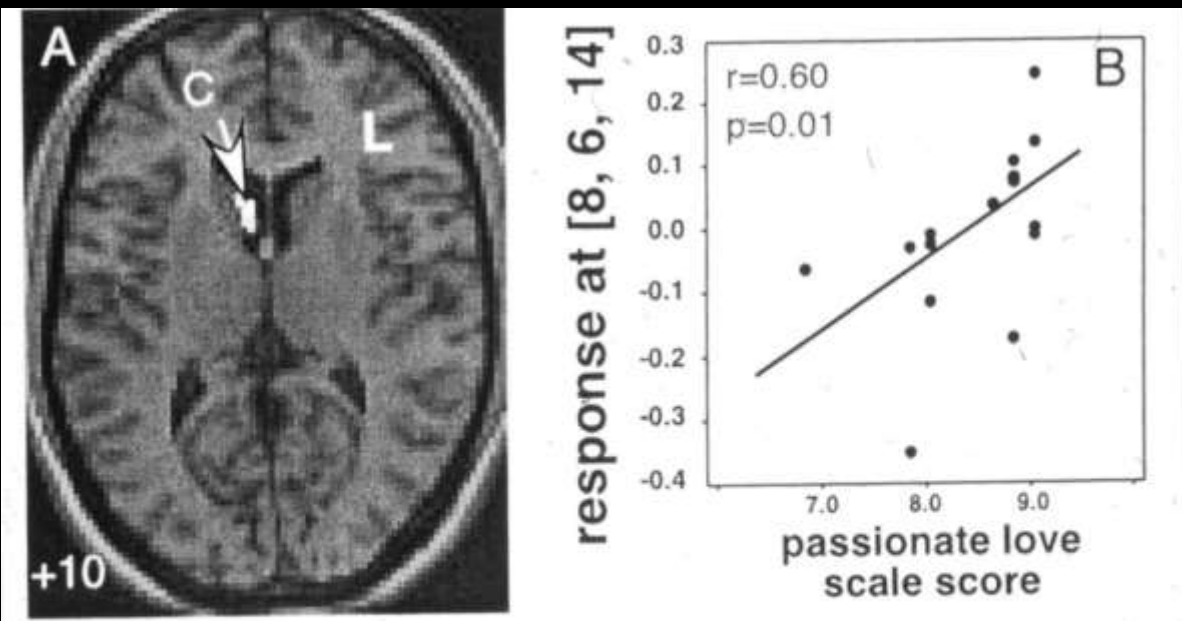


FIG. 3. Activation in the anteromedial caudate body was correlated with the passionate love scale (PLS) scores of participants. A: caudate location for the correlation (arrow). B: correlation of activity in the caudate with PLS scores. Location of responses shown in graph are given in Talairach coordinates. C, caudate; L, left side.

Aron, *Journal of Physiology*, 2005



Hormonal changes when falling in love

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KEYWORDS

Pair bonding; To fall in love; Humans; FSH; LH; Estradiol; Progesterone; DHEAS; Cortisol; Testosterone; Androstenedione

Summary To fall in love is the first step in pair formation in humans and is a complex process which only recently has become the object of neuroscientific investigation. The little information available in this field prompted us to measure the levels of some pituitary, adrenal and gonadal hormones in a group of 24 subjects of both sexes who had recently (within the previous six months) fallen in love, and to compare them with those of 24 subjects who were single or were part of a long-lasting relationship. The following hormones were evaluated by means of standard techniques: FSH, LH, estradiol, progesterone, dehydroepiandrosterone sulphate (DHEAS), cortisol, testosterone and androstenedione.

The results showed that estradiol, progesterone, DHEAS and androstenedione levels did not differ between the groups and were within the normal ranges. Cortisol levels were significantly higher amongst those subjects who had recently fallen in love, as compared with those who had not. FSH and testosterone levels were lower in men in love, while women of the same group presented higher testosterone levels. All hormonal differences were eliminated when the subjects were re-tested from 12 to 24 months later. The increased cortisol and low FSH levels are suggestive of the "stressful" and arousing conditions associated with the initiation of a social contact. The changes of testosterone concentrations, which varied in opposite directions in the two sexes, may reflect changes in behavioural and/or temperamental traits which have yet to be clarified. In conclusion, the findings of the present study would indicate that to fall in love provokes transient hormonal changes some of which seem to be specific to each sex.

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1. Introduction

offsprings, but also that a safe and stable environment is set up wherein the newborn can receive



Elevated serum cortisol is associated with falling in love.

Marazziti and Canale, *Psychoneuroendocrinology* (2004)

So the brain loves sex, and the more sensual the better.

Yet after the Ancients, this sensualization is driven underground:

1000 years of Christian Europe.



In Christian Europe, each of the three great sexual orientations is reduced to a minimal expression of passion.

For heteros, this means an exclusive sexual focus on the face and the genitals.

Other parts of a woman's body were obscured by clothing.





Bodies were covered when people had sex.



**Even the
pornography of
Christian
Europe was
vagina-centred.**

What did the other sexual orientations do?

- --Gays
- --Lesbians



**Gay male sex before our own time
meant anal penetration: buggery.**



**Gay male sex before our own time
meant anal penetration: buggery.**



Yet so deeply tabued was the anus that an anal kiss seals a pact between witch and devil.

N.B.: Anal sex was pretty much off the plate for any non-gay person.

And for gay men it represented the most elemental form of sexual expression, comparable to the missionary position.





Lesbian sexuality is most difficult of all to study because historically lesbians have been so discreet about what they do in bed.

Renée Vivien (l.) and Nathalie Barney, both in Directoire outfits

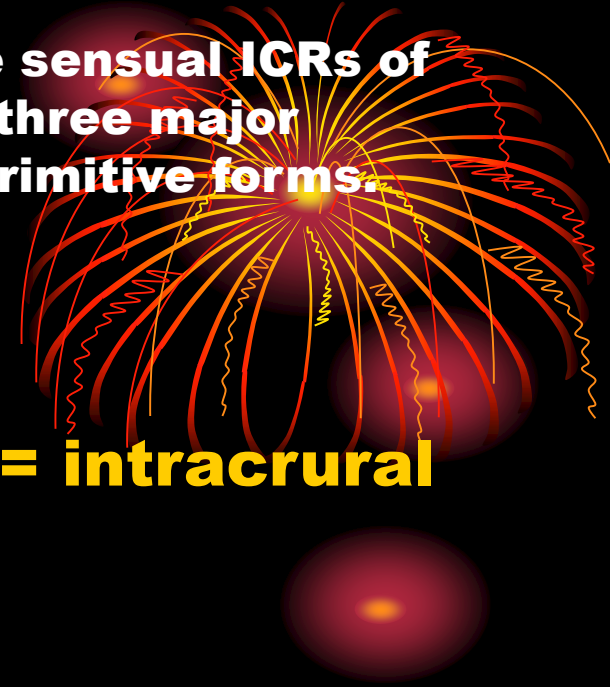
Yet we do know something.



- **The founding document of lesbian history is the diaries of Anne Lister, 1820s.**
- **Anne and her partners had passionate kisses and intracrural sex.**

So in the long night of Christian Europe, the sensual ICRs of the Greeks fall silent. The sexuality of the three major sexual orientations is reduced to its most primitive forms.

- **Missionary position = buggery = intracrural sex**



Why such an elemental sexual repertoire for all three sexual orientations? Just the very basics?

- **The conditions of life during the long centuries of Christian Europe were massively antisensual.**
- **The antierotic teachings of the Church: Sex for reproduction not pleasure.**



The surrounding community discouraged privacy and intense sexual experiences.



People lived in dirt, in the countryside with their livestock.



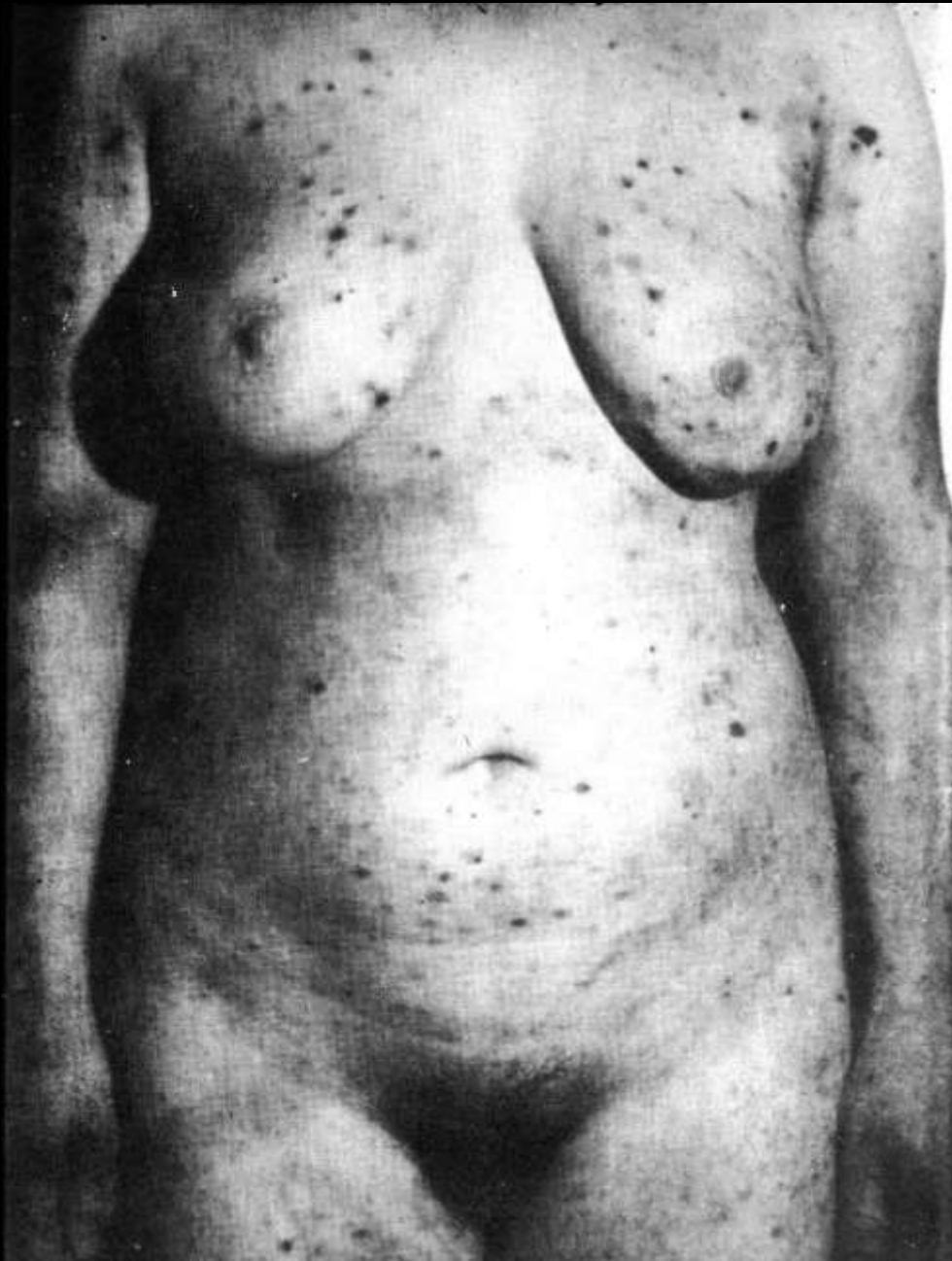
Supersex under these conditions? No.

Cultural attitudes were antisensual.

**“Remember
that you must
die”
(Memento
mori).**

**Lust und Tod
(Lust and Death),
1522**





**Chronic living in
filth resulted in
distracting skin
diseases.**

Scabies



**Of course,
young
couples had
always
sought out
sex.**

**Sex in rural
France,
ca. 1790**

Yet sexual dalliance meant (for unmarried women) a public whipping.

Switzerland, 1783.

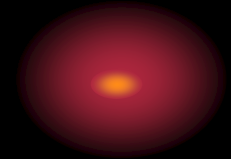
**So no supersex for unmarried women in 18th century Switzerland.
Too nervous.**



Then history turns a page. Late in the 19th century the ICRs of the Ancients start to come back to life. It is the beginning of a new sensualization of sexuality, comparable to the Ancients.



Renoir, "Le moulin de la galette" (1876)



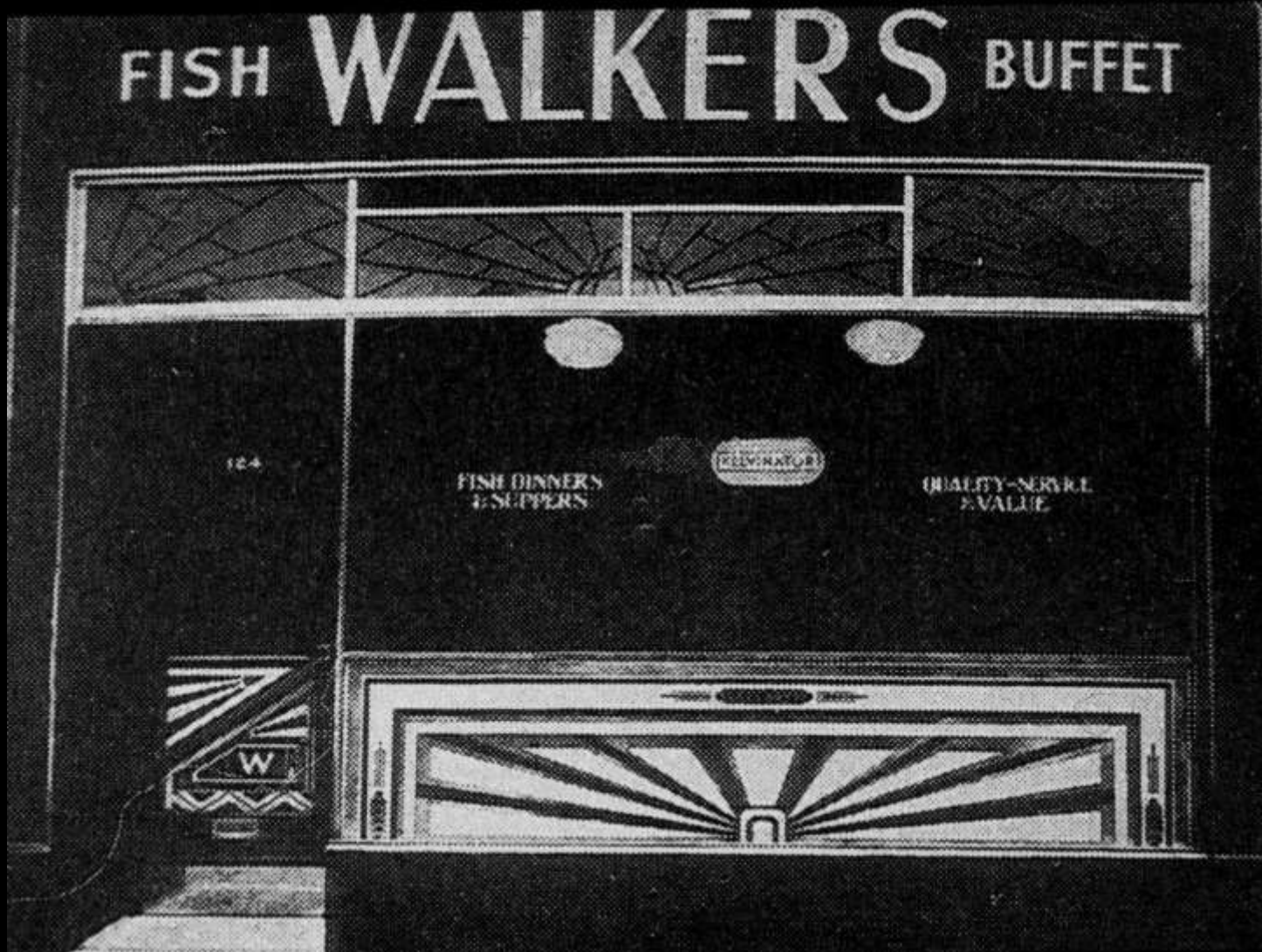


The Church loses control. People move from countryside to city. The great metropolises of the 19th century arise.

Now we have individual bed rooms, better nutrition, better public health.

People have energy, and the privacy to rediscover sensuality.

Better nutrition means more energy.



Fish and chip shop, UK, 1933

A new privacy favors eroticism.



**Monet,
Déjeuner
sur
l'herbe
(1863)**

The re-sensualizing of sexuality begins, a return to the behavior of the Ancients.



- **A neurobiological process involving the reactivation of ICRs? Or a cultural change of fashion?**

Late 19th century: Now the great breakout from the sexual restrictiveness of Christian Europe occurs.



New areas of the body become activated:

Deep kissing

The first kiss in cinema history (Edison, 1896)





**Men discover
their nipples
as an
erogenous
zone.**

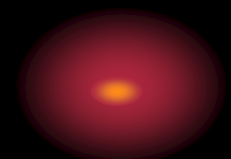
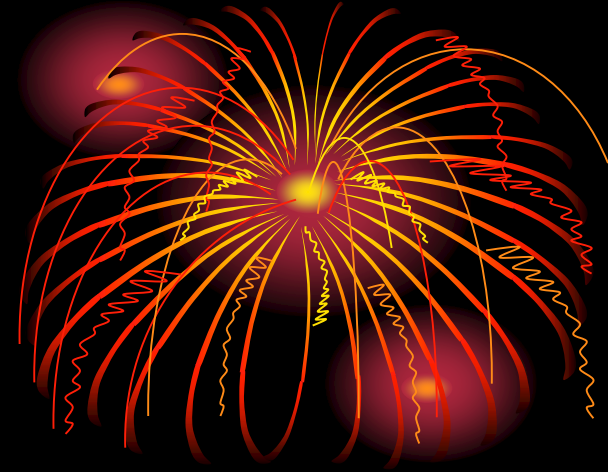
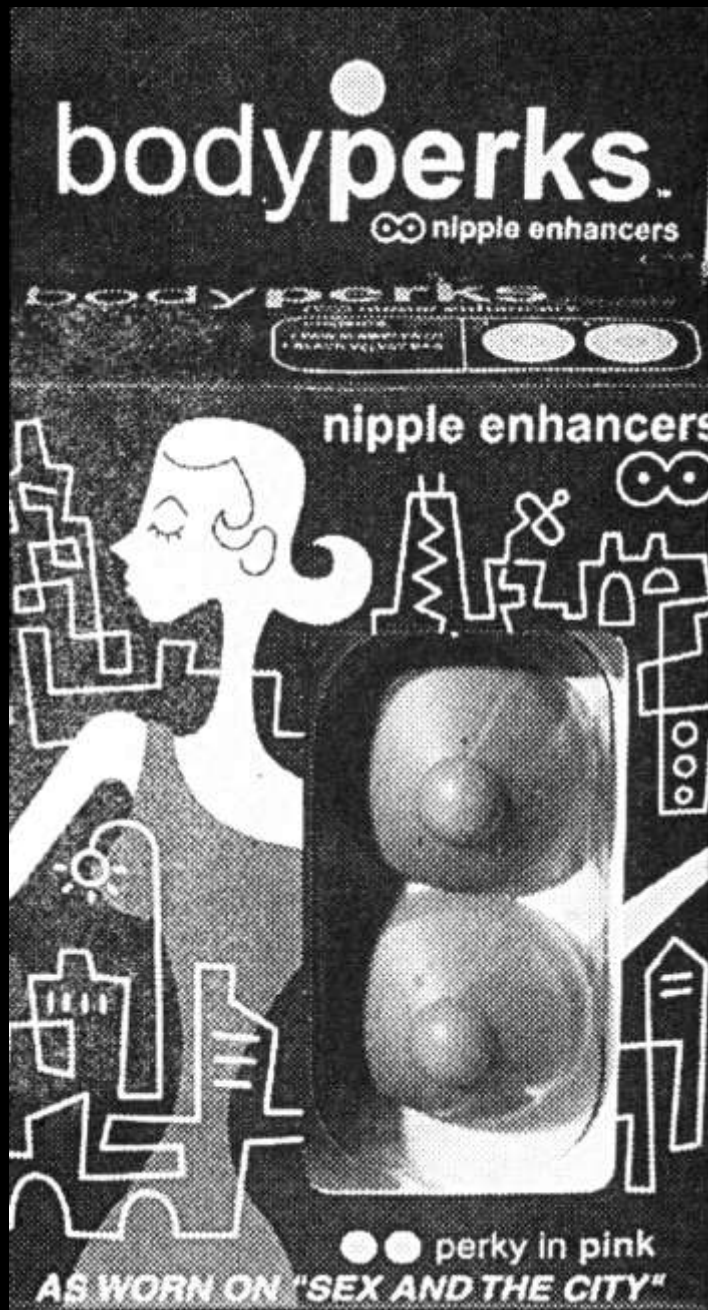


**The strong
woman with
armoured
nipples:
Munich, 1905.**



**The narrative
remains the
same for
gays and
lesbians.**

**Franz von
Bayros,
1907**



Fake nipples ...



**Oral sex
joins the
repertoire**



**Oral sex
(cont'd)**



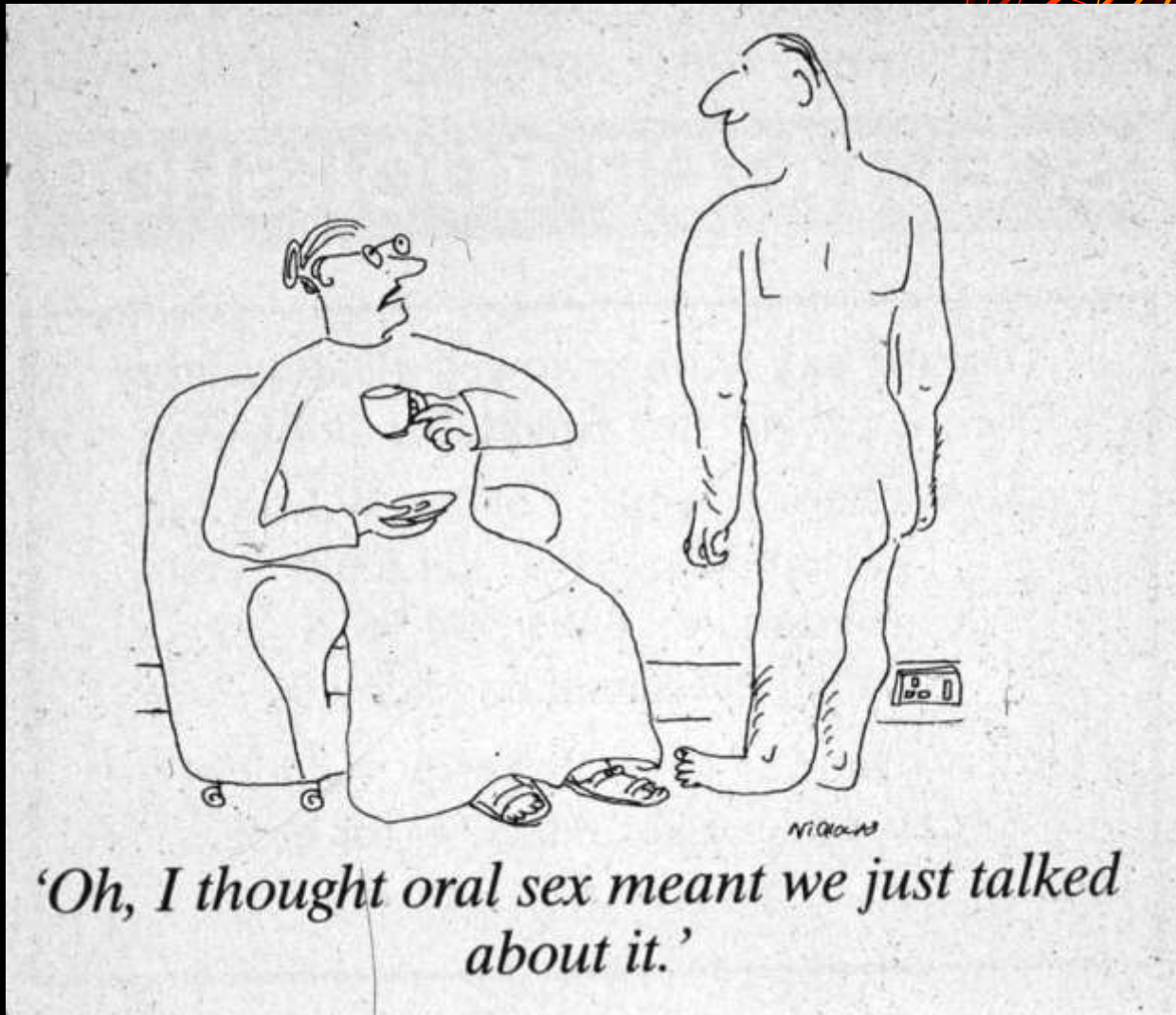
**Oral sex
joins the
lesbian
repertoire**

**Gerda Wegener
aquarelle,
1925**

A lesbian couple perform oral sex, 1939



Oral sex: Not everybody catches on.

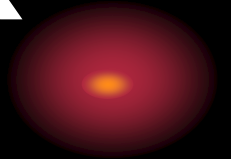




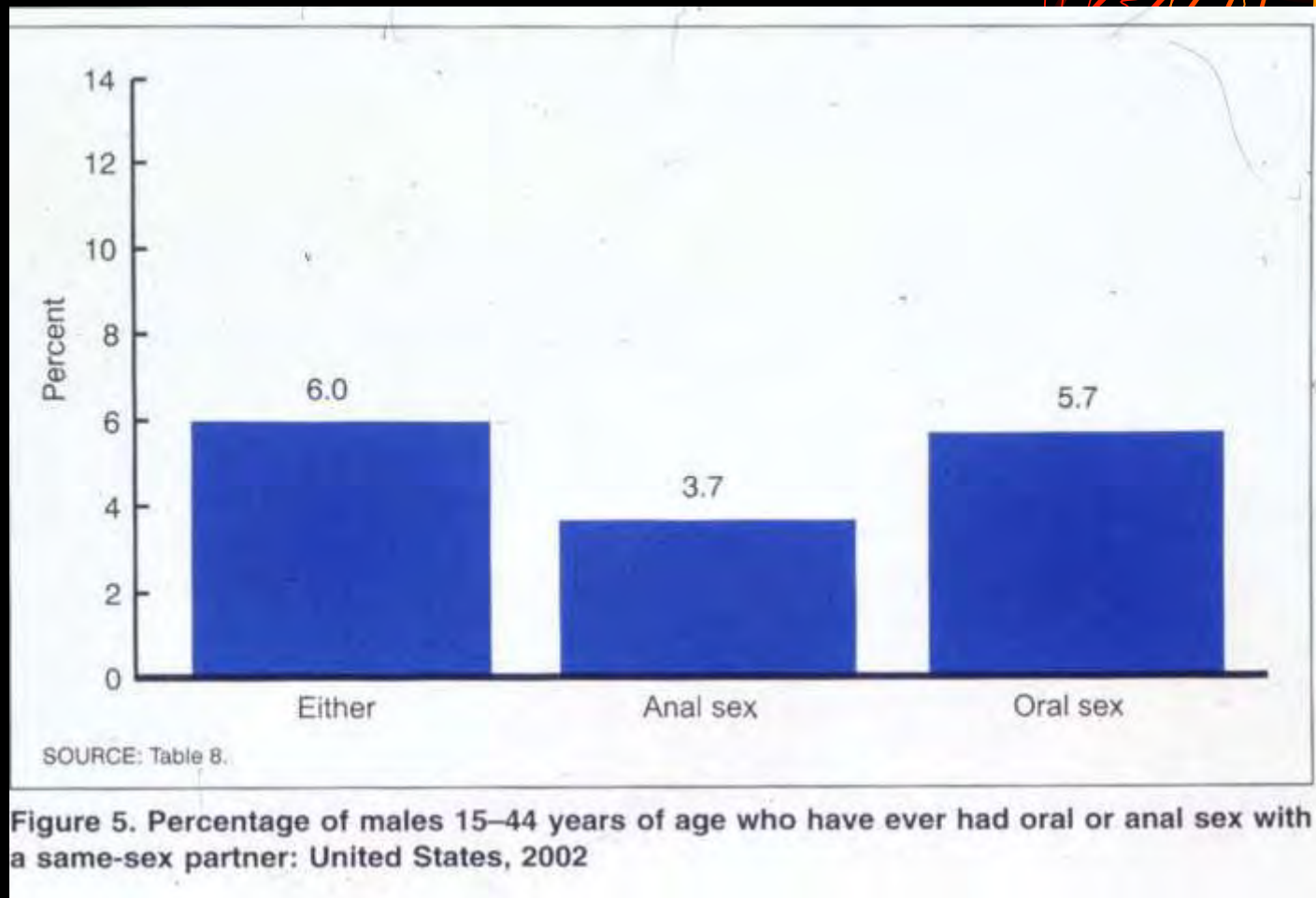
**Heteros
discover the
anus,
homosexuals
discover the
rest of the
body.
Convergence.**



**Anal sex
(cont'd)**



But gay men didn't discover anal sex, of course. Yet for gay men today, oral sex is commoner than anal.



So gay men expand their repertoire to other areas of the body



We have been describing the advent of total body sex, as the Ancients experienced it.

The entire body becomes a source of sexual pleasure – all the orifices, the muscular long limbs, everything. The body has pleasure receptors everywhere.

By the late 19th century, the external constraints on sensuality have been sufficiently removed that the brain, as with the Ancients, can direct the mind to act.

Convergence

All three sexual orientations begin at very different starting points:

Lesbians at intracrural sex

Gays at buggery

Heteros at the missionary position

With the discovery of total body sex, all converge to the same practices: deep kissing, nipple play, oral, anal, and admiration of muscle tone.

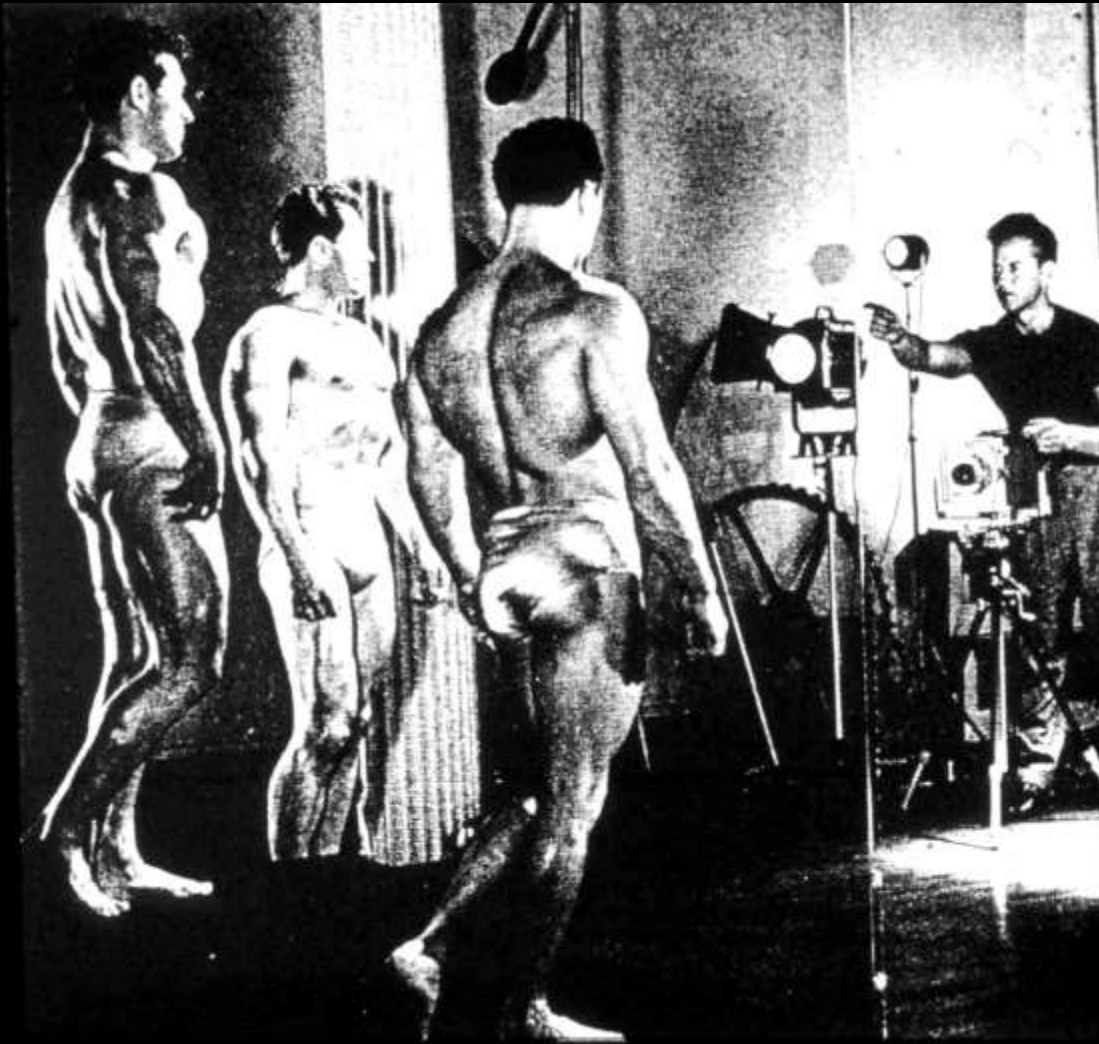


In the history of homosexuality, some themes are permanent; some are not.



There has always been a gay male interest in hard bodies. Is this an ICR or a cultural preference?

Michaelangelo's David, the classic gay male icon. Sixteenth century beefcake.



**Making
beefcake**

**Russ Warner
doing a
photo shoot**

Lesbians: butch vs. femme



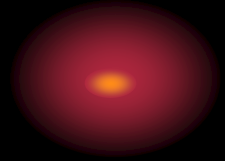
**Claire Waldoff
and Margo Lion
singing, Berlin,
1920s.**

**Here again, some
themes are
permanent (in
the ICRs of
lesbian women),
some not.
Which is butch
vs. femme?**



Now the big question: Are some recent changes going to become permanent? Going to become ICRs?

- **What changes?**



Roleplaying. Formerly known as “SM.” It’s pretty recent.



SM is an “overlay” for all three orientations, like romantic love or an insistence on marriage as a precondition for sex. The earliest references are in the 16th century.

“Die gestrenge Gouvernante” (The Strict Governess), 1920s. Probably porno for male consumption.

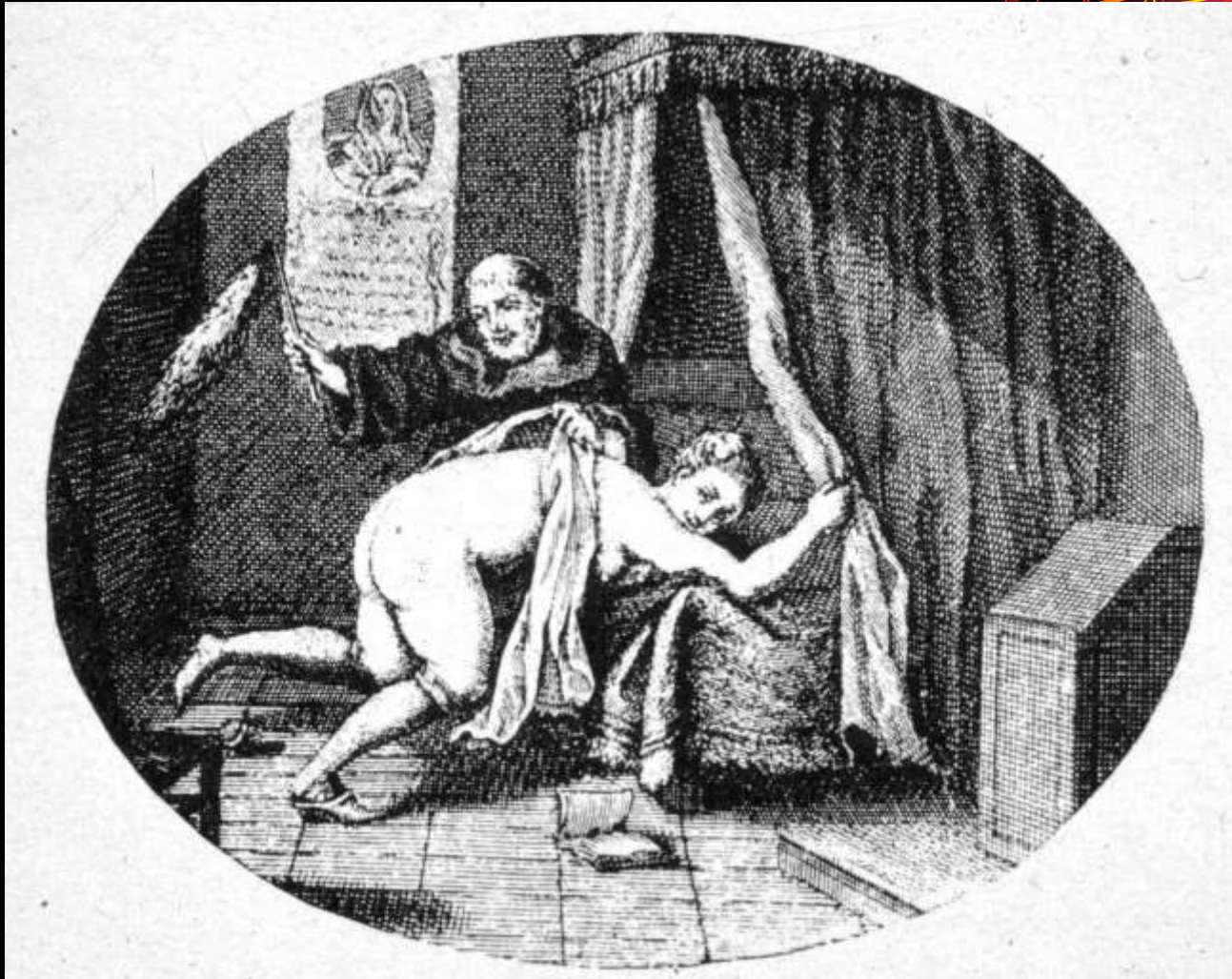


SM has also been a genuine lesbian theme.

N.B. There is no leather in either of these scenes. Simple flagellation. A brutish procedure comparable to the elemental nature of the missionary position, buggery, or intracrural sex.



SM does reach way back in time.



**A monk flagellating a servant,
an 18th century Dutch caricature.**

**SM: the
Marquis
de Sade**



The Marquis de Sade: *Justine* (1791)



Yet let us not forget Sade's Juliette, history's first dominatrix.

N.B. But fetish is simply not a theme for Sade.

The fetishizing of SM begins late in the 19th century. This is genuinely new.



Why is this important?

Fetish is important in sexual history because it brings the whole body together.

Fetish becomes the symbol of total body sex, the sexualizing of the entire body.

A decorative graphic of a firework exploding in the upper right corner. The firework has a bright yellow and orange core with numerous thin, radiating lines in shades of red, orange, and yellow. There are also several soft, glowing red circles scattered around the firework.

**Fetish
begins
with fur, in
the form
of Leopold
von
Sacher-
Masoch.**

**In 1869
Sacher-
Masoch
produces
history's first
fetish
document,
Venus im Pelz,
or Venus in
Fur.**

Leopold von Sacher-Masoch

Venus
im Pelz

und andere Erzählungen

Könemann

**Sacher-Masoch had a fur fetish.
Here we see him with his dominatrix,
the fur-clad Fanny von Pistor.**



Yet fur quickly gives way to leather.




- **By the 1920s, leather has become the primary fetish object.**
 - **The leather-clad dominatrix emerges.**
- This is one of the earliest images of the dominatrix, 1928.**





Rudolf Schlichter, *Domina Mea*, 1927/28



**The figure
of the
dominatrix
emerges.**

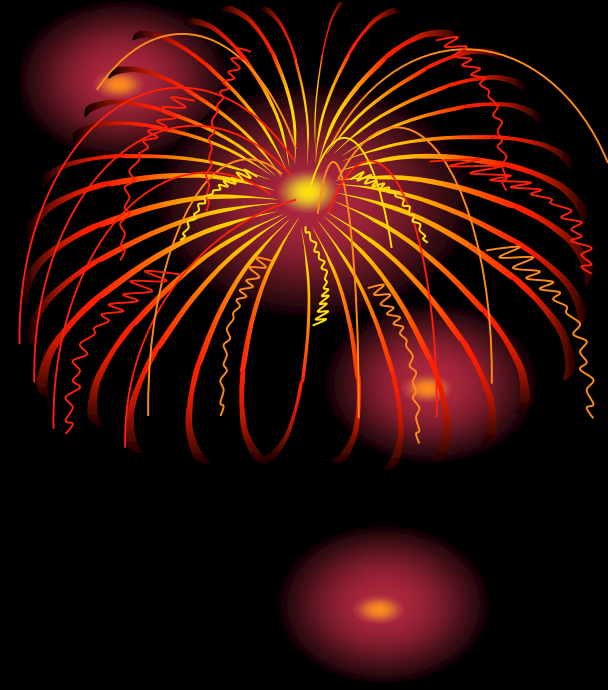
**Rudolf
Schlichter's
"Domina
mea" (1927)**

The dominatrix in pornography

- Emerges in the late 1920s-early '30s

Le Cuir Triomphant
(Triumphant Leather), early 1930s





But N.B.:
Not all fetish is SM-
oriented.

These are independent but
overlapping circles.

Gay men and lesbian women get in on the fetishizing of SM.



Two lesbian women in Berlin, 1931:

Fur coats, leather boots, and masculine accessories.





**Another
lesbian fetish
scene:
Berlin, 1920s
fur/leather**



**Lesbian
leather
scenes were
certainly
active in the
artistic
imagination by
the 1920s and
'30s.**

**Man Ray, “Les
fantaisies de
M. Seabrook”
(1930)**





Leather in gay SM


- **Begins with the gay motorcycle clubs just after WW II.**

**“Leather boys,”
Amsterdam, 1955**

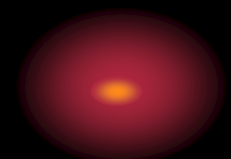
So in the three sexual orientations we see the convergence of fetish, especially leather. This is historically very new.

- **Will it become permanent? Will it become an ICR, or is it just a passing fad?**





**Some of these themes
cross over from the fetish
subculture into main
society. Just a fad, or
some larger biological
process?**



**Italian
magazine ad,
1998**



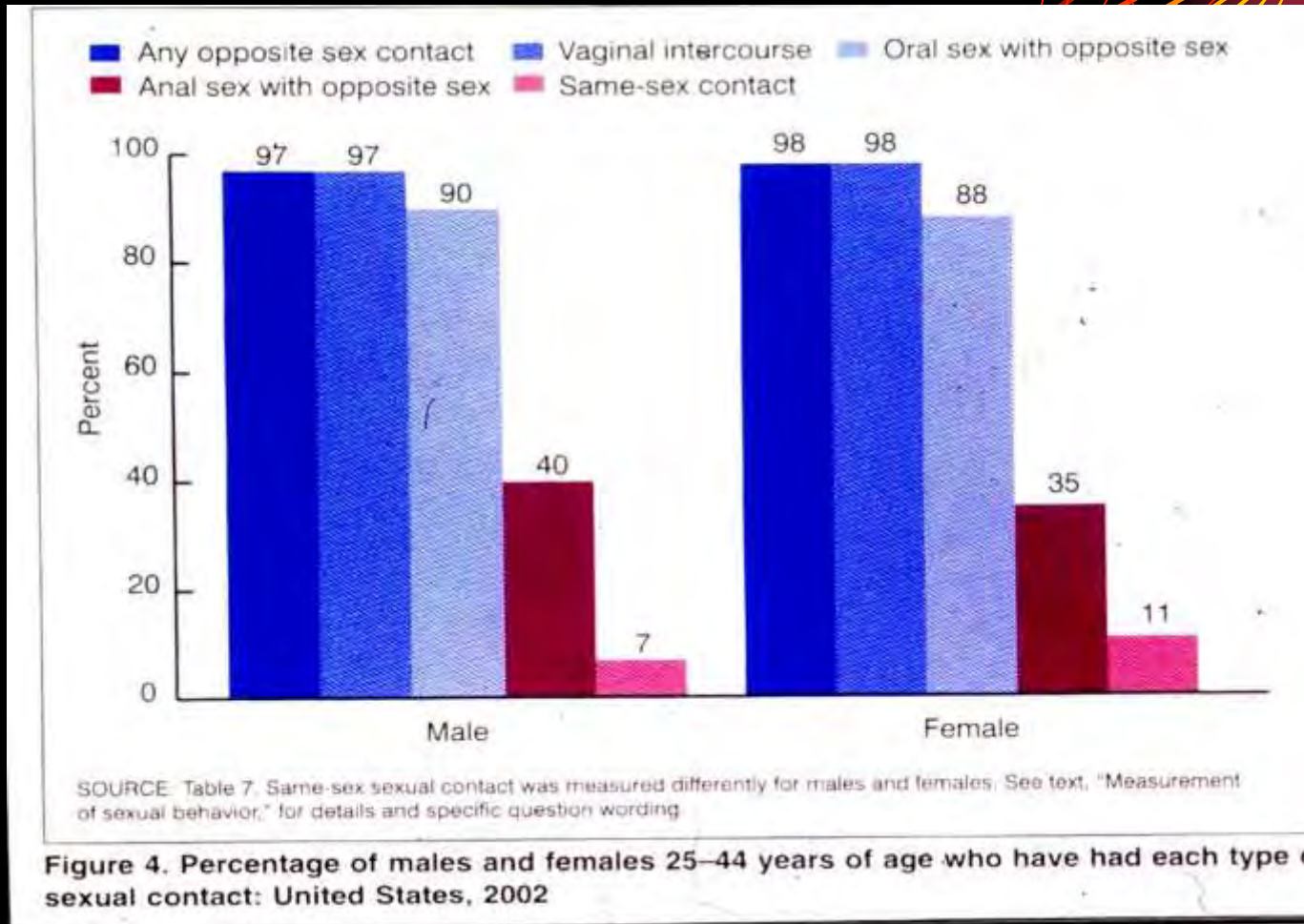
**So fetish
conquers fashion.**



**Real people start
dressing like this.**

**This is interesting
because it gives us
a marker of the
triumph of total
body sex.**

How the story comes out. Since the 1960s, the drive to total body sex has been *accelerating*.



Today, a third of women 24-44 have had anal sex. (On right, dark red column.)

How the story comes out: Adolescents.



TABLE 1. Participants' Engagement in and Intentions to Have Oral and Vaginal Sex

	Total, % (<i>n</i>)	Male, % (<i>n</i>)	Female, % (<i>n</i>)
Have had oral sex	19.60 (112)	18.20 (43)	20.80 (69)
Have had vaginal sex	13.50 (78)	14.00 (34)	13.10 (44)
Have had oral and vaginal sex	10.53 (60)	11.44 (27)	9.94 (33)
Intend to have oral sex in the next 6 mo.	31.50 (178)	34.50 (80)	29.40 (98)
Intend to have vaginal sex in the next 6 mo	26.20 (148)	29.00 (67)	24.10 (80)

Today, more young teenagers have had oral sex than vaginal.

How the story comes out: the fetish scene.



A shift from leather to latex.

Latex sites now vastly outnumber leather on the Internet.

So, Joseph Knoll has much to answer for.



- **We see all these changes. How many of them represent new patterns of neurobiology? New ICRs?**

The work of Joseph Knoll and the History of Sexuality



- **1. JK gives us some insight into the stability of the three big sexual orientations across the years: They are inborn and unlikely to change.**

The work of Joseph Knoll . . . (cont'd)



- **2. JK raises the question: What's the evolutionary logic of homosexuality, essentially nonreproductive behavior?**

Meaning of homosexuality? (cont'd)



- **--One possible answer: Nature wants to widen diversity in the gene pool, and just happened to throw in a few genes for homosexuality in addition to all the other sexual variants in the genetic pool. Thus, homosexuality would be an epiphenomenon of the survival need for genetic diversity.**

Meaning of homosexuality (cont'd)?



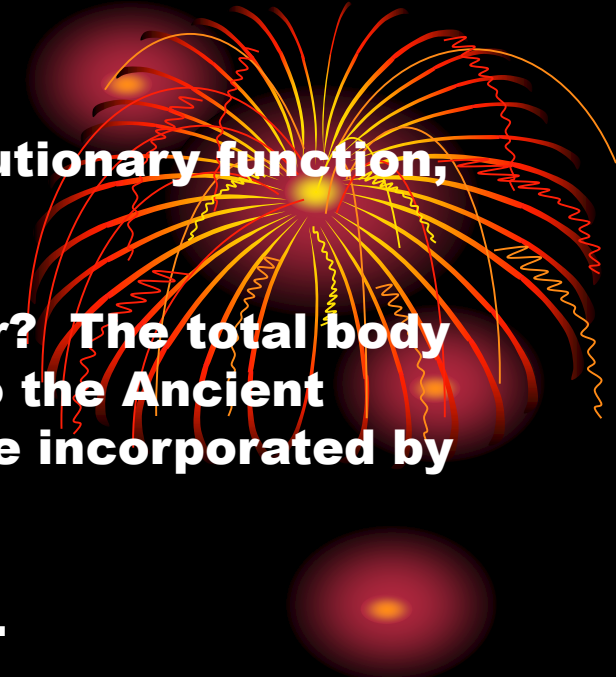
- **--A second possible answer: Possibly homosexuality is a backup mechanism in case something happens to the hetero parents. Gays and lesbians can be just as loving as heteros, the biological parents. Why shouldn't they make good caregivers, if all the other heteros are busy with their own offspring.**

3. JK raises the question, what is the evolutionary function, if any, of fetish?

What survival advantages might fetish offer? The total body sex argument. Total body sex goes back to the Ancient Greeks, so total body sex must somehow be incorporated by now into the innate drives.

Fetish is a representation of total body sex.

The fact that total body sex was driven underground for a thousand years by Christian Europe suggests that this particular phenotype was not strongly expressed. Yet now we see the re-emergence of total body sex, this time with a fetish overlay.



Final question:



- **It would be interesting to hear what impact, if any, Prof. Knoll thinks that deprenyl or BPAP have on sexuality?**



That's all.

