1) **Sex**: biological indicators of male (XY) and female (XX)
   - Barring Disorder of Sex Development (DSD) Sex is **not** assigned

2) **Gender**: The psychological and cultural characteristics associated with biological sex. (Shechner, 2010)
   - Contrary to DSM-V: gender is **not** assigned at birth

3) **Gender Identity**: Refers to an individual’s social identification as male, female, or other. (DSM-V) *Identity resides in the mind not in the body* (P. McHugh 2014).
Transgender: Refers to the broad spectrum of individuals who transiently or persistently identify with a gender different from that associated with the individual’s biological sex.

Transsexual: individual who seeks, or has undergone, social transition (hormones +/- SRS) from one gender to the other

Cross-sex hormones & SRS: considered standard of care for adults with GD (but not required to identify as transgender)
Gender Dysphoria of Childhood:

- **Gender dysphoria (GD) of childhood:**
  a condition in which pre-pubertal children perceive and are distressed by a marked incongruence between their experienced gender and the gender associated with their biological sex.

  [paraphrased from DSM-V]
1) **Identity not aligned with reality** = sign of confusion or mental illness

2) **Encourage children to identify with their biological sex**
   - Some families opt for watchful waiting
   - Others opt for family therapy with their child

3) **Over 75% accept bio sex** after passing naturally through puberty & identify as homo or bi-sexual **by late adolescence or early adulthood**.

[The predominate cultural belief] that all male-to-female (MtF) transsexuals are, essentially, women trapped in men’s bodies … has little scientific basis … and is inconsistent with clinical observation

~ Michael Bailey, PhD
As the “trapped in wrong body” myth persisted, the suffering of transgender adults was invoked to argue for the urgent rescue of alleged transgender children from the same fate.
2007 Norman Spack, MD
Boston Children’s Hospital Gender Clinic launches controversial protocol without evidence

1) Affirm child’s desired gender not biological sex
   - Live socially as opposite sex

2) Pubertal suppression at Tanner stage 2

3) Cross-sex hormones at age 16yrs

4) Bilateral mastectomy for natal girls age 16 S/P 1 yr of daily T
1) Brain studies prove GD is innate not psycho/social condition
   - Consistent, persistent insistence = diagnostic of an innate trans child whose “body and brain are not on the same page.”

2) GD Children will suffer and commit suicide w/o this protocol
   - Sterility & other potential risks are a small price to pay
   - Sexual Reassignment is safe enough & effective for adults
   - Better off sterile & monitoring for potential toxicities than dead
Rametti et. al. (2011) white matter microstructure of FtM transsexual adults more closely resembled that of men than that of women.

Other diffusion-weighted MRI studies have found white matter microstructure in both FtM and male-to-female (MtF) transsexuals falls halfway between that of genetic females and males.

These studies, however, do not prove causation because they are not prospective, serial, longitudinal, randomly sampled & population-based of a fixed set of individuals from infancy forward.
Neuroplasticity: *brain differences* most likely result from transgenderism.

- **Neuroplasticity**: significant evidence repeated patterns of behavior & thinking alter brain structure and function.

- No evidence of brain structures unchanged from birth.

- Transgender subjects have been thinking and acting for years in ways that, through learned behavior and associated neuroplasticity, may produce brain changes that could differentiate them from other members of their biological sex.
Male infant brains are masculinized by endogenous testosterone, secreted from testes beginning eight weeks’ gestation. Female infants lack testes, and therefore, do not have their brains masculinized.

Barring disorders of sex development (DSD), boys are not born with feminized brains, and girls are not born with masculinized brains.
Genes and hormones influence behavior, they do not hard-wire a person to think, feel, or behave in a particular way.

Humans "develop traits through the dynamic process of gene-environment interaction. ... [genes alone] don't determine who we are."

Twin Studies: relative contribution of Nature & Nurture

- MZ twins contain 100% same DNA from conception, and develop in same prenatal environment (exposed to same prenatal hormones).

- If genes and/or prenatal hormones contribute significantly to a trait, the concordance rates should be close to 100%.

- Example: concordance rate among MZ twin pairs for age of pubertal onset is as high as 90%; skin color is 100%.
Milton Diamond (2013) largest population base


- extensive literature search for MZ twin sets concordant or discordant for transsexuality.
- Internet bulletin board search and clinical contact requests for participants in a survey of twins in which one or both transitioned
Only 21 out of 74 (28%) of all MZ twin pairs were concordant. GD/trans is NOT innate.

BUT concordance among MZ twins > DZ twin concordance.

AND the prevalence of transsexuals among gen. population is <1%.

This means genetics contributes but only minimally.
Genetic influence is minimal

Shared environmental experiences contribute < genetics

At least 72% of transsexuality due to one or more non-shared post-natal experiences
**No single factor or factors destines any child/all children to develop GD**

- Clinical case studies suggest:
  - social reinforcement, parental psychopathology, family dynamics
  - Adverse childhood events not limited to sexual abuse
  - social contagion facilitated by mainstream and social media

*May play role in development & persistence of GD in vulnerable children*
1) Sharp increase in adolescent referrals in 2004–2007 cohort, and even more so in 2008–2011 cohort.
   - coming out “trans” > social status in some youth subcultures.

2) Significant co-occurrence of autism spectrum disorder; begs question: do developmental disorders predispose teens to gender confusion/dysphoria?
Spike in Adolescent sex reassignment requests

- 2 year quantitative retrospective chart review & qualitative analysis of all adolescent SR applicants @ Finland GIC from 2011-2013
- Natal girls markedly overrepresented
- Severe psychopathology preceding GD onset was common
- Youth on autism spectrum overrepresented

**Conclusion:** treatment guidelines must consider GD in minors in context of severe psychopathology and developmental difficulties.
Is suicide of GD children inevitable absent social affirmation and pubertal suppression?

>90 percent of all suicide victims have a diagnosed mental disorder. No evidence GD children who commit suicide are any different. Therefore, prevention = better treatment of psychological co-morbidities.

75%-95% of pre-pubertal GD children resolve by adulthood when neither affirmed nor medicated. Obviously, the vast majority do NOT commit suicide!
The New Desistance Debate

Desistance Rates for GD are inflated because...

1) Majority of subjects were misdiagnosed as GID/GD; they were in reality only gender non-conforming (GNC)

2) Steensma et.al.'s subjects were properly diagnosed, but his research wrongly assumes that all pts who failed to return to gender clinic resolved their GD.


Singh (2012): Majority of Zucker desisters were GID

- 63.3% of entire sample met full GID criteria
- 36.7% were sub-threshold
- No statistically significant difference in rates of desistance
- Sub-threshold children were as likely to identify as transgender
- 122/139 former Gender Identity Clinic patients (all boys) desisted: 88% desistance rate overall
“As the Amsterdam clinic is the only gender identity service in the Netherlands where psychological and medical treatment is offered to adolescents with GD, we assumed that for the 80 patients (56 boys and 24 girls) who did not return to the clinic, that their GD had desisted, and that they no longer had a desire for gender reassignment.” [Emphasis added]

- Bottom line: Objections to high desistance rates are weak
- Vast majority of GD children DO DESIST w/o transition protocol
Internationally recognized nonpartisan research & consulting firm

Evaluates medical technologies & therapies re: patient safety, health outcomes, and resource utilization.

2014 comprehensive evaluation of scientific literature regarding treatment of GD in adults and children
Hayes evaluates SRS in adults:
Weak Evidence Base

- Although “evidence suggests positive benefits” to the practice of using sex reassignment surgery in gender dysphoric adults, “serious limitations [inherent to the research] permit only weak conclusions.”

- e.g.: initial satisfaction with/relief from cosmetic results
Hayes evaluates Cross-sex hormone Safety in adults: Weak Evidence Base

- Statistically significant improvements not consistently demonstrated by multiple studies for most outcomes.

- Evidence for improved quality of life and function in male-to-female (MtF) adults was very sparse.

- Re: significant long-term safety risks but none have been proven or conclusively ruled out. [Due to poorly designed and executed studies].
Hayes reviews
Medical tx of GD in children:
NO Evidence Base

- The literature is “too sparse and the studies [that exist are] too limited to suggest conclusions.”

- Yet, since 2007, US gender clinics (>40 and counting now) promote suppression protocol as safe. It is being taught as standard of care in professional schools and residency programs across the nation.
Pubertal Suppression: Gonadotropin Releasing Hormone Agonists

- **Gonadotropin Releasing Hormone Agonists** (GnRH analogues) are FDA approved to tx precocious puberty:
  - **Leuprolide** IM Q month; or once every three months
  - **Histrelin**, a subcutaneous implant with yearly dosing

- **The GnRH agonists (or analogs) are super-agonists**: over-stimulate pituitary: LH and FSH receptors down-regulated. With down-regulation LH and FSH secretion halts as long as stimulus of GnRH analog is unrelenting.
GnRH Agonist Side Effects:

- Prevent the development of secondary sex characteristics
- Arrest bone growth
- Decrease bone accretion
- Prevent the sex-steroid organization and maturation of the adolescent brain
- Prevent the development of gonadal tissue and mature gametes
If the child discontinues the GnRH agonists, puberty will ensue.

Consequently, the Endocrine Society, WPATH & APA maintain that pubertal suppression & social affirmation are fully reversible interventions that carry no risk of harm to children.

Common sense, social learning theory, neuroplasticity and at least one study suggests otherwise.
Social affirmation & Pubertal Suppression: a self-fulfilling prophecy to a toxic future

de Vries et al. reported 100% of first 70 pre-pubertal candidates to receive puberty suppression embraced a transgender identity and requested cross-sex hormones.

Normally, 75% to 95% of pre-pubertal youth with GD embrace their biological sex by late adolescence.

To have 100% of pre-pubertal children choose cross-sex hormones suggests that the protocol itself inevitably leads the child to identify as transgender.
Role play & modeling: proven educational techniques used in public education.

Neuroplasticity: impersonating the opposite sex may alter the structure and function of the child’s brain in some way—potentially in a way that will make identity alignment with the child’s biologic sex less likely.

Pubertal suppression causes child to retain pre-pubertal appearance of a gender non-conforming boy disguised as a pre-pubertal girl, or the reverse.

Peers’ appear & develop normally into young men or young women, GD children are left psychosocially isolated & less able to identify as being the biological male or female they actually are.
A protocol of impersonation and pubertal suppression that sets into motion a single inevitable outcome (transgender identification) that requires lifelong use of toxic synthetic hormones, resulting in infertility, is neither fully reversible nor harmless.
PERMANENT STERILITY RESULTS
When ...

- GnRH agonists at Tanner II are followed by cross-sex hormones
- Tanner II children placed directly on cross-sex hormones
- Individuals undergo sex reassignment surgery and have their reproductive organs removed

*** Older adolescents who have experienced puberty are advised to cryopreserve gametes prior to beginning cross-sex hormones.
“There are potentially long-term safety risks associated with hormone therapy but none have been proven or conclusively ruled out.” ~Hayes, Inc.

Children who transition will require these hormones for a significantly greater length of time than their adult counterparts. Consequently, they may be more likely to experience toxicities.
Risks from Oral Estrogen to Natal Boys

- thrombosis/embolism
- cardiovascular disease
- weight gain
- hypertriglyceridemia
- hypertension

- decreased glucose tolerance
- gallbladder disease
- prolactinoma
- breast cancer
Risks of Testosterone to Natal Girls

- low HDL and high triglycerides
- Elevated homocysteine
- Hepatotoxicity
- polycythemia
- sleep apnea

- insulin resistance
- unknown effects on breast, endometrial and ovarian tissues
- Surgical risk from double mastectomy (as young as 16 years old)
GD is NOT innate; vulnerability not destiny
Psychosocial factors dominate (although many paths)
Norm for human development:
conceived male (XY) or female (XX); thoughts match reality & puberty proceeds uninterrupted
Barring DSDs
- Sex & gender are NOT “assigned” at birth
- Sex declares itself & gender is associated with bio sex
75%-95% pre-pubertal children with GD resolve by late adolescence when NOT affirmed & chemically castrated

Living socially as opposite sex + pubertal suppression = self-fulfilling outcome of transgender identification

Suppression at Tanner II + Cross-sex hormones age 16 (or Cross hormones alone at Tanner II) = INFERTILITY

Children will face lifetime of toxic cross-sex hormones
Medical Ethics

**Primum Non Nocere**

- Children and adolescents are cognitively and experientially immature
- Allowing them to assent, let alone consent, to permanent life-altering & toxic procedures is a gross violation of First Do No Harm.
Dr. X from Alaska asks, “But why impose cis-gender heterosexuality?”
- If there is no God then all things are permissible
- Teleology is either an illusion or irrelevant
- Man is his own god
If man is his own god, autonomy trumps truth.

- Science is a tool not to discover reality but to create our own reality & transcend biological boundaries.
- Reality & First do no harm become subjective.
  - Thoughts contrary to reality are NOT mental illness. People are mentally ill only if distressed by their thoughts; i.e.: emotional distress (not abnormal thinking) is the illness; happiness the cure.
- Radical individualism