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ACCADEMIA TIBERINA



GENDER: IDEOLOGY OR SCIENCE?

Acad. Prof. Dr. David Tomasi

ACCADEMIA TIBERINA



- Note: This slideshow only contains the basic slides to support the conversation and analysis contained in the official presentation “Gender: Ideology or Science” at the Accademia Tiberina, Rome, November 25th, 2022. Please refer to the full presentation and video for details, further information, images/graphs, and bibliographic references.



Main foci and goals of this video (Part 1):

1) **To promote love, tolerance, understanding, and inclusion.**

No sexist, intolerant, hateful (etc.) positions should ever be defended.

In the context of free speech, we certainly agree that everyone should have the chance to present a position we might disagree with. However, it is also important to always do our best to show when a position could be sexist, intolerant, hateful (etc.) and do our best to show its false premises and dangerous outcomes.

2) **To defend science and the scientific method.**

We could argue that science is not able to (in part because this is outside of its scope and nature) "give reasons for its own (more specifically: ethical / moral) perspectives, ontology, and direction. However, until "something **better**" (which means that the aforementioned parameters cannot be avoided in any case) we still believe that the scientific method is the best way to discover (note: not "invent," but di(s)-cover!) data, facts, about (at the very least) our biological nature



Main foci and goals of this video (Part 2):

1) **To educate about false, misleading, and/or incorrect interpretations.**

We are sure that many people (perhaps, even the majority!) who are supporting views which are contrary to scientific evidence do so, out of a misplaced belief in the ethical and moral value of the application of such views. It is essential to understand that the ultimate goal of people who support these views and people who do not support them (not because of personal opinion, but on the basis of scientific evidence) is essentially the same, i.e., to promote love, tolerance, inclusion, and understanding. Having an open and nurturing conversation, rather than a heated political one (note: Please keep politics out of the scientific discourse!) is the best way to achieve this goal.

2) **To protect our children.**

Beyond whatever scientific fact we can demonstrate, we also believe that *adult individuals* should be free to think, feel, and act in whatever way they seem fit. This of course does not mean that any of these is healthy, or even true, for themselves or others (only in the latter case we should implement restrictions and clear rules to protect others), but that *their* choice is free. However, no child should be forced to think, feel, and act (and the relative transitive option as in "acted upon" or "operated -surgically- upon") solely on the basis of non-informed conversations, i.e. without solid scientific-clinical-medical examination.

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Isogamy vs. Anisogamy

Isogamy:

The reproductive system and state of gametes from both sexes being the *same* **size** and **shape**.

Anisogamy:

The reproductive system and state of gametes from both sexes being of a different size and shape; more specifically:
Large & sessile for females, and small & mobile for males.



Gametes

Gametes are reproductive (sex) cells in animals or plants. The name derives from Ancient Greek γαμετή 'wife' / γαμέτης 'husband' --> γάμος 'marriage'

In animals, female gametes are called ova (sing. ovum) or egg cells, and male gametes are called sperm. Ova and sperm are haploid cells, with each cell carrying only one copy of each chromosome.

Gametes are produced through meiosis, where a diploid parent cell, which has two copies of each chromosome, undergoes one round of DNA replication followed by 2 separate cycles of nuclear division to produce 4 haploid cells.



Chromosomes (see: Karyotype)
X, XX, XXX, XXXX; XYY, XY, XXY, XXXY



Gonads (sex glands)



Hormones (endocrine system)



Phenotypic Sex



Chromosomes (see: Karyotype)
X, XX, XXX, XXXX; XYY, XY, XXY, XXXY



Gonads (sex glands)
→ ♀ Ovaries (ovum/-a) vs. ♂ Testes (sperm)
→ Gametes (haploid cells) → anisogamy (vs. isogamy)
→ forming a zygote



Hormones (endocrine system)
→ ♀ Estrogens (e.g. Estradiol); Progesterone vs.
♂ Androgens (testosterone, etc.); Anti-Müllerian hormone



Genitalia ♀ vagina vs. ♂ penis



Chromosomes (see: Karyotype)

♀ => X, XX, XXX, XXXX;

♂ => XYY, XY, XXY, XXXY



♂ defined by the presence of the Y chromosome



→ DNA-binding protein:

SRY (= Sex-determining region Y) gene / TDF (=Testis-determining factor)

→ Genetic Region = testis determining factor



Absence of SRY = ovarian development



→ DNA-binding protein:
SRY (= Sex-determining region Y) gene / TDF (=Testis-determining factor)
→ Genetic Region = testis determining factor



Leyding cells
- testosterone
- masculinization (virilization) of external genitalia
Wolffian ducts (mesonephric)
→ 8-12 weeks



Leading & Sertoli cells
- Anti-Müllerian hormone
(Müllerian Inhibiting Substance; regression of Müllerian structures)
→ 8-10 weeks



Gonads (sex glands)
 → ♀ Ovaries (ovum/-a) vs. ♂ Testes (sperm)
 → Gametes (haploid cells) → anisogamy (vs. isogamy)
 → forming a zygote



♀ (XX etc.) vs. ♂ (XY etc.)

↓
SRY-

↓
Ovary

↓
Uterus,
Fallopian Tubes
Upper 2/3 vagina

↓
SRY+

↓
Testis ~ Testosterone → Wolffian ducts /
mesonephric ducts

↓
Penis

↘
Epididymis
↘
Seminal Vesicle
↘
VAs deferens

↘
Anti-Müllerian Hormone

↘
~~Vagina, Uterus, Fallopian Tubes~~



Scientia et Revolutio

"La scienza moderna non nasce con Galileo e Newton, ma le sue origini vanno retrodatate di almeno duemila anni. La Rivoluzione scientifica del XVII secolo infatti riscopre una precedente Rivoluzione, quella ellenistica, promossa da figure come Euclide, Archimede, Eratostene, Aristarco di Samo e tanti altri. Fu grazie a loro che nacque il metodo scientifico, e studiarne l'origine è indispensabile per la comprensione della "civiltà classica" e per la valutazione di alcune questioni di capitale importanza per la storiografia: dal ruolo di Roma alla decadenza tecnologica medioevale, alla "Rinascita" in età moderna."

Lucio Russo, *La rivoluzione dimenticata - Il pensiero scientifico greco e la scienza moderna*,
Universale Feltrinelli 2012



Sex

--> *sek-s-

Sesso --> greco τέκος (tèkos) = generato, procreato,

--> I verbo τίκτω (tikto) = generare, procreare, produrre, (da cui deriva anche la parola ostetrica)

--> radice tak- (con la mutazione della t in s).

sex = gender --> جنس --> γένος vs. יין

Alt. Greco ἔξις (exis) = qualità, stato, condizione, poi trasformatosi in sexis.

--> Radice latina sec- del verbo secare = tagliare, separare, in senso più lato, distinguere (il maschio dalla femmina).

Proto-Italic: *sekajō. <--- saeculum / saecula vs. signum. VS Etruscan <AḷT<E / castus / casta
& Sansk. शस्त्र

Old Church Slavonic сѣщи (sěšti, “to cut, hack, chop off”)

Old English saga (English saw).

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Gender --> gènere s. m.

Lat. **genus -nēris**, affine a gignēre «generare» e alle voci gr. **γένος** «genere, stirpe», **γένεσις** «origine», **γίγνομαι** «nascere»].

Geschlecht

Althochdeutsch **gislahti**, mittelhochdeutsch **geslehte** oder *gesleht* „Abkunft, Stamm, Familie, Gattung“, belegt ab der Zeit um das Jahr 1000, aus dem Ursprung von schlagen, spätmittelhochdeutsch auch männliches oder weibliches Geschlecht, seit der Zeit um das Jahr 1400 auch ein Fachwort der Grammatik



Transgender / Trans(s)exual

Trans + *Gender*

Trans + Sex

Trans:

Lat. Trans = "across, beyond, through, on the other side of"

Lat. *trare- = "to cross"

PIE *tra- (root *tere-) = "cross over, pass through, overcome."

Transgender(ism) = Transsexual(ism) = Transvestit(ism)?

First usage "Transsexual," ultimately from German (through Lat.) *Transsexualismus* / *Transsexualität* (Weininger / Hirschfeld) and retranslated in its anglicized version back to German (and many other languages) often in juxtaposition to the original and/or common use of the term in each of these languages. As it is well known, the modern term transgender was intended to be preferred over transsexual (J. Oliver, 1965), given that transsexualism (was) "misleading; actually, 'transgenderism' is meant, because sexuality is not a major factor in primary **transvestism**."

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OPEN DISCUSSION

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