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6 ON THE IMPACT OF RESEARCH FINDINGS

Researchers are happy if their findings are recognized and have an impact. However, once published, the researcher loses control of how results are used. Study III is the first long-term cohort study of mortality and psychiatric inpatient care following gender transition (Dhejne et al., 2011). This paper has also had an impact outside the scientific world. Our findings have been used to argue that gender-affirming treatment should be stopped since it could be dangerous (Levine, 2016). But the results have also been used to show the vulnerability of the group and that better transgender health care is needed (Arcelus & Bouman, 2015; Zeluf et al., 2016). Despite the paper clearly stating that the study is not designed to evaluate whether or not gender-affirming is beneficial, it has been interpreted as such. But we do not know what would have happened without gender-affirming treatment; the situation may have been even worse. As an analogy, similar studies have found increased somatic morbidity, suicide rates, and overall mortality for patients treated for depression and bipolar disorder (Ösby, Brandt, Correia, Ekbom, & Sparen, 2001). This is important information, but it does not follow that antidepressant or mood stabilizing treatment cause the mortality. Most of the articles that use the study to argue against gender-affirming health care are published in non-peer reviewed papers and the public media in general. These non-scientific publications are difficult to keep track of. I am grateful to friends, colleagues, patients, LGBT organizations, and journalists who have alerted me when the results of the study have been misinterpreted, giving me a possibility to respond to the authors. One could argue that the results should never have been published due to the hurt caused to transgender persons. However, not publishing the results would also hurt the transgender group and take away an opportunity to receive better health care.

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Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden

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Abstract

Context: The treatment for transsexualism is sex reassignment, including hormonal treatment and surgery aimed at making the person's body as congruent with the opposite sex as possible. There is a dearth of long term, follow-up studies after sex reassignment.

Objective: To estimate mortality, morbidity, and criminal rate after surgical sex reassignment of transsexual persons.

Design: A population-based matched cohort study.

Setting: Sweden, 1973-2003.

Participants: All 324 sex-reassigned persons (191 male-to-females, 133 female-to-males) in Sweden, 1973–2003. Random population controls (10:1) were matched by birth year and birth sex or reassigned (final) sex, respectively.

Main Outcome Measures: Hazard ratios (HR) with 95% confidence intervals (CI) for mortality and psychiatric morbidity were obtained with Cox regression models, which were adjusted for immigrant status and psychiatric morbidity prior to sex reassignment (adjusted HR [aHR]).

Results: The overall mortality for sex-reassigned persons was higher during follow-up (aHR 2.8; 95% CI 1.8–4.3) than for controls of the same birth sex, particularly death from suicide (aHR 19.1; 95% CI 5.8–62.9). Sex-reassigned persons also had an increased risk for suicide attempts (aHR 4.9; 95% CI 2.9–8.5) and psychiatric inpatient care (aHR 2.8; 95% CI 2.0–3.9). Comparisons with controls matched on reassigned sex yielded similar results. Female-to-males, but not male-to-females, had a higher risk for criminal convictions than their respective birth sex controls.

Conclusions: Persons with transsexualism, after sex reassignment, have considerably higher risks for mortality, suicidal behaviour, and psychiatric morbidity than the general population. Our findings suggest that sex reassignment, although alleviating gender dysphoria, may not suffice as treatment for transsexualism, and should inspire improved psychiatric and somatic care after sex reassignment for this patient group.

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Introduction

Transsexualism (ICD-10),[1] or gender identity disorder (DSM-IV),[2] is a condition in which a person's gender identity - the sense of being a man or a woman - contradicts his or her bodily sex characteristics. The individual experiences gender dysphoria and desires to live and be accepted as a member of the opposite sex.

The treatment for transsexualism includes removal of body hair, vocal training, and cross-sex hormonal treatment aimed at making the person's body as congruent with the opposite sex as possible to alleviate the gender dysphoria. Sex reassignment also involves the surgical removal of body parts to make external sexual characteristics resemble those of the opposite sex, so called sex reassignment/confirmation surgery (SRS). This is a unique

intervention not only in psychiatry but in all of medicine. The present form of sex reassignment has been practised for more than half a century and is the internationally recognized treatment to ease gender dysphoria in transsexual persons.[3,4]

Despite the long history of this treatment, however, outcome data regarding mortality and psychiatric morbidity are scant. With respect to suicide and deaths from other causes after sex reassignment, an early Swedish study followed 24 transsexual persons for an average of six years and reported one suicide.[5] A subsequent Swedish study recorded three suicides after sex reassignment surgery of 175 patients.[6] A recent Swedish follow-up study reported no suicides in 60 transsexual patients, but one death due to complications after the sex reassignment surgery.[7] A Danish study reported death by suicide in 3 out of 29 operated male-to-female transsexual persons followed for an average of six years.[8] By contrast, a Belgian study of 107 transsexual persons followed for 4–6 years found no suicides or deaths from other causes.[9] A large Dutch single-centre study (N = 1,109), focusing on adverse events following hormonal treatment, compared the outcome after cross-sex hormone treatment with national Dutch standardized mortality and morbidity rates and found no increased mortality, with the exception of death from suicide and AIDS in male-to-females 25–39 years of age.[10] The same research group concluded in a recent report that treatment with cross-sex hormones seems acceptably safe, but with the reservation that solid clinical data are missing.[11] A limitation with respect to the Dutch cohort is that the proportion of patients treated with cross-sex hormones who also had surgical sex-reassignment is not accounted for.[10]

Data is inconsistent with respect to psychiatric morbidity post sex reassignment. Although many studies have reported psychiatric and psychological improvement after hormonal and/or surgical treatment,[7,12,13,14,15,16] other have reported on regrets,[17] psychiatric morbidity, and suicide attempts after SRS.[9,18] A recent systematic review and meta-analysis concluded that approximately 80% reported subjective improvement in terms of gender dysphoria, quality of life, and psychological symptoms, but also that there are studies reporting high psychiatric morbidity and suicide rates after sex reassignment.[19] The authors concluded though that the evidence base for sex reassignment "is of very low quality due to the serious methodological limitations of included studies."

The methodological shortcomings have many reasons. First, the nature of sex reassignment precludes double blind randomized controlled studies of the result. Second, transsexualism is rare [20] and many follow-ups are hampered by small numbers of subjects.[5,8,21,22,23,24,25,26,27,28] Third, many sex reassigned persons decline to participate in follow-up studies, or relocate after surgery, resulting in high drop-out rates and consequent selection bias.[6,9,12,21,24,28,29,30] Forth, several follow-up studies are hampered by limited follow-up periods.[7,9,21,22,26,30] Taken together, these limitations preclude solid and generalisable conclusions. A long-term population-based controlled study is one way to address these methodological shortcomings.

Here, we assessed mortality, psychiatric morbidity, and psychosocial integration expressed in criminal behaviour after sex reassignment in transsexual persons, in a total population cohort study with long-term follow-up information obtained from Swedish registers. The cohort was compared with randomly selected population controls matched for age and gender. We adjusted for premorbid differences regarding psychiatric morbidity and immigrant status. This study design sheds new light on transsexual persons' health after sex reassignment. It does not, however, address whether sex reassignment is an effective treatment or not.

Methods

National registers

The study population was identified by the linkage of several Swedish national registers, which contained a total of 13.8 million unique individuals. The Hospital Discharge Register (HDR, held by the National Board of Health and Welfare) contains discharge diagnoses, up to seven contributory diagnoses, external causes of morbidity or mortality, surgical procedure codes, and discharge date. Discharge diagnoses are coded according to the 8th (1969-1986), 9th (1987–1996), and 10th editions (1997-) of the International Classification of Diseases (ICD). The register covers virtually all psychiatric inpatient episodes in Sweden since 1973. Discharges that occurred up to 31 December 2003 were included. Surgical procedure codes could not be used for this study due to the lack of a specific code for sex reassignment surgery. The Total Population Register (TPR, held by Statistics Sweden) is comprised of data about the entire Swedish population. Through linkage with the Total Population Register it was possible to identify birth date and birth gender for all study subjects. The register is updated every year and gender information was available up to 2004/2005. The Medical Birth Register (MBR) was established in 1973 and contains birth data, including gender of the child at birth. National censuses based on mandatory self-report questionnaires completed by all adult citizens in 1960, 1970, 1980, and 1990 provided information on individuals, households, and dwellings, including gender, living area, and highest educational level. Complete migration data, including country of birth for immigrants for 1969 2003, were obtained from the TPR. In addition to educational information from the censuses, we also obtained highest educational level data for 1990 and 2000 from the Register of Education. The Cause of Death Register (CDR, Statistics Sweden) records all deaths in Sweden since 1952 and provided information on date of death and causes of death. Death events occurring up to 31 December 2003 are included in the study. The Crime Register (held by the National Council of Crime Prevention) provided information regarding crime type and date on all criminal convictions in Sweden during the period 1973–2004. Attempted and aggravated forms of all offences were also included. All crimes in Sweden are registered regardless of insanity at the time of perpetration; for example, for individuals who suffered from psychosis at the time of the offence. Moreover, conviction data include individuals who received custodial or non-custodial sentences and cases where the prosecutor decided to caution or fine without court proceedings. Finally, Sweden does not differ considerably from other members of the European Union regarding rates of violent crime and their resolution.[31]

Study population, identification of sex-reassigned persons (exposure assessment)

The study was designed as a population-based matched cohort study. We used the individual national registration number, assigned to all Swedish residents, including immigrants on arrival, as the primary key through all linkages. The registration number consists of 10 digits; the first six provide information of the birth date, whereas the ninth digit indicates the gender. In Sweden, a person presenting with gender dysphoria is referred to one of six specialised gender teams that evaluate and treat patients principally according to international consensus guidelines: Standards of Care.[3] With a medical certificate, the person applies to the National Board of Health and Welfare to receive permission for sex reassignment surgery and a change of legal sex status. A new national registration number signifying the new gender is assigned after sex reassignment surgery. The National

Board of Health and Welfare maintains a link between old and new national registration numbers, making it possible to follow individuals undergoing sex reassignment across registers and over time. Hence, sex reassignment surgery in Sweden requires (i) a transsexualism diagnosis and (ii) permission from the National Board of Health and Welfare.

A person was defined as exposed to sex reassignment surgery if two criteria were met: (i) at least one inpatient diagnosis of gender identity disorder diagnosis without concomitant psychiatric diagnoses in the Hospital Discharge Register, and (ii) at least one discrepancy between gender variables in the Medical Birth Register (from 1973 and onwards) or the National Censuses from 1960, 1970, 1980, or 1990 and the latest gender designation in the Total Population Register. The first criterion was employed to capture the hospitalization for sex reassignment surgery that serves to secure the diagnosis and provide a time point for sex reassignment surgery; the plastic surgeons namely record the reason for sex reassignment surgery, i.e., transsexualism, but not any co-occurring psychiatric morbidity. The second criterion was used to ensure that the person went through all steps in sex-reassignment and also changed sex legally.

The date of sex reassignment (start of follow-up) was defined as the first occurrence of a gender identity disorder diagnosis, without any other concomitant psychiatric disorder, in the Hospital Discharge Register after the patient changed sex status (any discordance in sex designation across the Censuses, Medical Birth, and Total Population registers). If this information was missing, we used instead the closest date in the Hospital Discharge Register on which the patient was diagnosed with gender identity disorder without concomitant psychiatric disorder prior to change in sex status. The reason for prioritizing the use of a gender identity disorder diagnosis *after* changed sex status over *before* was to avoid overestimating person-years at risk of sex-reassigned person.

Using these criteria, a total of 804 patients with gender identity disorder were identified, whereof 324 displayed a shift in the gender variable during the period 1973–2003. The 480 persons that did not shift gender variable comprise persons who either did not apply, or were not approved, for sex reassignment surgery. Moreover, the ICD 9 code 302 is a non specific code for sexual disorders. Hence, this group might also comprise persons that were hospitalized for sexual disorders other than transsexualism. Therefore, they were omitted from further analyses. Of the remaining 324 persons, 288 were identified with the gender identity diagnosis *after* and 36 *before* change of sex status. Out of the 288 persons identified *after* changed sex status, 185 could also be identified *before* change in sex status. The median time lag between the hospitalization *before* and *after* sex change for these 185 persons was 0.96 years (mean 2.2 years, SD 3.3).

Gender identity disorder was coded according to ICD-8: 302.3 (transsexualism) and 302.9 (sexual deviation NOS); ICD-9: 302 (overall code for sexual deviations and disorders, more specific codes were not available in ICD-9); and ICD-10: F64.0 (transsexualism), F64.1 (dual-role transvestism), F64.8 (other gender identity disorder), and F64.9 (gender identity disorder NOS). Other psychiatric disorders were coded as ICD-8: 290-301 and 303-315; ICD-9: 290-301 and 303-319; and ICD-10: F00-F63 as well as F65-F99.

Identification of population-based controls (unexposed group)

For each exposed person (N = 324), we randomly selected 10 unexposed controls. A person was defined as unexposed if there were no discrepancies in sex designation across the Censuses, Medical Birth, and Total Population registers *and* no gender identity disorder diagnosis according to the Hospital Discharge Register. Control persons were matched by sex and birth year and had to be alive and residing in Sweden at the estimated sex reassignment date of the case person. To study possible gender-specific effects on outcomes of interest, we used two different control groups: one with the same sex as the case individual at birth (birth sex matching) and the other with the sex that the case individual had been reassigned to (final sex matching).

Outcome measures

We studied mortality, psychiatric morbidity, accidents, and crime following sex reassignment. More specifically, we investigated: (1) all-cause mortality, (2) death by definite/uncertain suicide, (3) death by cardiovascular disease, and (4) death by tumour. Morbidity included (5) any psychiatric disorder (gender identity disorders excluded), (6) alcohol/drug misuse and dependence, (7) definite/uncertain suicide attempt, and (8) accidents. Finally, we addressed court convictions for (9) any criminal offence and (10) any violent offence. Each individual could contribute with several outcomes, but only one event per outcome. Causes of death (Cause of Death Registry from 1952 and onwards) were defined according to ICD as suicide (ICD-8 and ICD-9 codes E950-E959 and E980-E989, ICD-10 codes X60-X84 and Y10-Y34); cardiovascular disease (ICD-8 codes 390-458, ICD-9 codes 390-459, ICD-10 codes I00-I99); neoplasms (ICD-8 and ICD-9 codes 140-239, ICD-10 codes C00-D48), any psychiatric disorder (gender identity disorders excluded); (ICD-8 codes 290-301 and 303-315, ICD-9 codes 290-301 and 303-319, ICD-10 codes F00-F63 and F65-F99); alcohol/drug abuse and dependence (ICD-8 codes 303-304, ICD-9 codes 303-305 (tobacco use disorder excluded), ICD-10 codes F10-F16 and F18-F19 (x5 excluded); and accidents (ICD-8 and ICD-9 codes E800-E929, ICD-10 codes V01-X59).

Any criminal conviction during follow-up was counted; specifically, violent crime was defined as homicide and attempted homicide, aggravated assault and assault, robbery, threatening behaviour, harassment, arson, or any sexual offense.[32]

Covariates

Severe psychiatric morbidity was defined as inpatient care according to ICD-8 codes 291, 295-301, 303-304, and 307; ICD-9 codes 291-292, 295-298, 300-301, 303-305 (tobacco use disorder excluded), 307.1, 307.5, 308-309, and 311; ICD-10 codes F10-F16, F18-F25, F28-F45, F48, F50, and F60-F62. Immigrant status, defined as individuals born abroad, was obtained from the Total Population Register. All outcome/covariate variables were dichotomized (i.e., affected or unaffected) and without missing values.

Statistical analyses

Each individual contributed person-time from study entry (for exposed: date of sex reassignment; for unexposed: date of sex reassignment of matched case) until date of outcome event, death, emigration, or end of study period (31 December 2003), whichever came first. The association between exposure (sex reassignment) and outcome (mortality, morbidity, crime) was measured by hazard ratios (HR) with 95% CIs, taking follow-up time into account. HRs were estimated from Cox proportional hazard regression models, stratified on matched sets (1:10) to account for the matching by sex, age, and calendar time (birth year). We present crude HRs (though adjusted for sex and age through matching) and confounder-adjusted HRs [aHRs] for all outcomes. The two potential confounders, immigrant status (yes/no) and history of severe psychiatric morbidity (yes/no) prior to sex

reassignment, were chosen based on previous research[18,33] and different prevalence across cases and controls (Table 1).

Gender-separated analyses were performed and a Kaplan-Meier survival plot graphically illustrates the survival of the sex reassigned cohort and matched controls (all-cause mortality) over time. The significance level was set at 0.05 (all tests were two-sided). All outcome/covariate variables were without missing values, since they are generated from register data, which are either present (affected) or missing (unaffected). The data were analysed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA).

Ethics

The data linking of national registers required for this study was approved by the IRB at Karolinska Institutet, Stockholm. All data were analyzed anonymously; therefore, informed consent for each individual was neither necessary nor possible.

Results

We identified 324 transsexual persons (exposed cohort) who underwent sex reassignment surgery and were assigned a new legal sex between 1973 and 2003. These constituted the sex-reassigned (exposed) group. Fifty-nine percent (N = 191) of sex-reassigned persons were male-to-females and 41% (N = 133) female-to-males, yielding a sex ratio of 1.4:1 (Table 1).

The average follow-up time for all-cause mortality was 11.4 (median 9.1) years. The average follow-up time for the risk of being hospitalized for any psychiatric disorder was 10.4 (median 8.1).

Characteristics prior to sex reassignment

Table 1 displays demographic characteristics of sex-reassigned and control persons prior to study entry (sex reassignment). There were no substantial differences between female-to-males and male-to-females regarding measured baseline characteristics. Immigrant status was twice as common among transsexual individuals compared to controls, living in an urban area somewhat more common, and higher education about equally prevalent. Transsexual individuals had been hospitalized for psychiatric morbidity other than gender identity disorder prior to sex reassignment about four times more often than controls. To adjust for these baseline discrepancies, hazard ratios adjusted for immigrant status and psychiatric morbidity prior to baseline are presented for all outcomes [aHRs].

Mortality

Table 2 describes the risks for selected outcomes during follow-up among sex-reassigned persons, compared to same-age controls of the same birth sex. Sex-reassigned transsexual persons of both genders had approximately a three times higher risk of all-cause mortality than controls, also after adjustment for covariates. Table 2

Table 1. Baseline characteristics among sex-reassigned subjects in Sweden (N = 324) and population controls matched for birth year and sex.

Characteristic at baseline	Sex-reassigned subjects (N = 324)	Birth-sex matched controls (N = 3,240)	Final-sex matched controls (N = 3,240)
Gender			
Female at birth, male after sex change	133 (41%)	1,330 (41%)	1,330 (41%)
Male at birth, female after sex change	191 (59%)	1,910 (59%)	1,910 (59%)
Average age at study entry [years] (SD, min-max)			
Female at birth, male after sex change	33.3 (8.7, 20–62)	33.3 (8.7, 20–62)	33.3 (8.7, 20–62)
Male at birth, female after sex change	36.3 (10.1, 21–69)	36.3 (10.1, 21–69)	36.3 (10.1, 21–69)
Both genders	35.1 (9.7, 20–69)	35.1 (9.7, 20–69)	35.1 (9.7, 20–69)
Immigrant status			
Female at birth, male after sex change	28 (21%)	118 (9%)	100 (8%)
Male at birth, female after sex change	42 (22%)	176 (9%)	164 (9%)
Both genders	70 (22%)	294 (9%)	264 (8%)
Less than 10 years of schooling prior to entry vs. 10 years or more			
Females at birth, males after sex change	49 (44%); 62 (56%)	414 (37%); 714 (63%)	407 (36%); 713 (64%)
Males at birth, females after sex change	61 (41%); 89 (59%)	665 (40%); 1,011 (60%)	595 (35%); 1,091 (65%)
All individuals with data	110 (42%); 151 (58%)	1,079 (38%); 1,725 (62%)	1,002 (36%); 1,804 (64%)
Psychiatric morbidity* prior to study entry			
Female at birth, male after sex change	22 (17%)	47 (4%)	42 (3%)
Male at birth, female after sex change	36 (19%)	76 (4%)	72 (4%)
Both genders	58 (18%)	123 (4%)	114 (4%)
Rural [vs. urban] living area prior to entry			
Female at birth, male after sex change	13 (10%)	180 (14%)	195 (15%)
Male at birth, female after sex change	20 (10%)	319 (17%)	272 (14%)
Both genders	33 (10%)	499 (15%)	467 (14%)

Note:
*Hospitalizations for gender identity disorder were not included.
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Table 2. Risk of various outcomes among sex-reassigned subjects in Sweden (N = 324) compared to population controls matched for birth year and birth sex.

	Number of events cases/ controls 1973–2003	Outcome incidence rate per 1000 person-years 1973–2003 (95% CI)		Crude hazard ratio (95% CI) 1973–2003	Adjusted* hazard ratio (95% CI) 1973–2003	Adjusted* hazard ratio (95% CI) 1973–1988	Adjusted* hazard ratio (95% CI) 1989–2003
		Cases	Controls				
Any death	27/99	7.3 (5.0–10.6)	2.5 (2.0–3.0)	2.9 (1.9–4.5)	2.8 (1.8–4.3)	3.1 (1.9–5.0)	1.9 (0.7–5.0)
Death by suicide	10/5	2.7 (1.5–5.0)	0.1 (0.1–0.3)	19.1 (6.5–55.9)	19.1 (5.8–62.9)	N/A	N/A
Death by cardiovascular disease	9/42	2.4 (1.3–4.7)	1.1 (0.8–1.4)	2.6 (1.2–5.4)	2.5 (1.2–5.3)	N/A	N/A
Death by neoplasm	8/38	2.2 (1.1–4.3)	1.0 (0.7–1.3)	2.1 (1.0–4.6)	2.1 (1.0–4.6)	N/A	N/A
Any psychiatric hospitalisation‡	64/173	19.0 (14.8–24.2)	4.2 (3.6–4.9)	4.2 (3.1–5.6)	2.8 (2.0–3.9)	3.0 (1.9–4.6)	2.5 (1.4–4.2)
Substance misuse	22/78	5.9 (3.9–8.9)	1.8 (1.5–2.3)	3.0 (1.9–4.9)	1.7 (1.0–3.1)	N/A	N/A
Suicide attempt	29/44	7.9 (5.5–11.4)	1.0 (0.8–1.4)	7.6 (4.7–12.4)	4.9 (2.9–8.5)	7.9 (4.1–15.3)	2.0 (0.7–5.3)
Any accident	32/233	9.0 (6.3–12.7)	5.7 (5.0–6.5)	1.6 (1.1–2.3)	1.4 (1.0–2.1)	1.6 (1.0–2.5)	1.1 (0.5–2.2)
Any crime	60/350	18.5 (14.3–23.8)	9.0 (8.1–10.0)	1.9 (1.4–2.5)	1.3 (1.0–1.8)	1.6 (1.1–2.4)	0.9 (0.6–1.5)
Violent crime	14/61	3.6 (2.1–6.1)	1.4 (1.1–1.8)	2.7 (1.5–4.9)	1.5 (0.8–3.0)	N/A	N/A

Notes:
*Adjusted for psychiatric morbidity prior to baseline and immigrant status.
‡Hospitalisations for gender identity disorder were excluded.
N/A Not applicable due to sparse data.
doi:10.1371/journal.pone.0016885.t002

separately lists the outcomes depending on when sex reassignment was performed: during the period 1973-1988 or 1989–2003. Even though the overall mortality was increased across both time periods, it did not reach statistical significance for the period 1989–2003. The Kaplan-Meier curve (Figure 1) suggests that survival of transsexual persons started to diverge from that of matched controls after about 10 years of follow-up. The cause-specific mortality from suicide was much higher in sex-reassigned persons, compared to matched controls. Mortality due to cardiovascular disease was moderately increased among the sex-reassigned, whereas the numerically increased risk for malignancies was borderline statistically significant. The malignancies were lung cancer (N = 3), tongue cancer (N = 1), pharyngeal cancer (N = 1), pancreas cancer (N = 1), liver cancer (N = 1), and unknown origin (N = 1).

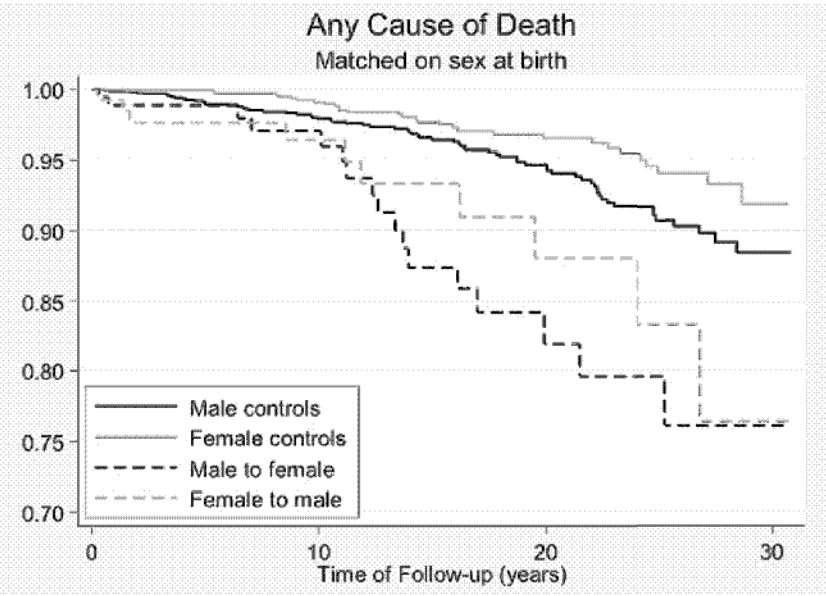

Figure 1. Death from any cause as a function of time after sex reassignment among 324 transsexual persons in Sweden (male-to-female: N = 191, female-to-male: N = 133), and population controls matched on birth year.
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Psychiatric morbidity, substance misuse, and accidents

Sex-reassigned persons had a higher risk of inpatient care for a psychiatric disorder other than gender identity disorder than controls matched on birth year and birth sex (Table 2). This held after adjustment for prior psychiatric morbidity, and was true regardless of whether sex reassignment occurred before or after 1989. In line with the increased mortality from suicide, sex-reassigned individuals were also at a higher risk for suicide attempts, though this was not statistically significant for the time period 1989–2003. The risks of being hospitalised for substance misuse or accidents were not significantly increased after adjusting for covariates (Table 2).

Crime rate

Transsexual individuals were at increased risk of being convicted for any crime or violent crime after sex reassignment (Table 2); this was, however, only significant in the group who underwent sex reassignment before 1989.

Gender differences

Comparisons of female-to-males and male-to-females, although hampered by low statistical power and associated wide confidence intervals, suggested mostly similar risks for adverse outcomes (Tables S1 and S2). However, violence against self (suicidal behaviour) and others ([violent] crime) constituted important exceptions. First, male-to-females had significantly increased risks for suicide attempts compared to both female (aHR 9.3; 95% CI 4.4–19.9) and male (aHR 10.4; 95% CI 4.9–22.1) controls. By contrast, female-to-males had significantly increased risk of suicide attempts only compared to male controls (aHR 6.8; 95% CI 2.1–21.6) but not compared to female controls (aHR 1.9; 95% CI 0.7–4.8). This suggests that male-to-females are at higher risk for suicide attempts after sex reassignment, whereas female-to-males maintain a female pattern of suicide attempts after sex reassignment (Tables S1 and S2).

Second, regarding any crime, male-to-females had a significantly increased risk for crime compared to female controls (aHR 6.6; 95% CI 4.1 10.8) but not compared to males (aHR 0.8; 95% CI 0.5–1.2). This indicates that they retained a male pattern regarding criminality. The same was true regarding violent crime. By contrast, female-to-males had higher crime rates than female controls (aHR 4.1; 95% CI 2.5–6.9) but did not differ from male controls. This indicates a shift to a male pattern regarding criminality and that sex reassignment is coupled to increased crime rate in female-to-males. The same was true regarding violent crime.

Discussion

Principal findings and comparison with previous research

We report on the first nationwide population-based, long-term follow-up of sex-reassigned transsexual persons. We compared our cohort with randomly selected population controls matched for age and gender. The most striking result was the high mortality rate in both male-to-females and female-to males, compared to the general population. This contrasts with previous reports (with one exception[8]) that did not find an increased mortality rate after sex reassignment, or only noted an increased risk in certain subgroups.[7,9,10,11] Previous clinical studies might have been biased since people who regard their sex reassignment as a failure are more likely to be lost to follow-up. Likewise, it is cumbersome to track deceased persons in clinical follow-up studies. Hence, population-based register studies like the present are needed to improve representativity.[19,34]

The poorer outcome in the present study might also be explained by longer follow-up period (median >10 years) compared to previous studies. In support of this notion, the survival curve (Figure 1) suggests increased mortality from ten years after sex reassignment and onwards. In accordance, the overall mortality rate was only significantly increased for the group operated before 1989. However, the latter might also be explained by improved health care for transsexual persons during 1990s, along with altered societal attitudes towards persons with different gender expressions.[35]

Mortality due to cardiovascular disease was significantly increased among sex reassigned individuals, albeit these results should be interpreted with caution due to the low number of events. This contrasts, however, a Dutch follow-up study that reported no increased risk for cardiovascular events.[10,11] A recent meta-analysis concluded, however, that data on cardiovascular outcome after cross-sex steroid use are sparse, inconclusive, and of very low quality.[34]

With respect to neoplasms, prolonged hormonal treatment might increase the risk for malignancies,[36] but no previous study has tested this possibility. Our data suggested that the cause-specific risk of death from neoplasms was increased about twice (borderline statistical significance). These malignancies (see Results), however, are unlikely to be related to cross-hormonal treatment.

There might be other explanations to increased cardiovascular death and malignancies. Smoking was in one study reported in almost 50% by the male-to females and almost 20% by female-to-males.[9] It is also possible that transsexual persons avoid the health care system due to a presumed risk of being discriminated.

Mortality from suicide was strikingly high among sex-reassigned persons, also after adjustment for prior psychiatric morbidity. In line with this, sex-reassigned persons were at increased risk for suicide attempts. Previous reports [6,8,10,11] suggest that transsexualism is a strong risk factor for suicide, also after sex reassignment, and our long-term findings support the need for continued psychiatric follow-up for persons at risk to prevent this.

Inpatient care for psychiatric disorders was significantly more common among sex-reassigned persons than among matched controls, both before and after sex reassignment. It is generally accepted that transsexuals have more psychiatric ill-health than the general population prior to the sex reassignment.[18,21,22,33] It should therefore come as no surprise that studies have found high rates of depression,[9] and low quality of life[16,25] also after sex reassignment. Notably, however, in this study the increased risk for psychiatric hospitalisation persisted even after adjusting for psychiatric hospitalisation prior to sex reassignment. This suggests that even though sex reassignment alleviates gender dysphoria, there is a need to identify and treat co-occurring psychiatric morbidity in transsexual persons not only before but also after sex reassignment.

Criminal activity, particularly violent crime, is much more common among men than women in the general population. A previous study of all applications for sex reassignment in Sweden up to 1992 found that 9.7% of male-to-female and 6.1% of female-to-male applicants had been prosecuted for a crime.[33] Crime after sex reassignment, however, has not previously been studied. In this study, male-to-female individuals had a higher risk for criminal convictions compared to female controls but not compared to male controls. This suggests that the sex reassignment procedure neither increased nor decreased the risk for criminal offending in male-to-females. By contrast, female-to-males were at a higher risk for criminal convictions compared to female controls and did not differ from male controls, which suggests increased crime proneness in female-to-males after sex reassignment.

Strengths and limitations of the study

Strengths of this study include nationwide representativity over more than 30 years, extensive follow-up time, and minimal loss to follow-up. Many previous studies suffer from low outcome ascertainment,[6,9,21,29] whereas this study has captured almost the entire population of sex-reassigned transsexual individuals in Sweden from 1973 2003. Moreover, previous outcome studies have mixed pre-operative and post-operative transsexual persons,[22,37] while we included only post-operative transsexual persons that also legally changed sex. Finally, whereas previous studies either lack a control group or use standardised mortality rates or standardised incidence rates as comparisons,[9,10,11] we selected random population controls matched by birth year, and either birth or final sex.

Given the nature of sex reassignment, a double blind randomized controlled study of the result after sex reassignment is not feasible. We therefore have to rely on other study designs. For the purpose of evaluating whether sex reassignment is an effective treatment for gender dysphoria, it is reasonable to compare reported gender dysphoria pre and post treatment. Such studies have been conducted either prospectively[7,12] or retrospectively,[5,6,9,22,25,26,29,38] and suggest that sex reassignment of transsexual persons improves quality of life and gender dysphoria. The limitation is of course that the treatment has not been assigned randomly and has not been carried out blindly.

For the purpose of evaluating the safety of sex reassignment in terms of morbidity and mortality, however, it is reasonable to compare sex reassigned persons with matched population controls. The caveat with this design is that transsexual persons before sex reassignment might differ from healthy controls (although this bias can be statistically corrected for by adjusting for baseline differences). It is therefore important to note that the current study is only informative with respect to transsexuals persons health after sex reassignment; no inferences can be drawn as to the effectiveness of sex reassignment as a treatment for transsexualism. In other words, the results should not be interpreted such as sex reassignment *per se* increases morbidity and mortality. Things might have been even worse without sex reassignment. As an analogy, similar studies have found increased somatic morbidity, suicide rate, and overall mortality for patients treated for bipolar disorder and schizophrenia.[39,40] This is important information, but it does not follow that mood stabilizing treatment or antipsychotic treatment is the culprit.

Other facets to consider are first that this study reflects the outcome of psychiatric and somatic treatment for transsexualism provided in Sweden during the 1970s and 1980s. Since then, treatment has evolved with improved sex reassignment surgery, refined hormonal treatment,[11,41] and more attention to psychosocial care that might have improved the outcome. Second, transsexualism is a rare condition and Sweden is a small country (9.2 million inhabitants in 2008). Hence, despite being based on a comparatively large national cohort and long-term follow-up, the statistical power was limited. Third, regarding psychiatric morbidity after sex reassignment, we assessed inpatient psychiatric care. Since most psychiatric care is provided in outpatient settings (for which no reliable data were available), underestimation of the *absolute* prevalences was inevitable. However, there is no reason to believe that this would change the *relative risks* for psychiatric morbidity unless sex-reassigned transsexual individuals were more likely than matched controls to be admitted to hospital for any given psychiatric condition.

Finally, to estimate start of follow-up, we prioritized using the date of a gender identity disorder diagnosis *after* changed sex status over *before* changed sex status, in order to avoid overestimating person-years at risk after sex-reassignment. This means that adverse outcomes might have been underestimated. However, given that the median time lag between the hospitalization before and after change of sex status was less than a year (see Methods), this maneuver is unlikely to have influenced the results significantly. Moreover, all deaths will be recorded regardless of this exercise and mortality hence correctly estimated.

Conclusion

This study found substantially higher rates of overall mortality, death from cardiovascular disease and suicide, suicide attempts, and psychiatric hospitalisations in sex-reassigned transsexual individuals compared to a healthy control population. This highlights that post surgical transsexuals are a risk group that need long-term psychiatric and somatic follow-up. Even though surgery and hormonal therapy alleviates gender dysphoria, it is apparently not sufficient to remedy the high rates of morbidity and mortality found among transsexual persons. Improved care for the transsexual group after the sex reassignment should therefore be considered.

Supporting Information

Table S1 Risk of various outcomes in sex-reassigned persons in Sweden compared to population controls matched for birth year and *birth sex*.
(DOCX)

Table S2 Risk of various outcomes in sex-reassigned persons in Sweden compared to controls matched for birth year and *final sex*.
(DOCX)

Author Contributions

Conceived and designed the experiments: CD PL AJ NL ML. Performed the experiments: MB AJ. Analyzed the data: CD PL MB AJ NL ML. Contributed reagents/materials/analysis tools: PL NL AJ. Wrote the paper: CD PL MB AJ NL ML.

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Endocrine Treatment of Gender-Dysphoric/ Gender-Incongruent Persons: An Endocrine Society* Clinical Practice Guideline

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*Cosponsoring Associations: American Association of Clinical Endocrinologists, American Society of Andrology, European Society for Pediatric Endocrinology, European Society of Endocrinology, Pediatric Endocrine Society, and World Professional Association for Transgender Health.

Objective: To update the "Endocrine Treatment of Transsexual Persons: An Endocrine Society Clinical Practice Guideline," published by the Endocrine Society in 2009.

Participants: The participants include an Endocrine Society–appointed task force of nine experts, a methodologist, and a medical writer.

Evidence: This evidence-based guideline was developed using the Grading of Recommendations, Assessment, Development, and Evaluation approach to describe the strength of recommendations and the quality of evidence. The task force commissioned two systematic reviews and used the best available evidence from other published systematic reviews and individual studies.

Consensus Process: Group meetings, conference calls, and e-mail communications enabled consensus. Endocrine Society committees, members and cosponsoring organizations reviewed and commented on preliminary drafts of the guidelines.

Conclusion: Gender affirmation is multidisciplinary treatment in which endocrinologists play an important role. Gender-dysphoric/gender-incongruent persons seek and/or are referred to endocrinologists to develop the physical characteristics of the affirmed gender. They require a safe and effective hormone regimen that will (1) suppress endogenous sex hormone secretion determined by the person's genetic/gonadal sex and (2) maintain sex hormone levels within the normal range for the person's affirmed gender. Hormone treatment is not recommended for prepubertal gender-dysphoric/gender-incongruent persons. Those clinicians who recommend gender-affirming endocrine treatments—appropriately trained diagnosing clinicians (required), a mental health provider for adolescents (required) and mental health

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Abbreviations: BMD, bone mineral density; DSD, disorder/difference of sex development; DSM, Diagnostic and Statistical Manual of Mental Disorders; GD, gender dysphoria; GnRH, gonadotropin-releasing hormone; ICD, International Statistical Classification of Diseases and Related Health Problems; MHP, mental health professional; VTE, venous thromboembolism.

professional for adults (recommended)—should be knowledgeable about the diagnostic criteria and criteria for gender-affirming treatment, have sufficient training and experience in assessing psychopathology, and be willing to participate in the ongoing care throughout the endocrine transition. We recommend treating gender-dysphoric/gender-incongruent adolescents who have entered puberty at Tanner Stage G2/B2 by suppression with gonadotropin-releasing hormone agonists. Clinicians may add gender-affirming hormones after a multidisciplinary team has confirmed the persistence of gender dysphoria/gender incongruence and sufficient mental capacity to give informed consent to this partially irreversible treatment. Most adolescents have this capacity by age 16 years old. We recognize that there may be compelling reasons to initiate sex hormone treatment prior to age 16 years, although there is minimal published experience treating prior to 13.5 to 14 years of age. For the care of peripubertal youths and older adolescents, we recommend that an expert multidisciplinary team comprised of medical professionals and mental health professionals manage this treatment. The treating physician must confirm the criteria for treatment used by the referring mental health practitioner and collaborate with them in decisions about gender-affirming surgery in older adolescents. For adult gender-dysphoric/gender-incongruent persons, the treating clinicians (collectively) should have expertise in transgender-specific diagnostic criteria, mental health, primary care, hormone treatment, and surgery, as needed by the patient. We suggest maintaining physiologic levels of gender-appropriate hormones and monitoring for known risks and complications. When high doses of sex steroids are required to suppress endogenous sex steroids and/or in advanced age, clinicians may consider surgically removing natal gonads along with reducing sex steroid treatment. Clinicians should monitor both transgender males (female to male) and transgender females (male to female) for reproductive organ cancer risk when surgical removal is incomplete. Additionally, clinicians should persistently monitor adverse effects of sex steroids. For gender-affirming surgeries in adults, the treating physician must collaborate with and confirm the criteria for treatment used by the referring physician. Clinicians should avoid harming individuals (via hormone treatment) who have conditions other than gender dysphoria/gender incongruence and who may not benefit from the physical changes associated with this treatment. **(*J Clin Endocrinol Metab* 102: 3869–3903, 2017)**

Summary of Recommendations

1.0 Evaluation of youth and adults

1.1. We advise that only trained mental health professionals (MHPs) who meet the following criteria should diagnose gender dysphoria (GD)/gender incongruence in adults: (1) competence in using the Diagnostic and Statistical Manual of Mental Disorders (DSM) and/or the International Statistical Classification of Diseases and Related Health Problems (ICD) for diagnostic purposes, (2) the ability to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) training in diagnosing psychiatric conditions, (4) the ability to undertake or refer for appropriate treatment, (5) the ability to psychosocially assess the person's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) a practice of regularly attending relevant professional meetings. (Ungraded Good Practice Statement)

1.2. We advise that only MHPs who meet the following criteria should diagnose GD/gender incongruence in children and adolescents: (1) training in child and adolescent developmental psychology and psychopathology, (2) competence in using the DSM and/or the ICD for diagnostic purposes, (3) the ability to make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (4) training in diagnosing psychiatric conditions, (5) the ability to undertake or refer for appropriate treatment, (6) the ability to psychosocially assess the person's understanding and social conditions that can impact gender-affirming hormone therapy, (7) a practice of regularly attending relevant professional meetings, and (8) knowledge of the criteria for puberty blocking and gender-affirming hormone treatment in adolescents. (Ungraded Good Practice Statement)

1.3. We advise that decisions regarding the social transition of prepubertal youths with GD/gender incongruence are made with the assistance of an MHP or another experienced professional. (Ungraded Good Practice Statement).

Natural History of Children With GD/Gender Incongruence

With current knowledge, we cannot predict the psychosexual outcome for any specific child. Prospective follow-up studies show that childhood GD/gender incongruence does not invariably persist into adolescence and adulthood (so-called "desisters"). Combining all outcome studies to date, the GD/gender incongruence of a minority of prepubertal children appears to persist in adolescence (20, 40). In adolescence, a significant number of these desisters identify as homosexual or bisexual. It may be that children who only showed some gender nonconforming characteristics have been included in the follow-up studies, because the DSM-IV text revision criteria for a diagnosis were rather broad. However, the persistence of GD/gender incongruence into adolescence is more likely if it had been extreme in childhood (41, 42). With the newer, stricter criteria of the DSM-5 (Table 2), persistence rates may well be different in future studies.

1.0 Evaluation of Youth and Adults

Gender-affirming treatment is a multidisciplinary effort. After evaluation, education, and diagnosis, treatment may include mental health care, hormone therapy, and/or surgical therapy. Together with an MHP, hormone-prescribing clinicians should examine the psychosocial impact of the potential changes on people's lives, including mental health, friends, family, jobs, and their role in society. Transgender individuals should be encouraged to experience living in the new gender role and assess whether this improves their quality of life. Although the focus of this guideline is gender-affirming hormone therapy, collaboration with appropriate professionals responsible for each aspect of treatment maximizes a successful outcome.

Diagnostic assessment and mental health care

GD/gender incongruence may be accompanied with psychological or psychiatric problems (43–51). It is therefore necessary that clinicians who prescribe hormones and are involved in diagnosis and psychosocial assessment meet the following criteria: (1) are competent in using the DSM and/or the ICD for diagnostic purposes, (2) are able to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) are trained in diagnosing psychiatric conditions, (4) undertake or refer for appropriate treatment, (5) are able to do a psychosocial assessment of the patient's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) regularly attend relevant professional meetings.

Because of the psychological vulnerability of many individuals with GD/gender incongruence, it is important that mental health care is available before, during, and sometimes also after transitioning. For children and adolescents, an MHP who has training/experience in child and adolescent gender development (as well as child and adolescent psychopathology) should make the diagnosis, because assessing GD/gender incongruence in children and adolescents is often extremely complex.

During assessment, the clinician obtains information from the individual seeking gender-affirming treatment. In the case

Table 2. DSM-5 Criteria for Gender Dysphoria in Adolescents and Adults

A. A marked incongruence between one's experienced/expressed gender and natal gender of at least 6 mo in duration, as manifested by at least two of the following:
   1. A marked incongruence between one's experienced/expressed gender and primary and/or secondary sex characteristics (or in young adolescents, the anticipated secondary sex characteristics)
   2. A strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (or in young adolescents, a desire to prevent the development of the anticipated secondary sex characteristics)
   3. A strong desire for the primary and/or secondary sex characteristics of the other gender
   4. A strong desire to be of the other gender (or some alternative gender different from one's designated gender)
   5. A strong desire to be treated as the other gender (or some alternative gender different from one's designated gender)
   6. A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one's designated gender)

B. The condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:
   1. The condition exists with a disorder of sex development.
   2. The condition is posttransitional, in that the individual has transitioned to full-time living in the desired gender (with or without legalization of gender change) and has undergone (or is preparing to have) at least one sex-related medical procedure or treatment regimen—namely, regular sex hormone treatment or gender reassignment surgery confirming the desired gender (*e.g.*, penectomy, vaginoplasty in natal males; mastectomy or phalloplasty in natal females).

Reference: American Psychiatric Association (14).

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of adolescents, the clinician also obtains information from the parents or guardians regarding various aspects of the child's general and psychosexual development and current functioning. On the basis of this information, the clinician:

- decides whether the individual fulfills criteria for treatment (see Tables 2 and 3) for GD/gender incongruence (DSM-5) or transsexualism (DSM-5 and/or ICD-10);
- informs the individual about the possibilities and limitations of various kinds of treatment (hormonal/surgical and nonhormonal), and if medical treatment is desired, provides correct information to prevent unrealistically high expectations;
- assesses whether medical interventions may result in unfavorable psychological and social outcomes.

In cases in which severe psychopathology, circumstances, or both seriously interfere with the diagnostic work or make satisfactory treatment unlikely, clinicians should assist the adolescent in managing these other issues. Literature on postoperative regret suggests that besides poor quality of surgery, severe psychiatric comorbidity and lack of support may interfere with positive outcomes (52–56).

For adolescents, the diagnostic procedure usually includes a complete psychodiagnostic assessment (57) and an assessment of the decision-making capability of the youth. An evaluation to assess the family's ability to endure stress, give support, and deal with the complexities of the adolescent's situation should be part of the diagnostic phase (58).

Social transitioning

A change in gender expression and role (which may involve living part time or full time in another gender role that is consistent with one's gender identity) may test the person's resolve, the capacity to function in the affirmed gender, and the adequacy of social, economic, and psychological supports. It assists both the individual and the clinician in their judgments about how to proceed (16). During social transitioning, the person's feelings about the social transformation (including coping with the responses of others) is a major focus of the counseling. The optimal timing for social transitioning may differ between individuals. Sometimes people wait until they start gender-affirming hormone treatment to make social transitioning easier, but individuals increasingly start social transitioning long before they receive medically supervised, gender-affirming hormone treatment.

Criteria

Adolescents and adults seeking gender-affirming hormone treatment and surgery should satisfy certain criteria before proceeding (16). Criteria for gender-affirming hormone therapy for adults are in Table 4, and criteria for gender-affirming hormone therapy for adolescents are in Table 5. Follow-up studies in adults meeting these criteria indicate a high satisfaction rate with treatment (59). However, the quality of evidence is usually low. A few follow-up studies on adolescents who fulfilled these criteria also indicated good treatment results (60–63).

Recommendations for Those Involved in the Gender-Affirming Hormone Treatment of Individuals With GD/Gender Incongruence

1.1. We advise that only trained MHPs who meet the following criteria should diagnose GD/gender incongruence in adults: (1) competence in using the DSM and/or the ICD for diagnostic purposes, (2) the ability to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) training in diagnosing psychiatric conditions, (4) the ability to undertake or refer for appropriate treatment, (5) the ability to psychosocially assess the person's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) a practice of regularly attending relevant professional meetings. (Ungraded Good Practice Statement)

1.2. We advise that only MHPs who meet the following criteria should diagnose GD/gender incongruence in children and adolescents: (1) training in child and adolescent developmental psychology and psychopathology, (2) competence in using the DSM and/or ICD for diagnostic

Table 3. ICD-10 Criteria for Transsexualism

Transsexualism (F64.0) has three criteria:
1. The desire to live and be accepted as a member of the opposite sex, usually accompanied by the wish to make his or her body as congruent as possible with the preferred sex through surgery and hormone treatments.
2. The transsexual identity has been present persistently for at least 2 y.
3. The disorder is not a symptom of another mental disorder or a genetic, DSD, or chromosomal abnormality.

Table 4. Criteria for Gender-Affirming Hormone Therapy for Adults

1. Persistent, well-documented gender dysphoria/gender incongruence
2. The capacity to make a fully informed decision and to consent for treatment
3. The age of majority in a given country (if younger, follow the criteria for adolescents)
4. Mental health concerns, if present, must be reasonably well controlled

Reproduced from World Professional Association for Transgender Health (16).

purposes, (3) the ability to make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (4) training in diagnosing psychiatric conditions, (5) the ability to undertake or refer for appropriate treatment, (6) the ability to psychosocially assess the person's understanding and social conditions that can impact gender-affirming hormone therapy, (7) a practice of regularly attending relevant professional meetings, and (8) knowledge of the criteria for puberty blocking and gender-affirming hormone treatment in adolescents. (Ungraded Good Practice Statement)

Evidence

Individuals with gender identity issues may have psychological or psychiatric problems (43–48, 50, 51, 64, 65). It is therefore necessary that clinicians making the diagnosis are able to make a distinction between GD/gender incongruence and conditions that have similar features. Examples of conditions with similar features are body dysmorphic disorder, body identity integrity disorder (a condition in which individuals have a sense that their anatomical configuration as an able-bodied person is somehow wrong or inappropriate) (66), or certain forms of eunuchism (in which a person is preoccupied with or engages in castration and/or penectomy for

Table 5. Criteria for Gender-Affirming Hormone Therapy for Adolescents

Adolescents are eligible for GnRH agonist treatment if:
1. A qualified MHP has confirmed that:
•the adolescent has demonstrated a long-lasting and intense pattern of gender nonconformity or gender dysphoria (whether suppressed or expressed),
•gender dysphoria worsened with the onset of puberty,
•any coexisting psychological, medical, or social problems that could interfere with treatment (*e.g.*, that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start treatment,
•the adolescent has sufficient mental capacity to give informed consent to this (reversible) treatment,
2. And the adolescent:
•has been informed of the effects and side effects of treatment (including potential loss of fertility if the individual subsequently continues with sex hormone treatment) and options to preserve fertility,
•has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process,
3. And a pediatric endocrinologist or other clinician experienced in pubertal assessment
•agrees with the indication for GnRH agonist treatment,
•has confirmed that puberty has started in the adolescent (Tanner stage ≥G2/B2),
•has confirmed that there are no medical contraindications to GnRH agonist treatment.
Adolescents are eligible for subsequent sex hormone treatment if:
1. A qualified MHP has confirmed:
•the persistence of gender dysphoria,
•any coexisting psychological, medical, or social problems that could interfere with treatment (*e.g.*, that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start sex hormone treatment,
•the adolescent has sufficient mental capacity (which most adolescents have by age 16 years) to estimate the consequences of this (partly) irreversible treatment, weigh the benefits and risks, and give informed consent to this (partly) irreversible treatment,
2. And the adolescent:
•has been informed of the (irreversible) effects and side effects of treatment (including potential loss of fertility and options to preserve fertility),
•has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent throughout the treatment process,
3. And a pediatric endocrinologist or other clinician experienced in pubertal induction:
•agrees with the indication for sex hormone treatment,
•has confirmed that there are no medical contraindications to sex hormone treatment.

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Interrogating Gender-Exploratory Therapy

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Abstract

Opposition to gender-affirmative approaches to care for transgender youths by some clinicians has recently begun to consolidate around "gender exploratory therapy" as a proposed alternative. Whereas gender-affirmative approaches follow the client's lead when it comes to gender, gender-exploratory therapy discourages gender affirmation in favor of exploring through talk therapy the potential pathological roots of youths' trans identities or gender dysphoria. Few detailed descriptions of the approach's parameters have been offered. In this article, I invite clinicians to reflect on gender-exploratory therapy through a series of questions. The questions are followed by an exploration of the strong conceptual and narrative similarities between gender-exploratory therapy and conversion practices. Finally, the ethical dimensions of gender-exploratory therapy are discussed from the lenses of therapeutic neutrality, patient-centered care, loving attention, and therapeutic alliance, suggesting that the approach may be unethical.

Keywords

assessment/diagnosis, clinical ethics, conversion practices, culture/diversity, gender exploration, sex/gender, transgender

Challenging trans health's convergence on gender affirmation, some clinicians working with trans youths have begun advocating for what they call "gender exploratory therapy" as a distinct clinical paradigm (Edwards-Leeper & Anderson, 2021; Spiliadis, 2019). The approach is presented as a neutral ground between the "radical" gender-affirmative model and "unethical" conversion practices (D'Angelo et al., 2021). Its proponents describe it as an "agenda-free, neutral therapy" and "ethical non-affirmative" approach—contrasting it with gender-affirmative approaches, which they characterize as political and agenda-driven to the detriment of adolescents (D'Angelo et al., 2021). Gender-affirmative approaches follow clients' lead when it comes to gender, emphasizing the importance of respecting clients' desires regarding social gender affirmation, which includes gender identity, gender expression, name, and pronouns; supporting clients' free, self-directed gender exploration; and scaffolding their decision-making surrounding transition-related medical interventions (Ashley, 2019b; St. Amand & Ehrensaft, 2018).

The conceptual fulcrum of the gender-exploratory approach lies in gender exploration through talk therapy, with the goal of identifying why youths have gender dysphoria and/or believe themselves to be trans. Gender dysphoria and self-identification as trans are approached with suspicion and associated by proponents of the approach with unprocessed trauma, childhood abuse, internalized homophobia or misogyny, co-occurring mental illness, social contagion, autism, sexual fetishism, and unconscious drives (D'Angelo et al., 2021; Edwards-Leeper & Anderson, 2021; Gender Exploratory Therapy Association [GETA], 2021; Lemma & Savulescu, 2021; Marchiano, 2017; Withers, 2020). Until gender exploration is completed, youths are not offered transition-related medical services, and social gender affirmation is typically discouraged. In many cases, medical transition and social gender affirmation will be pushed back even further because psychotherapy "should be the first-line treatment for all cases of gender dysphoria" and transition-related medical care "should be avoided if possible" (GETA, 2021). The mandatory nature of gender exploration is what distinguishes gender-exploratory therapy from gender-affirmative approaches, which often hold space for gender exploration and encourage

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individuals to explore what gender means to them while simultaneously providing transition-related medical services and social gender affirmation (Ashley, 2019b). Gender-exploratory therapy does not include every clinical approach that facilitates gender exploration.

Critics of the paradigm have emphasized that affirmation is far more neutral than the proposed alternatives because it emanates from clients rather than being imposed on them and have argued that there is no evidence to support nonaffirmation. Although couched in the language of exploration, gender-exploratory therapy seems more akin to interrogation or perhaps even inquisition. Gender-exploratory therapy also sits uneasily with the dominant view among scientists that being trans is not pathological (American Psychological Association, 2021; Coleman et al., 2012, p. 168). Describing trans identities as commonly or always being a pathological or maladaptive response is a long-standing view that has been extensively criticized in the scientific literature and for which no compelling evidence exists (Arnoldussen et al., 2020; Ashley, 2020; Bauer et al., 2022; Olson et al., 2016; Rae et al., 2019; Serano, 2020). The surge of gender-exploratory therapy coincides with ongoing attempts to criminalize gender-affirming care for trans youths, sometimes masquerading as a compromise between gender-affirmative care and conversion practices and at other times functioning as the intellectual arm of political movements calling for the criminalization of gender-affirming care (e.g., Brejcha & Breen, 2021).

The literature on gender-exploratory therapy has focused predominantly on criticizing gender-affirmative approaches and defending the need for psychotherapeutic gender exploration. Detailed discussions of the parameters of this therapeutic mode—how it is done, what it looks like in practice—are, by contrast, scarce. In this article, I offer questions for clinicians and then offer my personal reflections on gender-exploratory therapy. These questions, which form the first section, aim to foster self-reflection and spark ongoing critical discussions around gender-exploratory therapy. Readers should not merely skim through the questions but instead sit with them. Writing down answers or walking through them with a colleague may be helpful. I readily acknowledge that they are leading questions but hope that proponents of the approach will nonetheless approach answering them in good faith. In the second section of the article, I offer reflections of my own as an expert on conversion practices and scholar of clinical ethics. I emphasize the conceptual and narrative parallels between gender-exploratory therapy and conversion practices and explore the approach's ethical dimensions from the lenses of therapeutic neutrality, patient-centered care, loving attention, and therapeutic alliance.

Questions for Clinicians

1. What do you do if a client refuses to engage in gender exploration with you? Do you refuse them gender-affirming care, even if it may be necessary to their well-being?
2. How long does gender-exploratory therapy last? How do you know if it has gone on long enough? Do you go until you find a "root cause" of the client's trans identity or gender dysphoria?
3. How do you distinguish, for example, trauma that caused someone to be trans from trauma that a trans person happens to have? Do you trust the client's views? Would you equally trust clients' view that their gender identity or gender dysphoria is and is not grounded in trauma? Why or why not?
4. If you conclude that trans identity or gender dysphoria is rooted in, for example, trauma, how do you assess whether this response is adaptive or maladaptive? How do you determine whether the person can safely and effectively be encouraged or helped to reidentify with the gender they were assigned at birth? Is there any evidence that gender-exploratory therapy is safe or effective?
5. If clients eventually come to identify as cisgender, do you wind down gender-exploratory therapy, or do you continue at a similar pace to ensure that their reidentification is genuine and not itself a coping or adaptive/maladaptive response? Why or why not?
6. Relatedly, do you consider self-identification as transgender more suspect or deserving of exploration than self-identification as cisgender? Why or why not? How is this reflected in gender-exploratory therapy?
7. Is it possible that the, for example, trauma permanently altered the person's sense of self?
8. If the psychotherapeutic attempt to treat gender identity and/or gender dysphoria proves unsuccessful, would you consider recommending gender-affirming care? Under what conditions?
9. Do you see refusing to affirm someone's expressed sense of self and experiences of gender as an appropriate response to individuals who may be experiencing trauma? Does nonaffirmation conflict with trauma-informed care's emphasis on fostering clients' sense of choice, empowerment, and acceptance (Levenson et al., 2021)? Do you think nonaffirmation poses risks of retraumatization?
10. Is there any evidence that gender-exploratory therapy leads to better outcomes, however you define them, than gender-affirming approaches?

Is there any evidence that it can successfully identify youths who are not "truly" trans, whose identification is maladaptive, or who would be harmed by gender-affirming interventions?

11. Do you believe that gender-exploratory therapy can create psychological, social, and emotional pressures to reidentify with one's gender assigned at birth? Do you believe that it can create pressures to misreport reidentification or alleviation of gender dysphoria? Do you believe that it can create pressures to identify specific factors, for example, trauma as a cause of trans identity or gender dysphoria?
12. Do you believe that gender-exploratory therapy can create pressures to lie, misrepresent, or otherwise engage in gender-exploratory therapy in bad faith to obtain gender-affirming care? Do you believe it can lead clients to suppress their doubts and worries and, as a result, make decisions regarding gender-affirming care that are less informed and thoughtful?
13. What do you make of the distress of the numerous youths who are "truly" trans, who will experience ongoing distress during gender-exploratory therapy, and who form a strong majority of individuals seeking gender-affirmative care? High-end estimates of detransition are around 3% (Brik et al., 2020; Narayan et al., 2021). There are some suggestions that up to 76% of people who detransition do not tell their clinicians that they have done so (Littman, 2021). Even if one assumes, for the sake of argument, that these upper-bound estimates are accurate, one is left with a large 88% of individuals who do not detransition. Detransition seems rare.
14. What pronouns and gendered terms do you use during gender-exploratory therapy? Do you use terms desired by clients or terms that reflect their gender assigned at birth, or do you avoid pronouns and gendered terms altogether? Do you see using terms reflecting the client's gender assigned at birth as a neutral option? Why or why not?
15. Do you believe that transition-related medical interventions, such as hormones, can be offered in parallel to exploratory therapy either as a means of reducing current gender dysphoria and/or as a way of helping clients explore their gender identity and ascertain whether gender-affirming care is right for them? Do you think social and medical transition being temporary is an inherently undesirable outcome? Why or why not? Is this related to a belief that bodies that have undergone medical transition are less desirable and should be avoided if possible?
16. Given concerns that premature affirmation may foreclose gender identity and exploration and considering that puberty blockers arguably have far less of a foreclosing impact on gender than endogenous puberty, do you think that clinicians should offer and encourage puberty blockers for all questioning and even perhaps all cisgender kids? Would your answer change if you were absolutely certain that puberty blockers had no negative long-term side effects?

Exploring Perspectives

Conversion practices

Critics consider gender-exploratory therapy a form of conversion practice, and opponents of proposed bans on conversion practices have claimed that the laws would prohibit gender-exploratory therapy (Ashley, 2022; Brejcha & Breen, 2021; Edwards-Leeper & Anderson, 2021). Conversion practices that aim to change, discourage, or repress someone's gender identity have been associated with serious risks of severe psychological distress and suicidality (Green et al., 2020; Lee et al., 2022; Turban et al., 2020). As someone with extensive scholarly and policy experience surrounding conversion practices, I am struck by how much gender-exploratory therapy and conversion practices resemble one another from a conceptual and narrative standpoint.

Conversion practices have long associated same-sex attraction with pathological causes, often focusing on childhood trauma and sexual assault (e.g., Nicolosi & Nicolosi, 2002). Other proposed causes include family dynamics, disrupted relationships to femininity and masculinity, co-occurring mental illness, social contagion, and unconscious drives. Survivor Peter Gajdics explained how his therapist tried to depict his sexual orientation as a by-product of trauma, telling him that his

> history of childhood sexual abuse had created a false homosexual identity and so my therapy's goal would be to heal old trauma in order, as he said, to correct the error of my sexual orientation and revert to my innate heterosexuality. (House of Commons of Canada, 2020; see also Gajdics, 2017).

Proponents of conversion practices contrast them with mainstream practices that promote affirming sexual orientation, which they describe as politically motivated and ideologically captured:

> A 16-year-old young man came into my office, concerned that he might be homosexual. I told him that if he was, he could choose Gay Affirmative Therapy, or he could seek to grow out of homosexuality. . . .

> The young man had been confused by the popular rhetoric that assumes that if you are homosexual, then the only honest response is to live out the gay identity. Believing this, he was surprised to hear that there are men who, out of the fullness of their identities, choose a different struggle. . . . The mental health profession is largely responsible for the neglect of the non-gay homosexual. In its attempt to support the liberation of gays, it has pushed underground the other population. (Nicolosi, 1991, pp. 4–6)

The passage bears a striking resemblance to the narrative surrounding gender-exploratory therapy, which includes claims that "trans activists want to silence detransitioners or deny their existence" and portrays gender-affirming care as "an overcorrection" that is being "pushed by activists" (Edwards-Leeper & Anderson, 2021). And just as proponents of gender-exploratory therapy depict clinicians as being "afraid of being cast as transphobic bigots by their local colleagues and referral sources if they engage in gender exploring therapy," (Edwards-Leeper & Anderson, 2021) so did Joseph Nicolosi claim that "the sexual revolution and the 'rights' movements—civil rights, minority rights, feminist rights—have resulted in an intimidating effect upon psychology" (Nicolosi, 1991, p. 9).

Proponents of conversion practices often appeal to the accounts of "ex-gay" clients to bolster their claim that same-sex attraction can be and therefore frequently is caused by trauma or other external factors—a move that is reminiscent of how proponents of gender-exploratory therapy select and deploy detransitioners' accounts. For instance, Joseph Nicolosi described how one of his clients never believed his orientation to be ingrained and quoted another as saying that "embracing a homosexual lifestyle has been like living a lie" and that "only since I have started to look at what is behind these homosexual feelings have I really begun to find peace and self-acceptance" (Nicolosi, 1991, p. 5; see also Fetner, 2005). Compare this passage with the research of Lisa Littman (2021), which draws on detransitioners' reports as evidence that their trans identity or gender dysphoria was caused by trauma, abuse, mental-health problems, or internalized homophobia. Such reliance on self-report contrasts with the distrust proponents of gender-exploratory therapy have displayed toward self-report when clients assert a trans identity or when they reject the suggestion that their gender dysphoria is a pathological response.

Studies and collated anecdotal accounts from detransitioners often represent a subgroup that is particularly hostile to gender-affirming care (Leveille, 2021; Restar, 2020). Ky Schevers (2021b), who was heavily involved in detransitioner advocacy for 6 years, described the subculture as "heavily invested in transphobic radical feminist ideology." Schevers explained that people in radical feminist detransitioned women's communities were "encouraged to see themselves as women struggling with gender dysphoria and to see any sense of being a gender other than woman as a symptom to be managed, not an identity to express" and that she came to believe that "my being trans was a result of trauma and misogyny" (Schevers, 2021a, 2021b). The accuracy of detransition narratives being promoted is sometimes dubious. For instance, detransitioner Keira Bell has advocated against access to gender-affirming care on account that she was "rushed" into medical transition. However, this narrative eludes important facts. She was assessed over 21 months in addition to being on the clinic's waitlist—which is now 26 months long—seemingly contradicting the claim that she was rushed. More critically perhaps, she identified challenges to her gender identity as entrenching her decision to transition, telling the court that

> the psychiatrist attempted to talk of the gender spectrum as a way of persuading me to not pursue medical transition. I took this as a challenge to how serious I was about my feelings and what I wanted to do and it made me want to transition more. Now I wish I had listened to her. (*Bell v. Tavistock*, 2020)

Suspicion toward Bell's gender identity seems to have backfired and played a foreclosing role on gender exploration, in contradiction to the conceptual underpinnings and justifications of gender-exploratory therapy.

Detransition is a heterogeneous and complex experience that is frequently obscured by ideological commitments. Contrary to the assumption that detransition necessarily reflects the individual's authentic identity, Ky Schevers now identifies as a "genderqueer transmasculine butch," regrets having detransitioned, and views the subculture's ideology as akin to conversion practices (Schevers, 2021a, 2021b). This not to say that detransitioners are generally misguided trans people or victims of internalized transphobia. My point is more mundane: The deployment of detransition narratives by proponents of gender-exploratory therapy belies the complexity of detransitioners' experiences. The suggestion by proponents of gender-exploratory therapy that gender-affirmative approaches are to blame for detransition is unconvincing, especially once one considers how detransitioners' stories are being curated in ways reminiscent of how ex-gay narratives are used to support conversion practices.

The attempt to distance and distinguish gender-exploration therapy from conversion practices is also

familiar. After California banned conversion practices, Joseph Nicolosi wrote an essay claiming that his reparative therapy did not directly aim at altering same-sex attraction but, rather, encouraged inquiry and exploration into its underlying cause. The positive-sounding language of inquiry and exploration sanitizes his approach despite him viewing "most same-sex attractions as reparations for childhood trauma" (Nicolosi, 2015). "Exploring, isolating and resolving these childhood emotional wounds will often result in reducing unwanted same-sex attractions," he explained.

His son, Joseph Nicolosi, Jr., also sought to distance himself from conversion practices, coining a new approach termed "reintegrative therapy" that he insists is not equivalent to conversion therapy (Nicolosi, Jr., 2018). Reintegrative therapy is described as a form of "sexual attraction fluidity exploration" and is purported to "significantly decreases unwanted sexual behaviors while improving psychological well-being" (Reintegrative Therapy Association, 2021). Paralleling the rhetoric around gender-exploratory therapy, proponents of reintegrative therapy describe it as a "sexual orientation-neutral approach, designed to treat trauma and addiction for males and females regardless of the client's sexual orientation" and use the positive-sounding language of "exploration" in explaining it (Nicolosi, Jr., 2018, p. 61). According to Nicolosi, Jr. (2018), "the protocol involves exploring the client's attractions from a neutral stance of curiosity and then seeking to resolve the trauma memories which lie beneath with standard trauma treatments" (p. 61). According to him, reintegrative therapy is distinct from conversion practices because conversion practices "seek to modify the sexuality," whereas reintegrative therapy only alters sexual orientation "as a byproduct [*sic*] of resolving the core unmet need" (p. 66). This may seem like a distinction without a difference. After all, clinicians have always justified conversion practices by claiming that same-sex attraction is rooted in underlying trauma, psychological disturbances, and other pathological factors. The insistence that reintegrative therapy is practiced in the same way regardless of whether the person is gay, bisexual, or straight also falls flat given Nicolosi, Jr.'s father's recognition that in the history of psychiatry no "heterosexual ever sought treatment for distress about his heterosexuality and wished to become homosexual" (Nicolosi, 1991, p. 9).

Descriptions of reintegrative therapy by people who offer it are reminiscent of how gender-exploratory therapy is described by its proponents. Clinicians promoting gender-exploratory therapy have notably insisted that the approach is "not the same as 'conversion,' as the latter implies a therapist agenda and an aim for a fixed outcome" (D'Angelo et al., 2021, p. 10) and emphasized that they "do not aim to change someone's gender or sexuality related feelings but rather engage in a dialogue exploring the meaning-making around identity development" (Spiliadis, n.d.). Such statements overlook the fact that gender-exploratory therapy is predicated on suspicion toward trans identities and gender dysphoria and is neither developed for nor applied to cisgender individuals who do not report gender dysphoria.

I leave readers to conclude for themselves whether reintegrative therapy is tantamount to conversion practices. In any case, the conceptual and narrative similarities between reintegrative therapy and gender-exploratory therapy are hard to miss.

Clinical ethics

Proponents of gender-exploratory therapy situate their approach as neutral, agenda-free, and more in line with foundational principles of psychotherapy (D'Angelo et al., 2021). Yet approaching trans identities and gender dysphoria from a position of suspicion—suspicion that, regardless of indication, they may be attributable to pathological causes and should be explored as such—is incompatible with therapeutic neutrality. One of the sources quoted by D'Angelo and colleagues (2021), for instance, explained therapeutic neutrality as "knowing one's place and staying out of the patient's personal life," allowing "for the patient's agenda to be given primary consideration" (Simon, 1992, p. 273). However, gender-exploratory therapy seems to interject itself into clients' lives by doubting that their gender identity and experience of gender dysphoria are authentic and not pathological. Gender-exploratory therapy also fails to give primary consideration to the client's agenda of self-actualization by placing undue weight on the risk of detransition. As I showed with the psychiatrist who tried to convince Keira Bell not to transition, discouraging or delaying transition can severely undermine the therapeutic relationship and foreclose the client's free, self-directed gender exploration. On that account, gender-exploratory therapy seems inconsistent with therapeutic neutrality.

Therapeutic neutrality is a complex and fraught concept. Not all agree on whether and how it should be pursued. According to psychiatrists Frank Yeomans and Eve Caligor (2016), therapeutic neutrality comes only after a treatment frame is set in place. Neutrality vis-à-vis treatment goals and approach is fundamentally different from neutrality in treatment because clinicians may view clients' goals as unacceptable—Yeomans and Caligor gave the example of suicide. Historically, therapeutic neutrality is intertwined with psychoanalysis and was developed as a response to risks associated with

transference and countertransference (Meissner, 1998). Therapeutic neutrality referred to "a point equidistant from the id, the ego, and the superego" (Anna Freud, as cited in Greenberg, 1986). Critics of therapeutic neutrality have also pointed out that the concept can be counterproductive insofar as clinicians may obscure and fail to examine how they project, impart, and impose their own values onto clients by appealing to therapeutic neutrality (Fancher, 2015; Humphries, 1982; Meissner, 1998; Wachtel, 1986; see also Ashley, 2019a). This remark is particularly salient given the conceptual and normative relationship that gender-exploratory therapy entertains with gender dysphoria and being trans. Although neutrality can be a beneficial aspiration, it is prone to distortions and misuse and cannot stand alone as a consideration for clinical ethics. Appeals to therapeutic neutrality in highly politicized contexts are too often a preemptive rejoinder to potential critics, cynically turning the concept against its very purpose. As psychoanalyst Paul L. Wachtel (1986) wrote, "one cannot stay outside the field, one cannot avoid influencing what one is observing" (p. 61). Unless situated in a broader normative philosophy, therapeutic neutrality is neither a helpful nor a realistic goal. Neutrality, much like the cake, is a lie.

The notions of patient-centered care, loving attention, and therapeutic alliance are more promising conceptual tools for reflecting on models of care in trans health. Patient-centered care is, in a way, an elaboration on the concept of therapeutic neutrality. Patient-centered care is "characterized by responsiveness to patient needs and preferences, using the patient's informed wishes to guide activity, interaction and information-giving, and shared decision-making" (Pelzang, 2010, p. 912) and represents "a shift from a traditional, paternalistic, provider-driven and disease-focused approach towards one that fully integrates the patient's perceptions, needs and experiences" (Fix et al., 2018, p. 301). Patient-centered care is a philosophical and normative orientation rather than a problem-solving algorithm. Its application to particular contexts can be difficult without the aid of additional conceptual tools, notably because of the wide range of care contexts in which it is used.

From a patient-centered standpoint, it is crucial to realize that most individuals who enter a clinical relationship because they are trans or experience gender dysphoria do so for the express purpose of securing access to gender-affirming care and, accordingly, living out their felt gender in everyday life. Although some may view their own trans identity or gender dysphoria as a pathological response, they are a minority. There is little basis for doubting clients who believe that their gender identity or gender dysphoria is nonpathological given the rarity of regret and the absence of proven indicators or validated assessment techniques that could accurately predict future regret (Brik et al., 2020; Bustos et al., 2021; Deutsch, 2012; In re: Kelvin, 2017; Lawrence, 2003; Narayan et al., 2021; Pimenoff & Pfäfflin, 2011; Wiepjes et al., 2018). Imposing gender exploration on clients seems manipulative or coercive and incompatible with patient-centered care. Although patient-centered care is not against exploration or assessments, it emphasizes the importance of centering clients' desires and perspectives as much as possible. Without a clear and compelling justification, suspicion and paternalism run afoul of patient-centered care. Instead, a patient-centered approach would facilitate access to gender-affirming care; scaffold clients' self-directed and autonomous gender exploration, including through medical transition; and offer health-care services tailored to the needs of detransitioners (Ashley, 2019b; Hildebrand-Chupp, 2020). Rather than imposing gender exploration, patient-centered therapists support clients in their decision-making process and foster a space for them to explore their gender on their own terms, should they want to do so.

The concept of loving attention, drawn from feminist philosophy, can help operationalize patient-centered care in the trans health context by specifying what it means to be responsive to clients' needs and preferences and to use them in the development of a clinical model. Philosopher E. M. Hernandez (2021) explained that loving attention entails perceiving and attending to people on their own terms rather than on the clinicians' terms. Loving attention stands in opposition to arrogant, paternalistic outlooks in which clinicians purport to know better what is in the person's best interest and whether their self-understanding and desires align with that interest. Loving attention offers a critical outlook on paternalism, good intentions, and benevolence, understanding that—as the saying goes—the road to hell is paved with good intentions.

Instead of drawing on their own understanding of the desirability of gender-affirming care, of the client's gender identity and gender dysphoria, and of their sources, clinicians working from a stance of loving attention "[seek] the other person through critical checking and questioning of one's self, not suppressing the perceiver's wants and desires but recognizing how they lead one astray" (Hernandez, 2021, p. 622). It is not enough to avoid active rejection by adopting a "neutral" stance that neglects differences between persons. Loving attention requires respect for individuals on their own terms, which entails adopting and affirming their self-understanding of gender and desires for gender-affirming care. Hernandez (2021), for instance, pointed out that applying the gender-neutral "they" to a trans woman who uses the pronoun "she" fails to

reflect loving attention even if the person calls everyone "they." Gender-exploratory therapy fails to embody loving attention because it approaches being trans and gender dysphoria with suspicion and a mind turned toward pathological roots even if there is no clear, immediate, or compelling reason to believe that the client's self-understanding is wrong, besides, perhaps, stereotypes. Gender-exploratory therapy fails to appreciate trans communities on their own terms and thus falls short of loving attention. By contrast, gender-affirmative approaches' emphasis on trans individuals' self-understanding and on supporting them on their own terms clearly reflect a form of loving attention.

Therapeutic alliance is another concept that helps one appreciate the flaws of gender-exploratory therapy. Fostering an atmosphere of trust, comfort, and autonomy in clinical relationships is critical to decision-making and long-term well-being (Ardito & Rabellino, 2011; Ashley & Domínguez, 2021; Kukla, 2021; Martin et al., 2000). Clinicians who are perceived as erecting barriers to gender-affirming care can undermine the client's decision-making by making them suppress doubts and worries, misrepresent their experiences, react defensively, and even initiate medical interventions earlier than they may otherwise have because of fear that they could be taken away. Whether gender-exploratory therapy falls under the umbrella of conversion practices, even its proponents admit that the approach is commonly experienced as nonaffirmative and that its practitioners are perceived as "transphobic bigots" (D'Angelo et al., 2021; Edwards-Leeper & Anderson, 2021). Gender-exploratory therapy positions the clinician as an antagonist, a gatekeeper of gender-affirming care that clients must overcome if they want to access the desired interventions. The testimony of Keira Bell before the High Court of England and Wales, discussed earlier, attests to this phenomenon. The oppositional dynamic that flows from conceptual and narrative foundations of gender-exploratory therapy can severely undermine the therapeutic alliance. "No one trusts the doctors as the place to work things out," explained Dean Spade (2006, p. 326; see also MacKinnon et al., 2020). If individuals seeking gender-affirming care do not trust clinicians with their doubts and worries, the quality of their decision-making is undermined, and free, self-directed gender exploration is foreclosed. In addition, fear or hesitancy discussing mental-health needs can create barriers to psychotherapeutic care and keep trans people away from needed mental-health services. By contrast, gender-affirmative approaches can foster greater trust, comfort, and autonomy, reducing the stakes of gender exploration and thus creating more space for it should clients want to explore their gender. The therapeutic alliance cultivated by gender-affirming care can also foster access to mental and physical health-care services for needs unrelated or tangential to gender, such as sexual health services and trauma-informed therapy.

Patient-centered care, loving attention, and therapeutic alliance converge onto gender-affirmative approaches as the most ethical paradigms of trans care, casting doubt on the ethics of gender-exploratory therapy. Approaching trans identities and gender dysphoria from a stance of suspicion under the guise of curiosity and neutrality fails to accord with principles of clinical ethics. It betrays value-laden assumptions that are incompatible with therapeutic neutrality. Clients' self-described needs and understandings are the starting point of ethical therapy.

Conclusion

Gender-exploratory therapy is an emergent and underdefined paradigm in trans health care. Despite appealing to positive notions such as curiosity, neutrality, and exploration, proponents of gender-exploratory therapy leave many critical questions unanswered and strike a conceptual and normative pose that seems incompatible with evolving understandings of clinical ethics and trans identities. Being trans is not undesirable and should not be approached as if it were.

Proponents of gender-exploratory therapy acknowledge that some consider it a form of conversion practice, paradoxically resenting the suggestion while opposing bans on conversion practices on account that it would prohibit their approach. As for critiques of gender-exploratory therapy, they are presented as evidence of trans health care's ideological capture. Yet a close comparison of gender-exploratory therapy and conversion practices reveals many conceptual and narrative similarities. How proponents talk about gender-exploratory therapy is nearly identical to how individuals offering conversion practices targeting sexual orientation frame their own work. Despite the language of exploration, gender-exploratory therapy shares more with interrogation, if not inquisition.

When you begin from the premise that trans identities are suspect and often rooted in pathology, your therapeutic approach soon becomes indistinguishable from conversion practices. As a scholar of conversion practices, the uncanny resemblance cannot but give me pause.

Transparency

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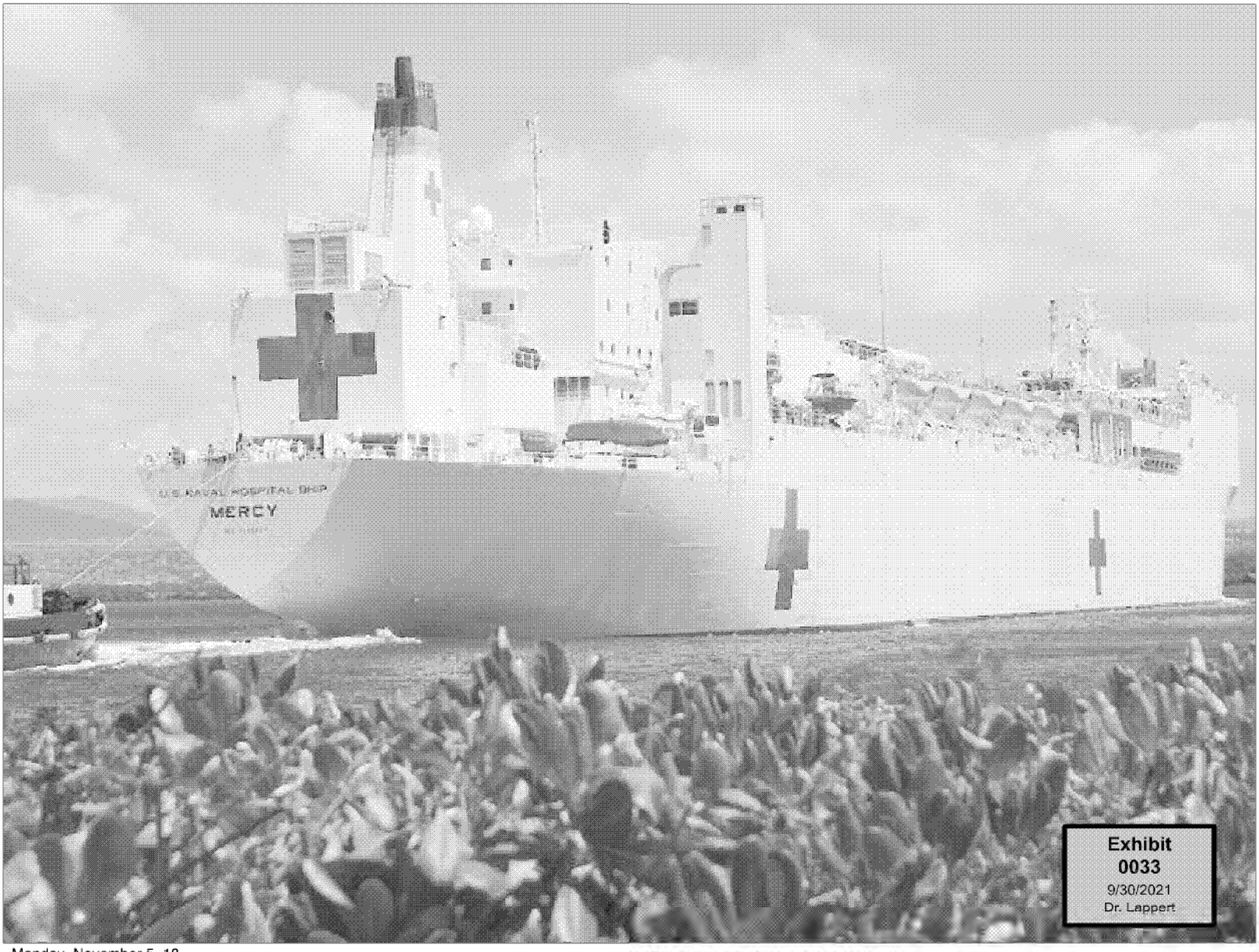


Pl. Trial Ex. 125

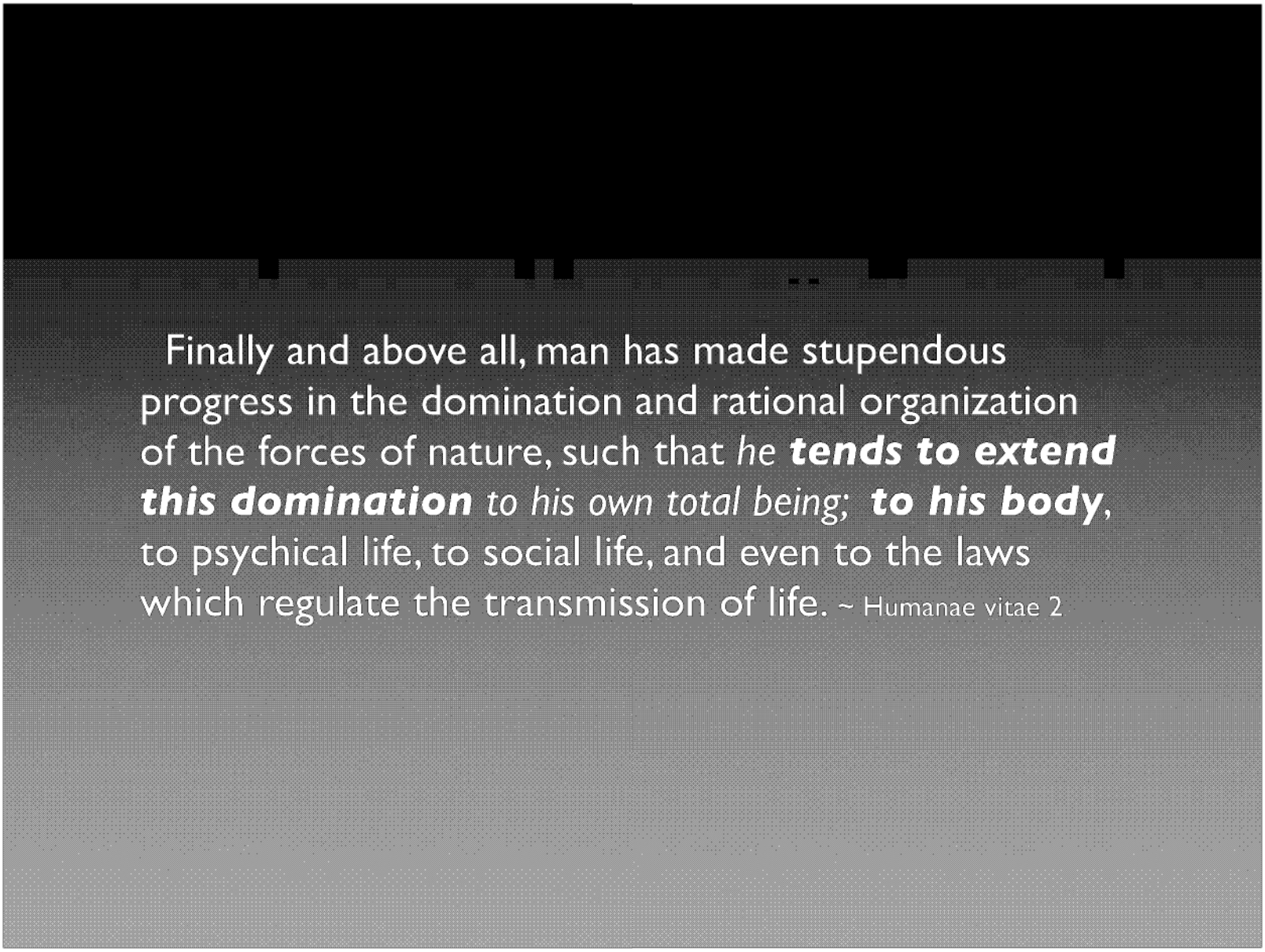
Transgender Surgery & Christian Anthropology

COURAGE

Deacon Patrick W. Lappert, MD
Birmingham in Alabama
256-303-8509

The Challenge

- "Male and female He created them" has been replaced by a confusion of exceptional cases.
  - Aggressive re-characterization of the nature of the human person.
    - Academia, entertainment, law, and even at church.


Finally and above all, man has made stupendous progress in the domination and rational organization of the forces of nature, such that *he* ***tends to extend this domination*** *to his own total being;* ***to his body***, to psychical life, to social life, and even to the laws which regulate the transmission of life. ~ Humanae vitae 2

The Challenge

- Understand the subject.
- Fluent in the language.
- No shocking surprises.
- Patient, but insisting upon the truth

Human Nature

- The human person: body and spirit together comprising a single nature.
  - By our nature we are made for *the other*.
  - Possessed of an intellect by which we can know the good, the true, and the beautiful.
  - Possessed of a will by which we can choose the good, the true, and the beautiful; *the moral life*.

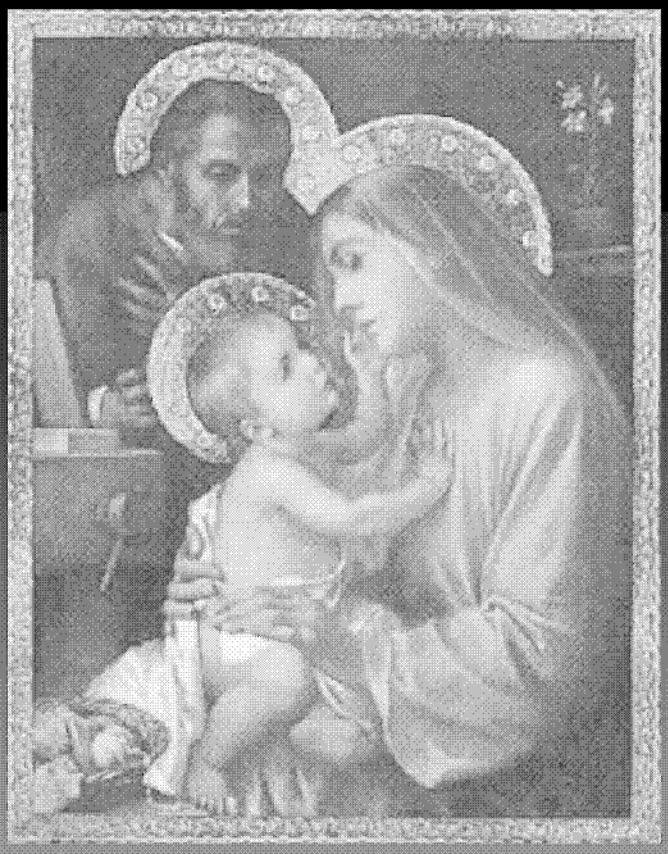
Human nature

- The moral life: built upon foundational truths.
  - Not arbitrary.
  - Not repressive, but rather affirming of the intrinsic dignity of the person.

What is a human being?

Human Nature

- The human body
  - The "reproductive system", and the fulness of humanity.
  - Dimorphism and complementarity.
  - The human family is in our nature.



The Image and Likeness of God

Human Nature

- Why must we consider first the *nature* of the human person?
  - Defines the "end" of medical and surgical care.
  - Human nature is that which is perfected by the life of grace.
  - That which is perfectly realized in the Incarnation of Jesus Christ.

Modern "Gender"

- A confusion of biology, psychology, and political science.
  - Use of biology to explain psychology
  - Political terms to explain the emotional life.
  - Shifting from biological determinism, to freedom of expression.
  - Language of "science" counterpoised with rejection of scientific evidence as "tool of oppression".

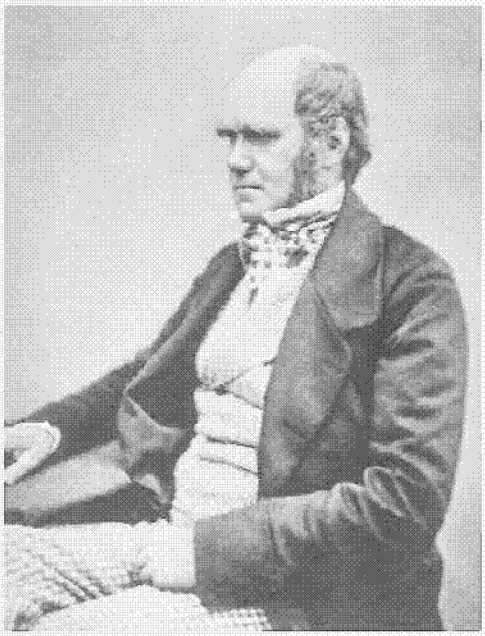
"Great Expectations"

- Science (separate from faith): A "pure" thing.
  - Deeper, "more evolved"
- Technology: domination of nature
  - Capability to modify the person in any way that "choice" demands.
- *Progress*: irresistible power of history leading to liberation from the oppression of the past. Transgenders no longer *"outcasts"*!

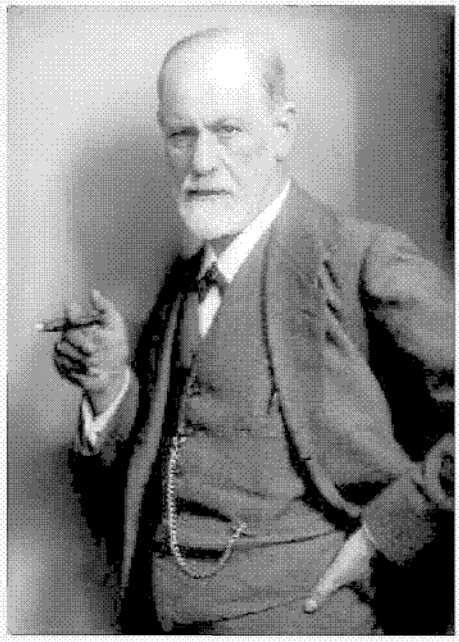
Transgender Language

- Outgrowth of "gender identity" principles.
- Relationship to the "sexual revolution".
  - The divorce of the two aspects of human sexual union.
  - Catholic anthropology vs. materialistic anthropology.

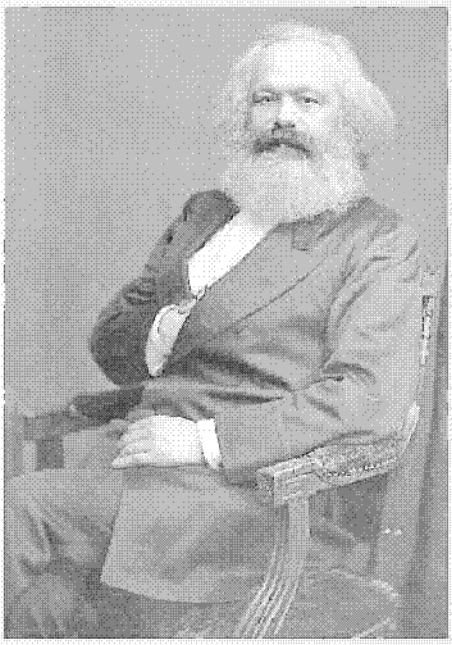
The 3 Stranded Rope



Charles Darwin



Sigmund Freud



Karl Marx

The human person is materially caused, materially driven, and his highest aim and happiness is materially defined.

Psychological Language

- Seeking to give a complete explanation of human behavior, without recourse to theology.
- Man as merely a particularly complicated animal.
  - Inherent drives common to animal life.
    - Assorted coping mechanisms to deal with the frustration of those drives. Some are pathological = neurosis / psychosis
- "The Pleasure Principle" ~ Freud

Psychological Language

- The search for "pleasure" is the central instinct:
- Sexual pleasure seen as the zenith.
- The central element in character development:
  - Sexual drive, and sexual experiences are seen as the prime movers in the development of personality and social capacities.
  - Good (pleasurable) experiences = good personality development.

Psychological Language

- Human sexuality is viewed from the standpoint of the *one person, their needs*, and the satisfaction of those needs.
- Any moral perspective on human sexuality seen as an arbitrary social restriction, or "*taboo*", without foundational truth.
- Belief that much psychopathology can be avoided by changing society, and ignoring moral questions.

Modern Sexuality Sumarized

(Lappert's Axioms)

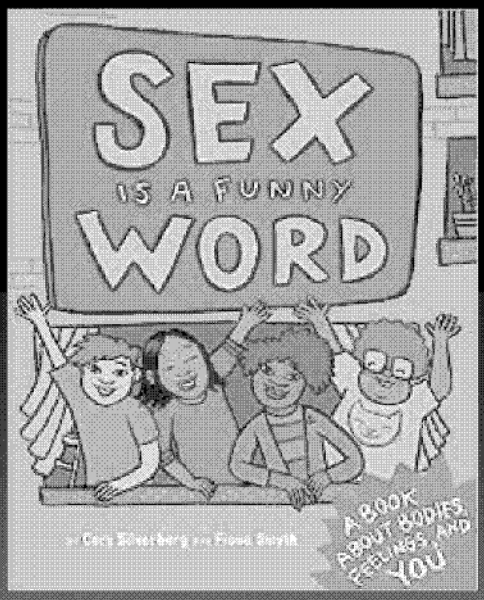
"Adult sexuality" is an endlessly variable, *personal* expression of *individuality*, the purpose of which is to produce joy for that person. It sometimes involves other people, and with alarming frequency, is known to produce other people.

Monday, November 5, 18

Modern Sexuality Sumarized

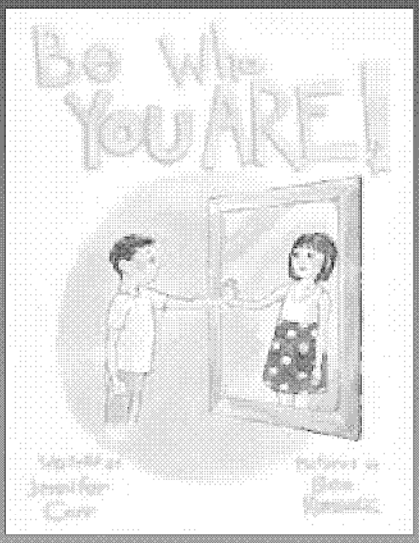
(Lappert's Axioms)

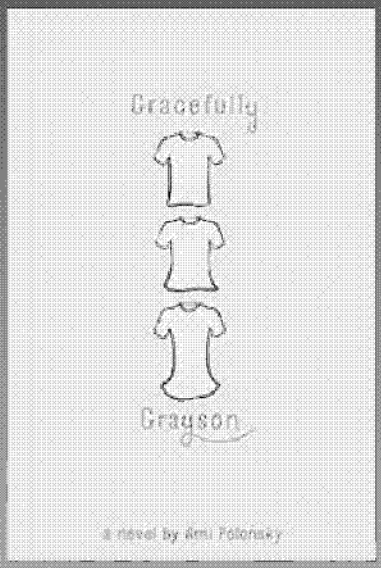
"Adult sexuality", is the developmental result of "childhood sexuality", just as adult language is the developmental result of childhood language. For this reason, it has become the habit of psychologists, and teachers to talk to children about "adult" sexual activity.



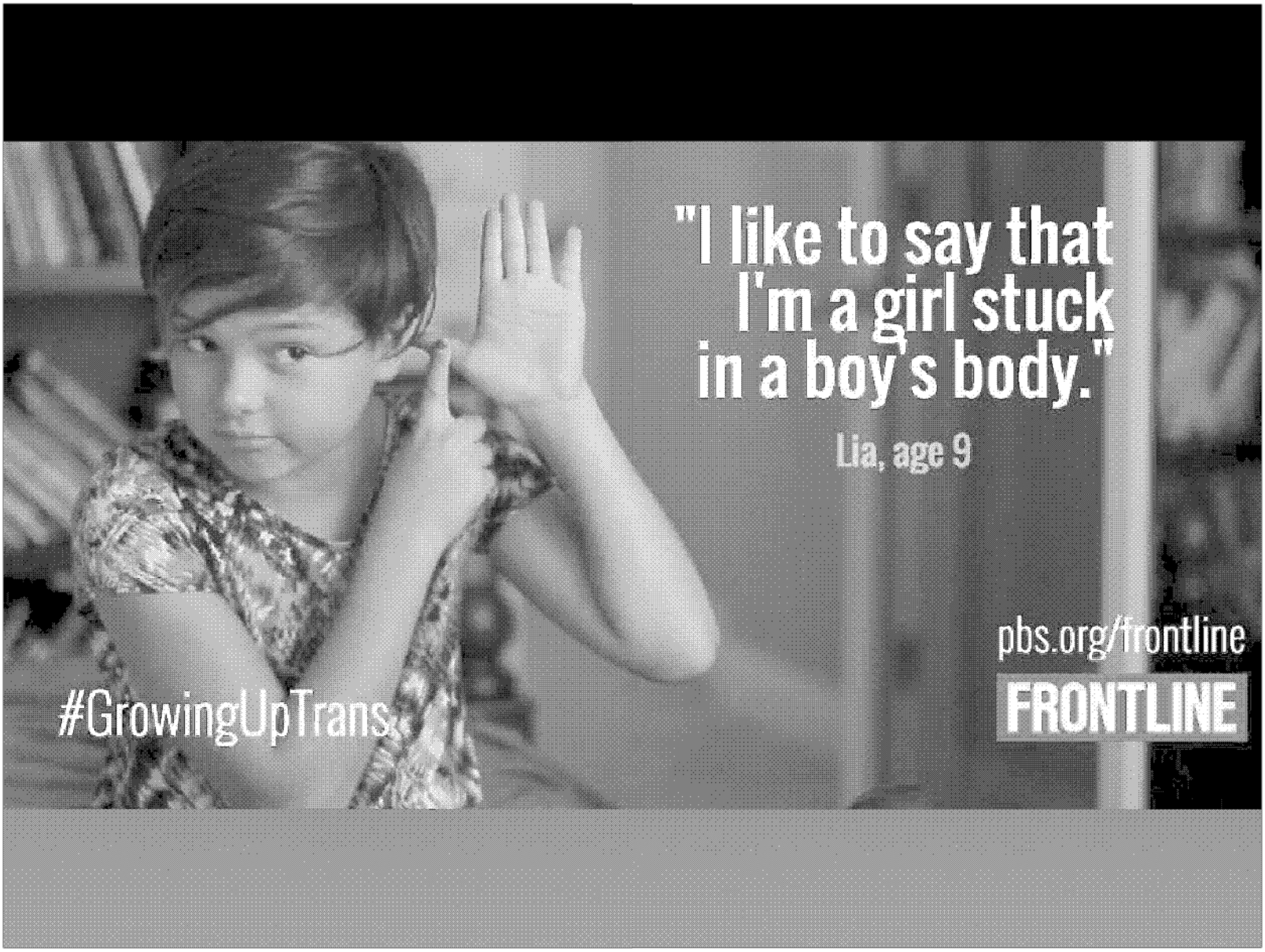
Recommended for
4- 8 y.o. children

Recommended for
7- 10 y.o. children





Recommended fo
9 y.o. children


"I like to say that I'm a girl stuck in a boy's body."
Lia, age 9
#GrowingUpTrans
pbs.org/frontline
FRONTLINE


Shaping the Conversation, &
Grooming a Generation
Make an impact with a Master's or PhD in Media Psychology
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I WANT TO KILL MYSELF...
A letter by a nine year old child...
Pages
Home
Jazz In The News
Who We Are
Main
Mission
1 2 3 4 5 6 7 8 9 10
Jazz Talks Dating With Barbara Walters 20/20 Update 2013
On a Special Edition of "20/20 Saturday," Jazz is a typical 11-year-old girl except for one thing,
she was born as a boy.

Making Life Better with Plastic Surgery

- When you "don't feel right, because something "doesn't look right".
  - Aesthetics or Reconstruction

Managing the Unseen Wound

- Profound sorrow, anger, anxiety.
- Seeking a material (aesthetic) explanation and remedy.

Body Dysmorphic Disorders

- Broad category of disorders of misperception about physical appearance
  - Anorexia
  - BDD/ Aesthetic surgery patients
  - Seeking limb amputations etc.

Science
Neurophilosophy

The science and ethics of voluntary amputation

Should amputation be offered as a treatment to people suffering from Body Integrity Identity Disorder?

Mo Costandi

Wednesday 30 May 2012 13.07 EDT

Body Dysmorphic Disorder

- Type of Obsessive- Compulsive Disorder
  - Depressive presentation
  - Social isolation. "Outcast"
- Treatment
  - SSRIs, Cognitive-Behavioral Therapy

Gender Dysphoria

- The unhappiness associated with the condition because:
  - "I don't look the way I know I should"
  - "The world does not accept me as I know I really am"
  - Social isolation due to:
    - Incongruous behavior
    - Secret life with associated shame.

Transgender

- Obsessive thinking with varying degrees of "dysphoria"
- Perceiving something that is not objectively there:
- Delusional thinking
- Errors of assumption

Criteria For Delusion

- Karl Jaspers in *General Psychopathology* (1913) The criteria are:
  - certainty (held with absolute conviction)
  - incorrigibility (not changeable by compelling counterargument or proof to the contrary)
  - impossibility or falsity of content (implausible, bizarre or patently untrue)

Co-morbidities:

- Alcohol and drug abuse, depression, incarceration, homelessness, high rate of suicidal ideation.
- Variable in Expression:
  - Private stress management by cross-dressing
  - Public, anonymous cross-sex persona, including sexual contact (sometimes prostitution).
- Transitioning in stages.

Biological Language

- Seeks to establish the material causation for the psychological instincts/ drives
  - Genetic, neuroanatomic, endocrine, etc.
- Seeks to understand the biological basis for "gender"
  - Sexual dimorphism/ polymorphism vs. social construct and learned behaviors

Biological Language

- "Evolution" words applied to human sexual functioning.
  - Searching for the "adaptive advantage" of fruitless sexual activity.
    - The problem of reconciling a Darwinian view of the human person, and a putative inherited behavior that is annoyingly maladaptive.
- The hope: genetic trait of animal life would silence moral arguments.

Biological Determinism
vs.
The Moral Life

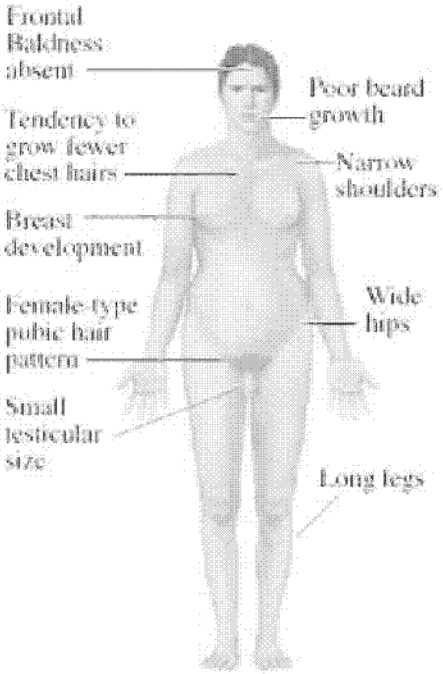
Biological Language

- "Isn't there a genetic explanation for "transgender?"
- "We learned in school that there are many genetically caused examples of people who are somewhere in between "man" and "woman".
  - Klinefelter's Syndrome
  - Androgen Insensitivity Syndrome (AIS)
- "That is what I have. I am "intersex", and I choose to be....."

Monday, November 5, 18

Biological "Intersex"
(Hermaphroditism)

Klinefelter syndrome



- Lower IQ than sibs
- Tall stature
- Poor muscle tone
- Reduced secondary sexual characteristics
- Gynaecomastia (male breasts)
- Small testes/infertility

Clinical Support for Intersex Persons

- Multidisciplinary: Pediatrics, Geneticists, Pediatric Surgery, Urology, Psychology.
  - Assessment: Including genital ambiguity, problems with voiding etc.
  - Planning based upon "sexual assignment".

Gender Assignment Surgery
(ambiguous genitalia)

- Seeks to remedy structural problems that interfere with voiding.
- Seeks to establish an arrangement of tissue that would make sexual intercourse possible.
- Make reproduction possible only in cases of structural problems of shape, size, and patency.

So...is it biological?

- Genetic, like Klinefelter or AIS? - -
  - No genetic marker, no mutation.
    - Normal male or female karyotype
- Hormonal?
  - Hormone levels entirely normal for age/sex matched controls
- Anatomical?
  - Brain scans: MRI, PET Scan etc.
    - No structure/ activity that mimics opposite sex.

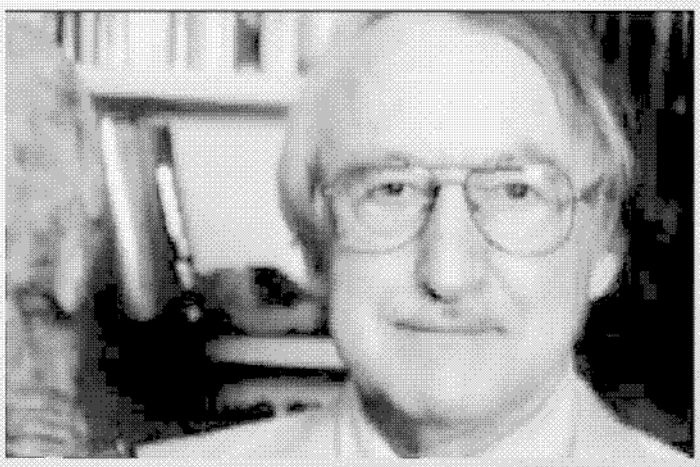
Nature v. Nurture

- Speculation among "sexologists" working in Intersex Clinics.
- "Gender Identity" is:
  - Malleable, or "fluid"
  - Socially determined
  - Typically produced by "repressive" processes

The "Science" of Gender

Dr. Harry Benjamin

Dr. Alfred Kinsey



Dr. John Money

Nature v. Nurture

- Difficulty in separating the vague and as yet not demonstrated genetic influences from social/ cultural influences.
- Database skewed by selection bias among genetically/ developmentally abnormal patients.

The Twin Study

- The "gold standard" for exclusion of biological determinism (genetic).
- Monozygotic twins raised in different social circumstances.

The Index Case

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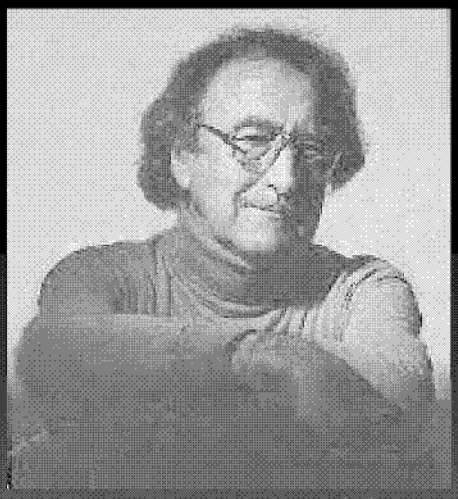
John Money, PhD

Sexologist in the Intersex Clinic
Johns Hopkins



-Convinces parents to raise their son as a girl.

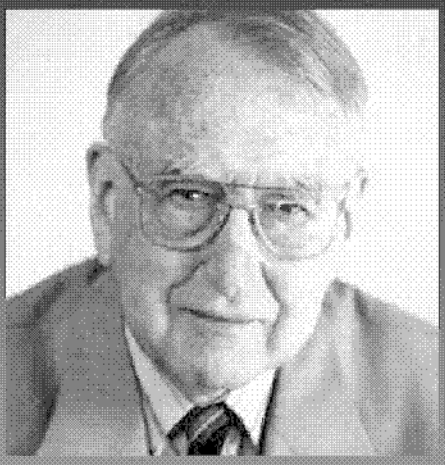
-"Socialize" strenuously as a girl

-Castrate, and administer estrogen

-Ultimately use reconstructive surgery to produce a neo-vagina.

Published Results in "Peer Reviewed Journals"

- Papers and presentations based upon "long term follow up".
- "Successful" in every way.
- Torrent of "scientific literature" re: gender roles / identity etc.
- Political dimension



John Money, PhD

The Reimer Twins

"Brenda" Reimer

"Scientific" Basis of Gender Politics

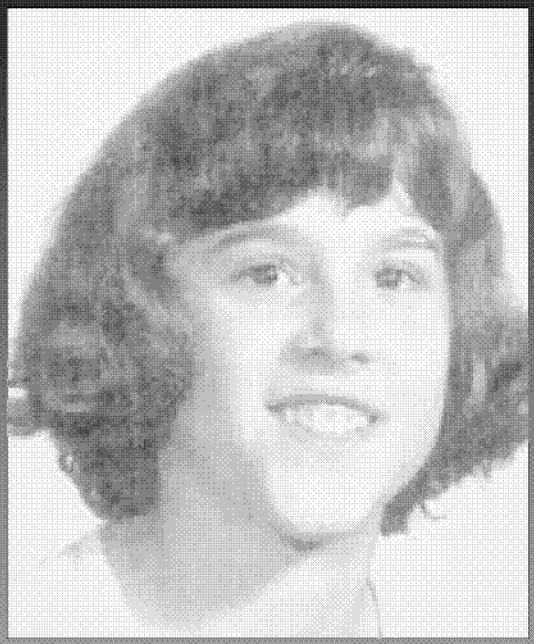
- Gender "assignment" is a process of repression.
- Forces persons into "binary" model of sexual expression.
- Sexual expression is a form of political expression.
- "Dr. Money's twin study proves this conclusively!"

Annual Visits to John Money, PhD

- Expected result further drives the intervention.
  - Photographs them as he "instructs" them in "sex-play".
  - Fear and anxiety

Truth

- Was eventually given the truth at age 15.
- Enthusiastically embraces boyhood.



The Experiment is Ended

- Hormone replacement due to castration.
- Surgical efforts
- The silence of John Money, PhD

David the Man

Husband, and adoptive father of three children

David the Man

- Battle with depression.
- Financial difficulties
- Wife leaves him after 14 years.
- Brother dies of drug overdose.

David Reimer 1965- 2004

The Nexus

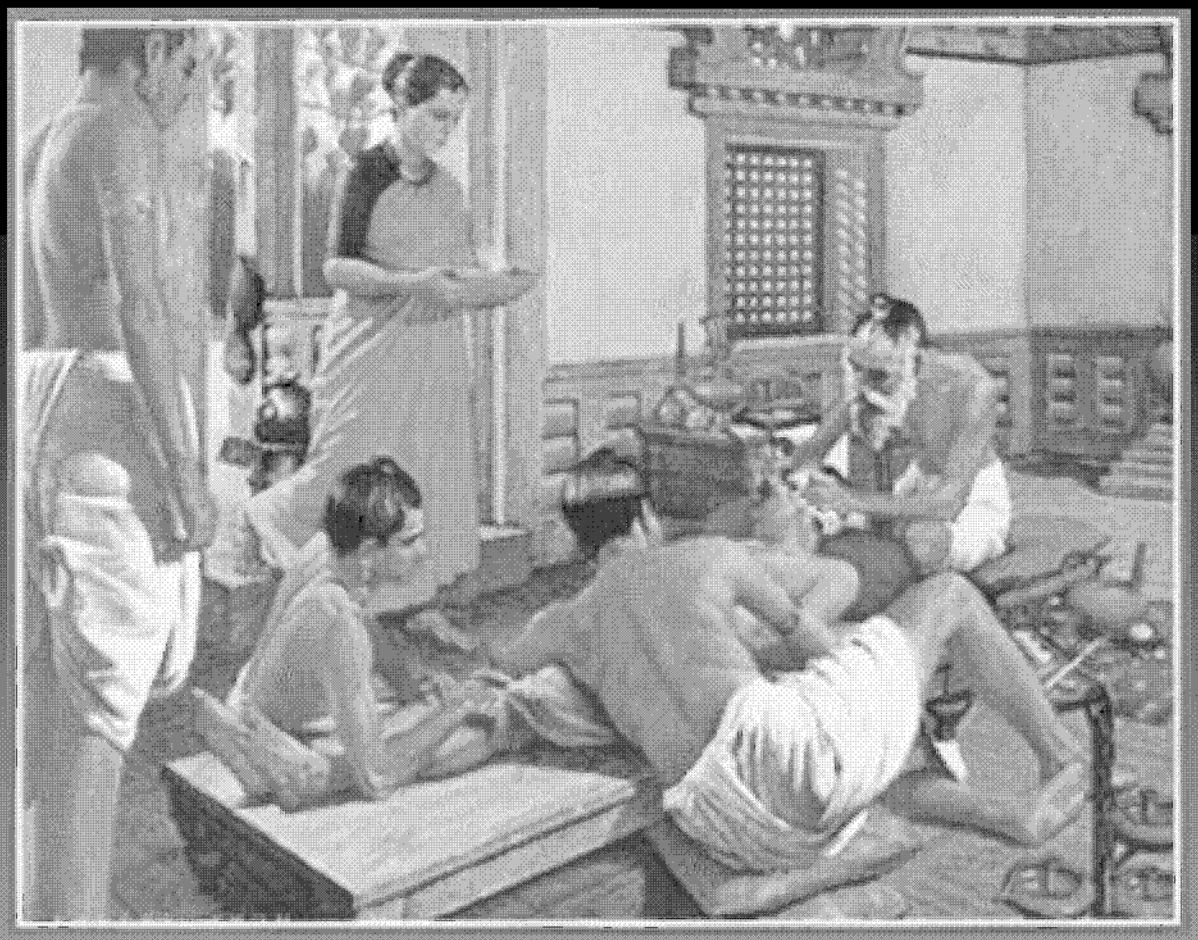
- Catholic Anthropology

&

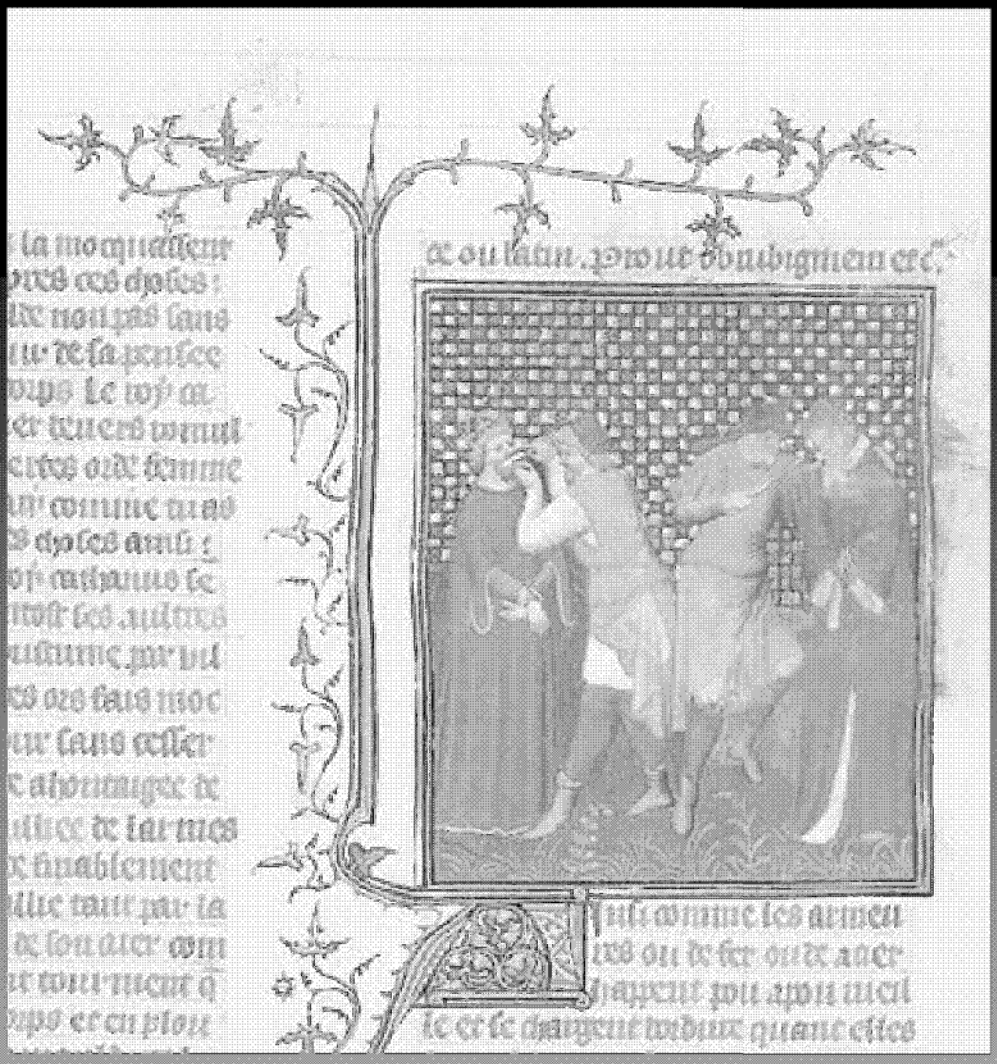
- Plastic/ Reconstructive Surgery

A Quick Review of Plastic Surgery

- The oldest form of surgery
  - Ear reconstruction- India
  - Nasal reconstruction- Italy
    - Restoration of the social outcast.

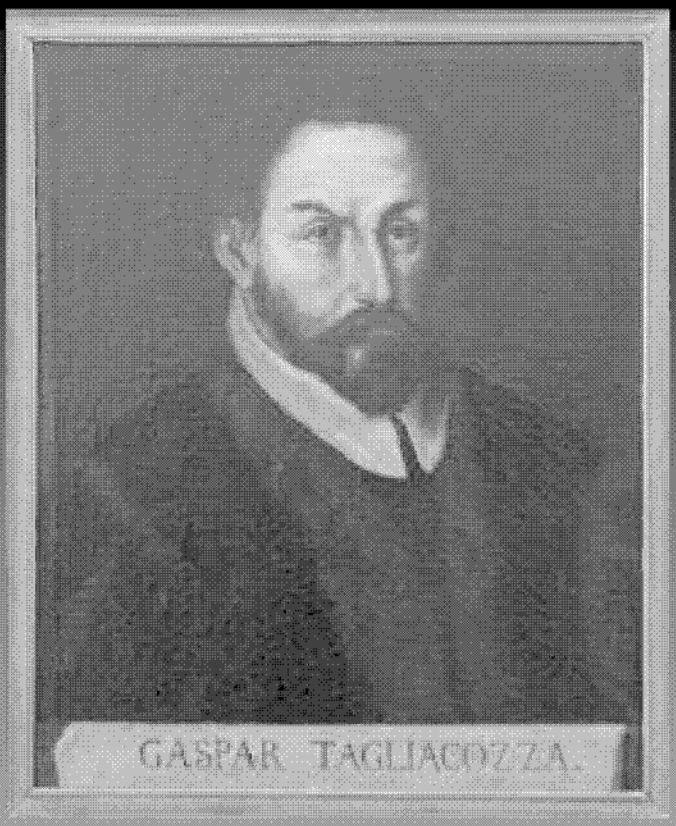


Sushruta- 7th Century BC India



The Mutillation of Emperor Justinian II "*Rhinotmetos*" 695 AD

History-



Plastic & Reconstructive Surgery

- Basic Principles:
  - Establishment or Restoration
    - Form and Function
  - Based upon a thorough understanding of the nature of the missing or injured part, and its relationship to the person.
  - Directed at the "perfection" of the nature of the human person.

Restoration

- Lost due to trauma, or surgical management of malignancy, infection, etc.
- Missing at birth, due to developmental anomalies, or in-utero events.

Missing from trauma

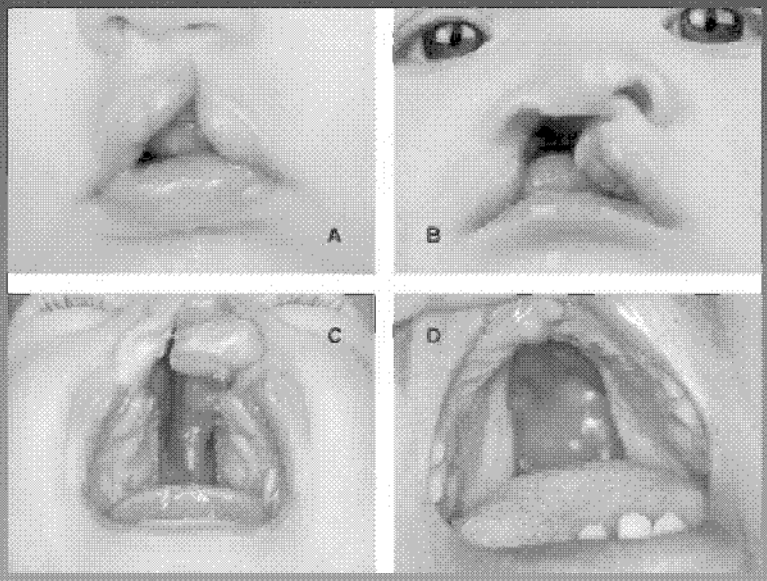
- Adult male: traumatic amputation of non-dominant thumb
- Needs prehensile, helping hand with good grip and fine "key pinch" functions.

Restoration

- Degree of functional restoration is dictated by the intrinsic natural function of the lost part
  - Hand:
    - Grasping, pinching, stabilizing, pushing, dominant vs. helping.
- Goals are tailored to the life of the patient

Congenital Cleft Palate

- Congenital malformation of the face with varying degrees of palatal integrity
- Feeding difficulty
- Speech problems
- Hearing problems
- Dental problems



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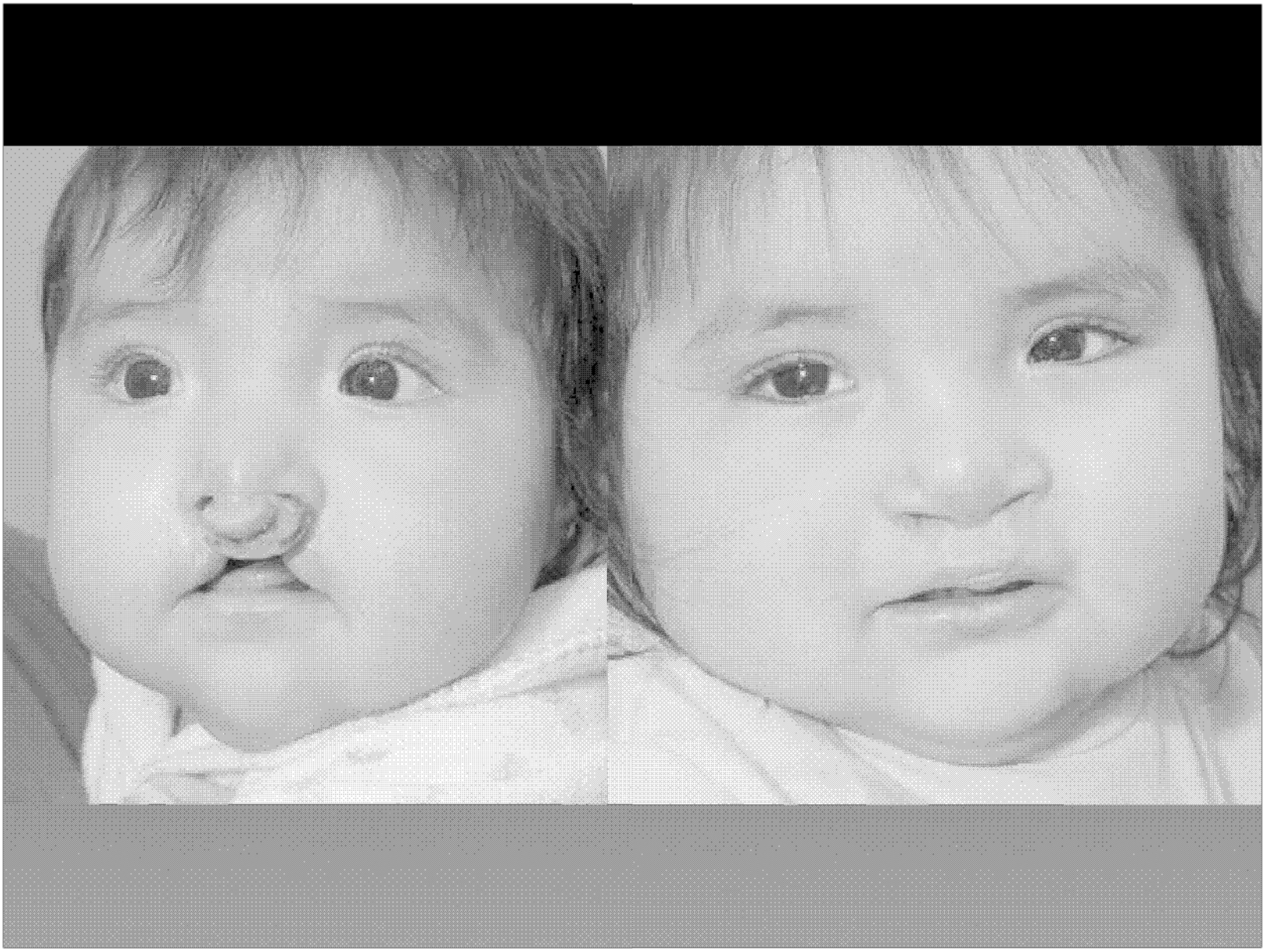

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The Cost of Reconstruction

- What will be lost, or compromised in the course of reconstruction?
  - "Donor defect".
  - Risk vs. benefit

"Transitioning"
(Progressive Expression of Condition)

- Obsessive thoughts leading to compulsive behaviors.
  - Interferes with living in the present moment.
  - Managing anxiety by unhealthy means.
  - Withdrawal, cross-sex dressing / acting in secret.

Transitioning

- Secretive, dysfunctional life leads to conflicts with family, and peers. Causes "dysphoria".
  - Psychological counseling: the broad and the narrow.
    - APA: Presumes that "gender non-conforming" is the essential and true nature of the person, therefore health is to be found in giving full expression to the subjectively perceived persona.

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Transitioning

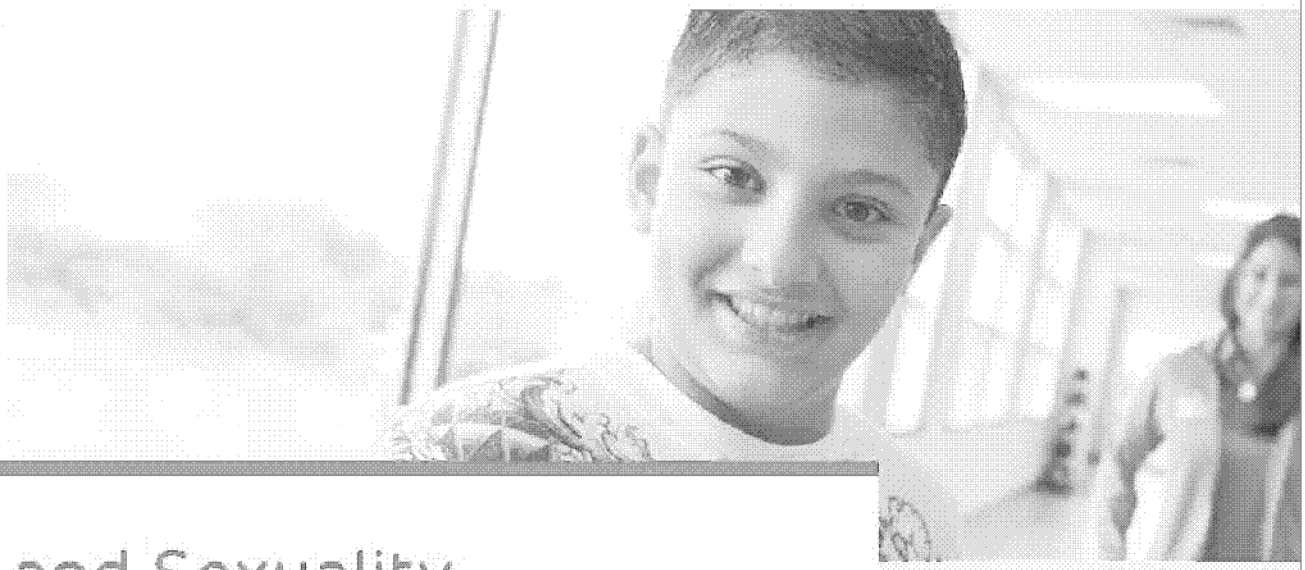
- Psychological Testing of "maleness and femaleness" (objective standard).
- Cross-sex identity development: clothing, name, persona.
- Endocrine management
  - Puberty blocking in pre-pubertal children; cross-sex hormones.
- Voice training, hair management.

Children's Hospital of Philadelphia

FIND A DOCTOR DEPARTMENTS CONDITIONS LOCATIONS YOUR VISIT Search...

Endocrinologist

Wilma C. Rossi, MD, MBE



Gender and Sexuality Development Clinic

CONTACT US

"Providers, patient and parents were ready to start hormone therapy with testosterone to help him align his body with who he had always known he was on the inside."

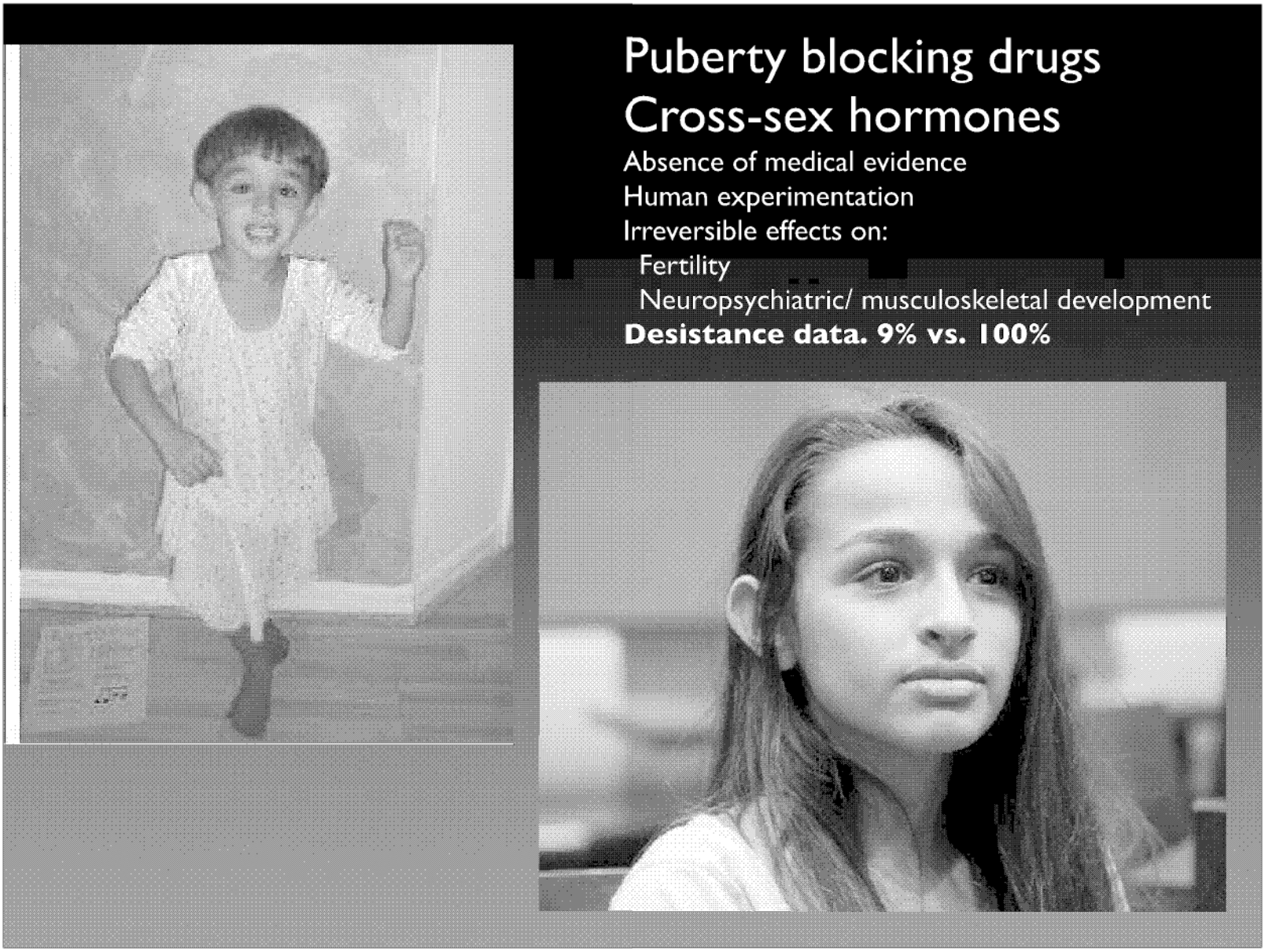
"While gender-related healthcare can be expensive in the short term, it is recognized to lead directly to improved health outcomes and long-term cost savings." ~CHOP


The Washington University
Transgender Center
at St. Louis Children's Hospital
Resources
About Us
What to Expect
"Your first visit to the Washington University Transgender Center at St Louis Children's Hospital will take about 60-90 minutes. You'll meet with one of our physicians for an informational discussion about age-appropriate therapies (depending on if the patient has started puberty.)You may be referred to a mental health provider for ongoing psychosocial support and assessment, if indicated.
Records from patient's primary care physicians should be sent prior to the first visit, so our doctors can review them for pre-existing conditions that may be affected by hormone therapy."
Karen Hamon, BSN, RN, CDE
Pronouns: She, Her, Hers
Casey E. Lofquest, MSN, RN, CPNP
Pronouns: She, Her, Hers

-Education regarding gender dysphoria and its possible treatments. Gender dysphoria refers to the distress that may accompany the incongruence between one's gender identity and one's assigned sex at birth.

-Administering pubertal blockers, which delay puberty and suppress unwanted and irreversible secondary sexual characteristics; for example, deepening of the voice and facial hair for transgender females and breast development for transgender males.

-Administering cross sex (gender-affirming) hormones that make a person's physical body match their gender identity. These may begin between the ages of 14 and 16 after patients meet readiness and eligibility criteria.



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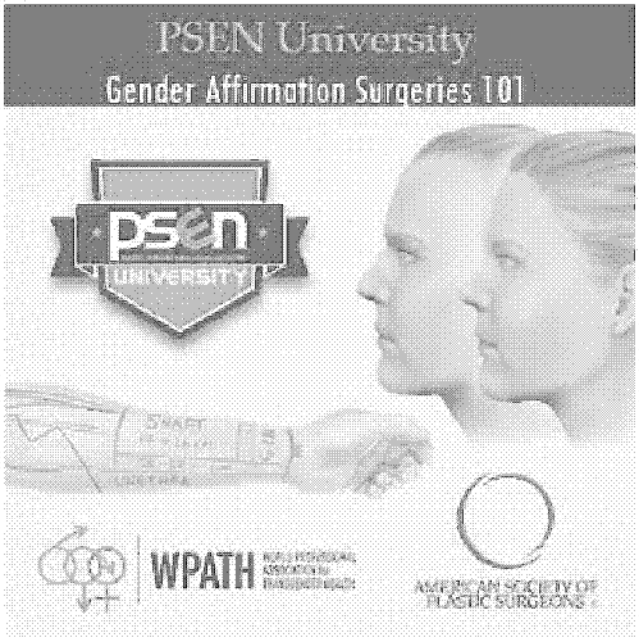
Transitioning

- Surgery
  - Secondary surgeries: hair, forehead, nose, jaw, neck, breast. Euphemism: "Top Surgery".
  - Definitive and final: castration and vaginoplasty, or hysterectomy / oophorectomy and phalloplasty. "Bottom Surgery".



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Product Description

Presented by: Loren Schechter, MD

About this Course :

This course is a live webinar CME course to be held on April 18th 2018 at 7pm cst. This course also includes the 2017 *PSEN University Gender Affirming 101 for Surgeons - Video Series* which features top webinar recordings from p...

The Surgery

- Top surgery is largely reversible.
- Bottom surgery is irreversible. Fully functioning genital organs are mutilated in order to produce a counterfeit form.
  - Form has primacy
  - Function is destroyed (donor morbidity)

Grave Matter

- Willful sterilization destroys the procreative aspect.
- Simultaneous degradation of the unitive aspect.
  - major loss of sensory apparatus, and persistence of the native neural "map" in the brain.

Grave Matter

- "Banking" of ova and sperm for future in vitro and proxy pregnancies.
  - Objectification of children; the "right to a child".
  - Link between "reproductive technology", & "gender affirmation medicine".

Plea For Mercy

- Because self-identified transgender persons suffer greatly
  - High rate of substance abuse.
  - High rate of homelessness.
  - High rate of suicide attempt:
    - 18yo - 55yo steady at approx. 40% risk.

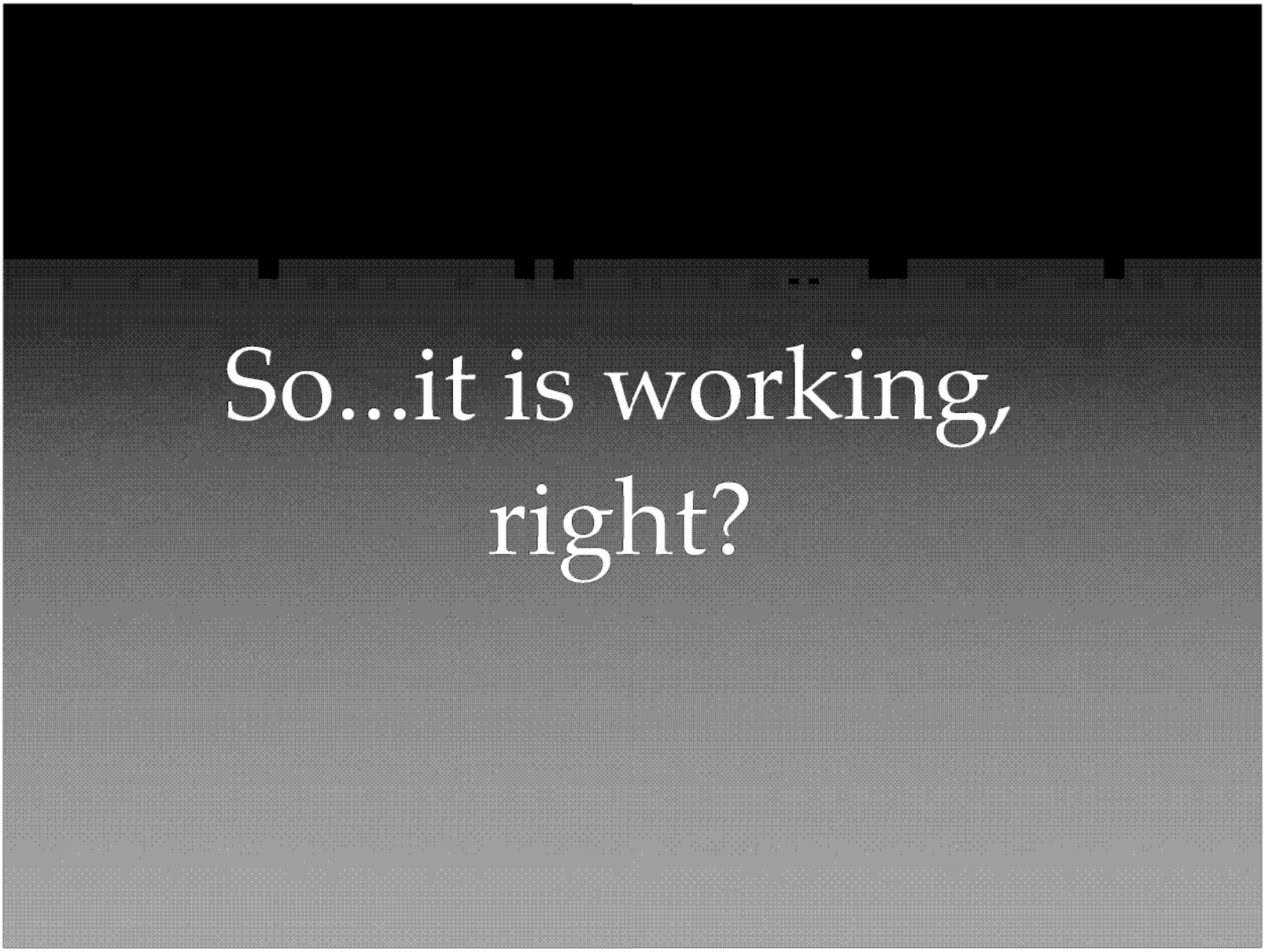
"The only way I will rest in peace is if one day transgender people aren't treated the way I was, they're treated like humans, with valid feelings and human rights. Gender needs to be taught about in schools, the earlier the better. My death needs to mean something" - Leelah Alcorn

UK: 48% of trans people under 26 attempt suicide (2014)
US: 41% of trans people attempt suicide (2014)
Canada: 43% of trans people attempt suicide (2012)

The Appeal From Sentiment

Compulsion To "Mercy"

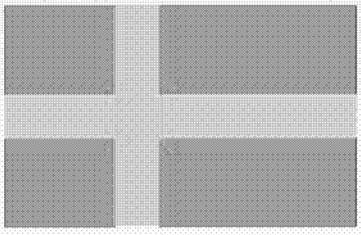
- "Everything must be done to help these persons live their new identity"
  - Home, school, work
    - Names, pronouns, bathrooms, etc.
    - Health insurance directed toward transitioning, not treatment of OCD.
    - Attempts to diagnose and treat are labeled "hate speech".


So...it is working, right?

Evidence Based Medicine

- Over the years, many small retrospective studies.
- Inconsistent criteria for inclusion of patients and the selection of controls
- Much self-selection bias; high drop out rate.
- Small samples and short follow-up
- Varying degrees of "success". Ranging from "improved in gender dysphoria" to continued elevated psychiatric hospitalization and suicide attempts and death.

The Swedish Study



- Population cohort study over 30 year period.
  - Age and sex matched cohort.
  - Data from consistent national database.
    - Standardized reporting for identity change, hospitalization, psychiatric diagnosis and co-morbidities, and mortality.

The Swedish Study

Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden

Cecilia Dhejne,[1] Paul Lichtenstein,[2] Marcus Boman,[2] Anna L. V. Johansson,[2] Niklas Långström,[2,3] and Mikael Landén[1,2,4,*]

James Scott, Editor

Abstract Go to: Go to:

Context

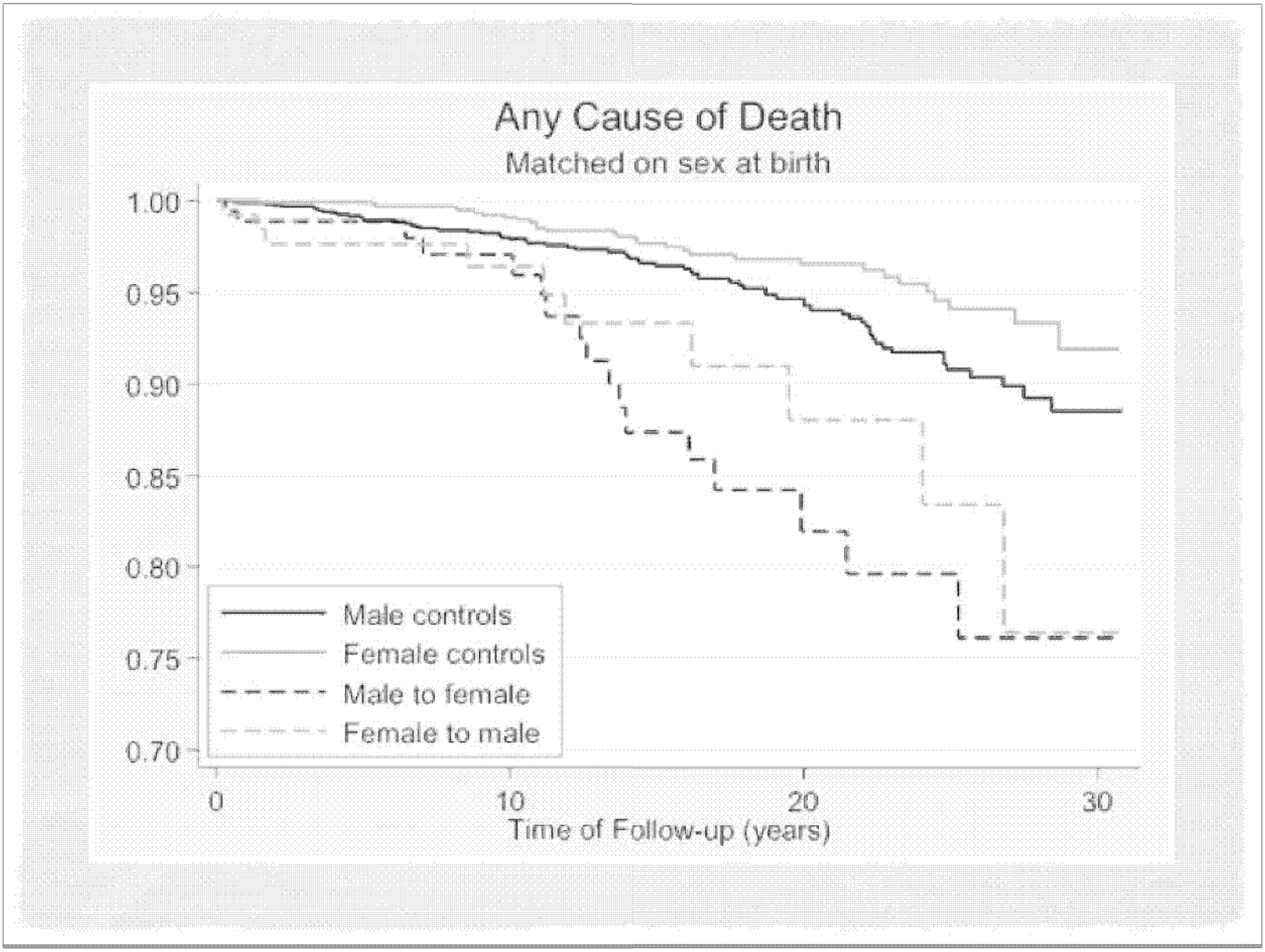
The treatment for transsexualism is sex reassignment, including hormonal treatment and surgery aimed at making the person's body as congruent with the opposite sex as possible. There is a dearth of long term, follow-up studies after sex reassignment.

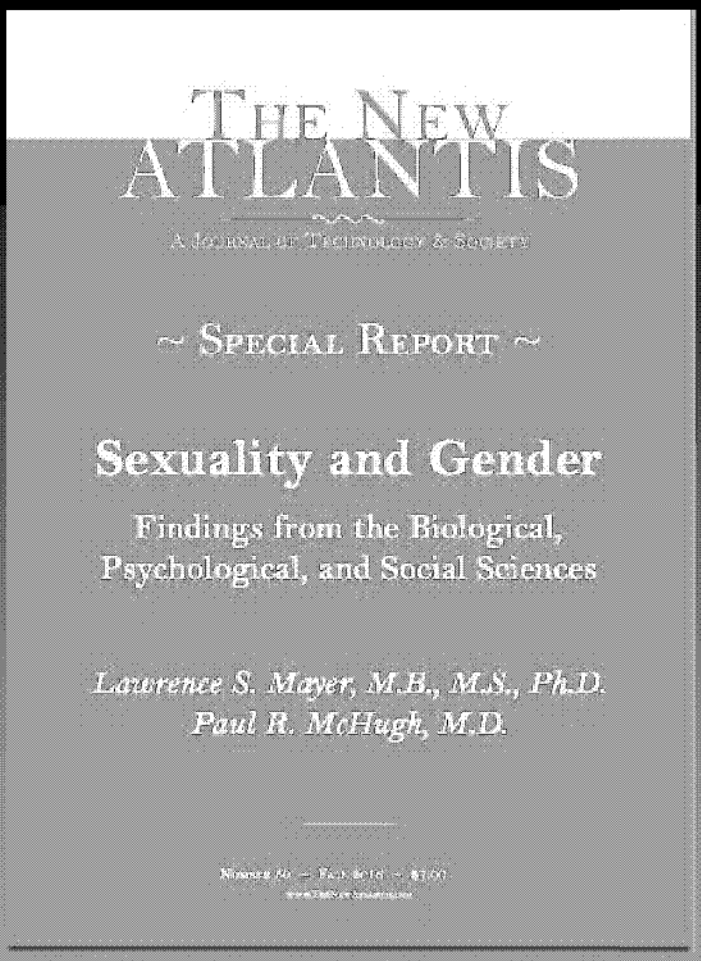
Swedish Study

Table S1. Risk of various outcomes in sex-reassigned subjects in Sweden compared to population controls matched for birth year and *birth sex*.

		Crude hazard ratio (95% CI)			Adjusted* hazard ratio (95% CI)		
Outcome	**No. of events (male-to-female/ female-to-male)**	**All sex-reassignment persons (N=324)**	**Male-to-female only (N=191)**	**Female-to-male only (N=133)**	**All sex-reassignment persons (N=324)**	**Male-to-female only (N=191)**	**Female-to-male only (N=133)**
Any death	27 (17/10)	2.9 (1.9-4.5)	2.6 (1.5-4.5)	3.7 (1.8-7.7)	2.8 (1.8-4.3)	2.4 (1.4-4.1)	3.8 (1.8-7.9)
Death by suicide	10 (6/4)	19.1 (6.5-55.9)	13.9 (3.9-49.6)	40.0 (4.5-357.9)	N/A	N/A	N/A
Death by cardiovascular disease	9 (6/3)	2.6 (1.2-5.4)	2.3 (0.9-5.7)	3.2 (0.9-11.9)	N/A	N/A	N/A
Death by neoplasm	8 (4/4)	2.1 (1.0-4.6)	1.7 (0.6-4.9)	2.8 (0.9-8.5)	N/A	N/A	N/A
Any psychiatric hospitalisation‡	64 (43/21)	4.2 (3.1-5.6)	4.7 (3.2-6.7)	3.4 (2.1-5.6)	2.8 (2.0-3.9)	3.2 (2.1-4.9)	2.2 (1.3-4.0)
Substance misuse	22 (14/8)	3.0 (1.9-4.9)	2.8 (1.6-5.1)	3.5 (1.6-7.8)	1.7 (1.0-3.1)	1.5 (0.7-3.1)	2.3 (0.9-5.8)
Suicide attempt	29 (22/7)	7.6 (4.7-12.4)	15.4 (7.9-30.2)	2.9 (1.3-6.8)	4.9 (2.9-8.5)	10.4 (4.9-22.1)	1.9 (0.7-4.8)
Any accident	32 (19/13)	1.6 (1.1-2.3)	1.4 (0.9-2.2)	1.9 (1.0-3.4)	1.4 (1.0-2.1)	1.2 (0.7-2.0)	1.8 (1.0-3.3)
Any crime	60 (33/27)	1.9 (1.4-2.5)	1.2 (0.8-1.7)	5.6 (3.5-9.1)	1.3 (1.0-1.8)	0.8 (0.5-1.2)	4.1 (2.5-6.9)
Violent crime	14 (8/6)	2.7 (1.5-4.9)	1.8 (0.8-3.7)	9.9 (3.2-30.7)	1.5 (0.8-3.0)	0.8 (0.3-2.1)	7.2 (2.1-24.4)

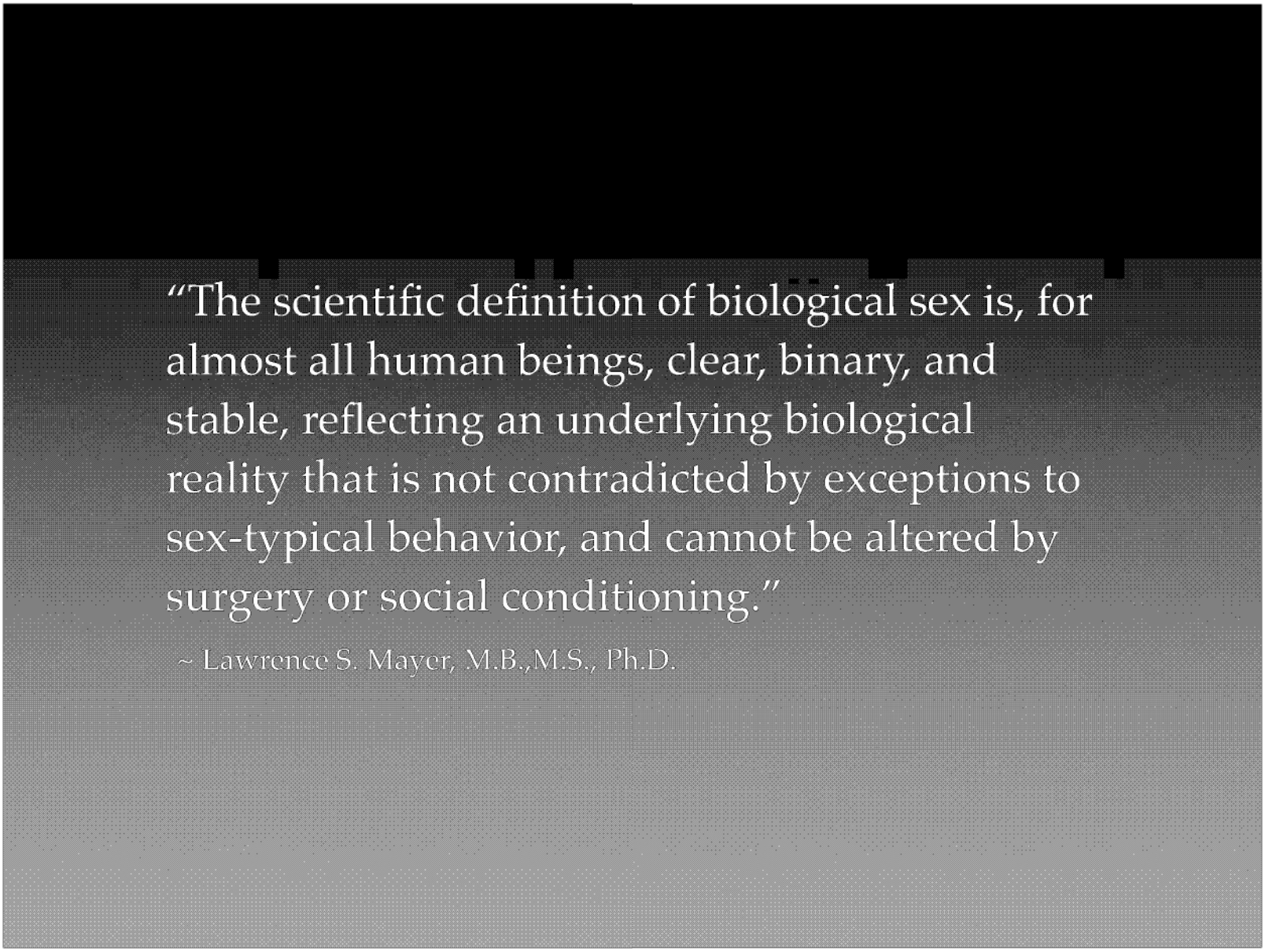
Notes: N/A Not applicable due to sparse data. *Adjusted for immigrant status and psychiatric morbidity up to baseline. ‡ Hospitalisations for gender identity disorder were excluded.


Any Cause of Death
Matched on sex at birth
1.00
0.95
0.90
0.85
0.80
0.75
0.70
Male controls
Female controls
Male to female
Female to male
0
10
20
30
Time of Follow-up (years)



A study of the studies.

-Examination of 500 papers in: epidemiology, genetics, endocrinology, psychiatry, neuroscience, embryology, and pediatrics


"The scientific definition of biological sex is, for almost all human beings, clear, binary, and stable, reflecting an underlying biological reality that is not contradicted by exceptions to sex-typical behavior, and cannot be altered by surgery or social conditioning."
~ Lawrence S. Mayer, M.B.,M.S., Ph.D.

"The notion that a two-year-old, having expressed thoughts or behaviors identified with the opposite sex, can be labeled for life as transgender has absolutely no support in science.

Indeed, it is iniquitous to believe that all children who have gender-atypical thoughts or behavior at some point in their development, particularly before puberty, should be encouraged to become transgender."

~Lawrence S. Mayer, M.B.,M.S., Ph.D.

Monday, November 5, 18

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RESEARCH ARTICLE

Rapid-onset gender dysphoria in adolescents and young adults: A study of parental reports

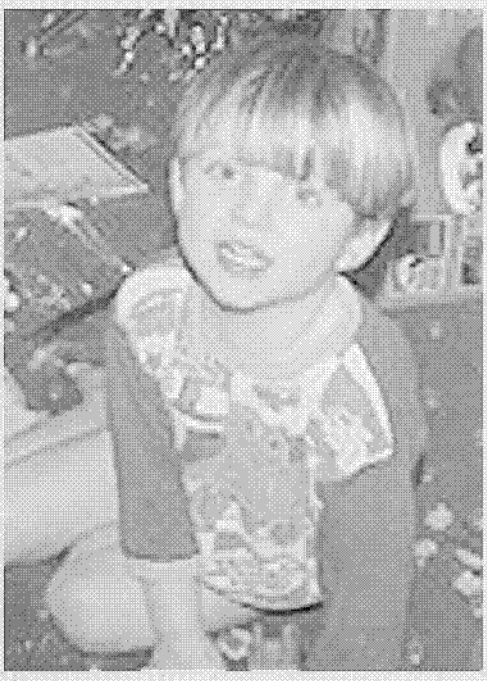
Lisa Littman

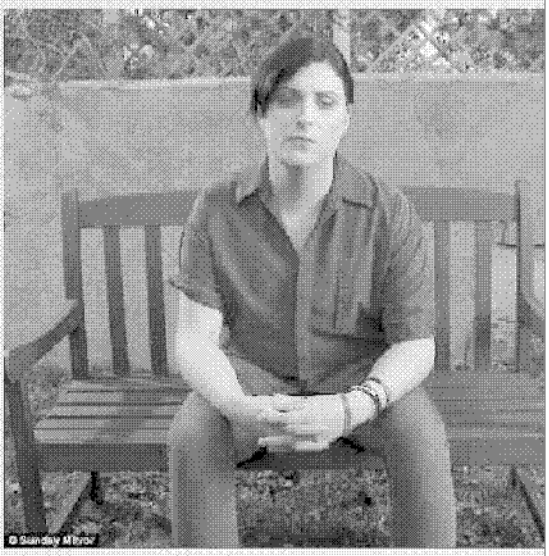
Published: August 16, 2018 • https://doi.org/10.1371/journal.pone.0202330

[redacted]

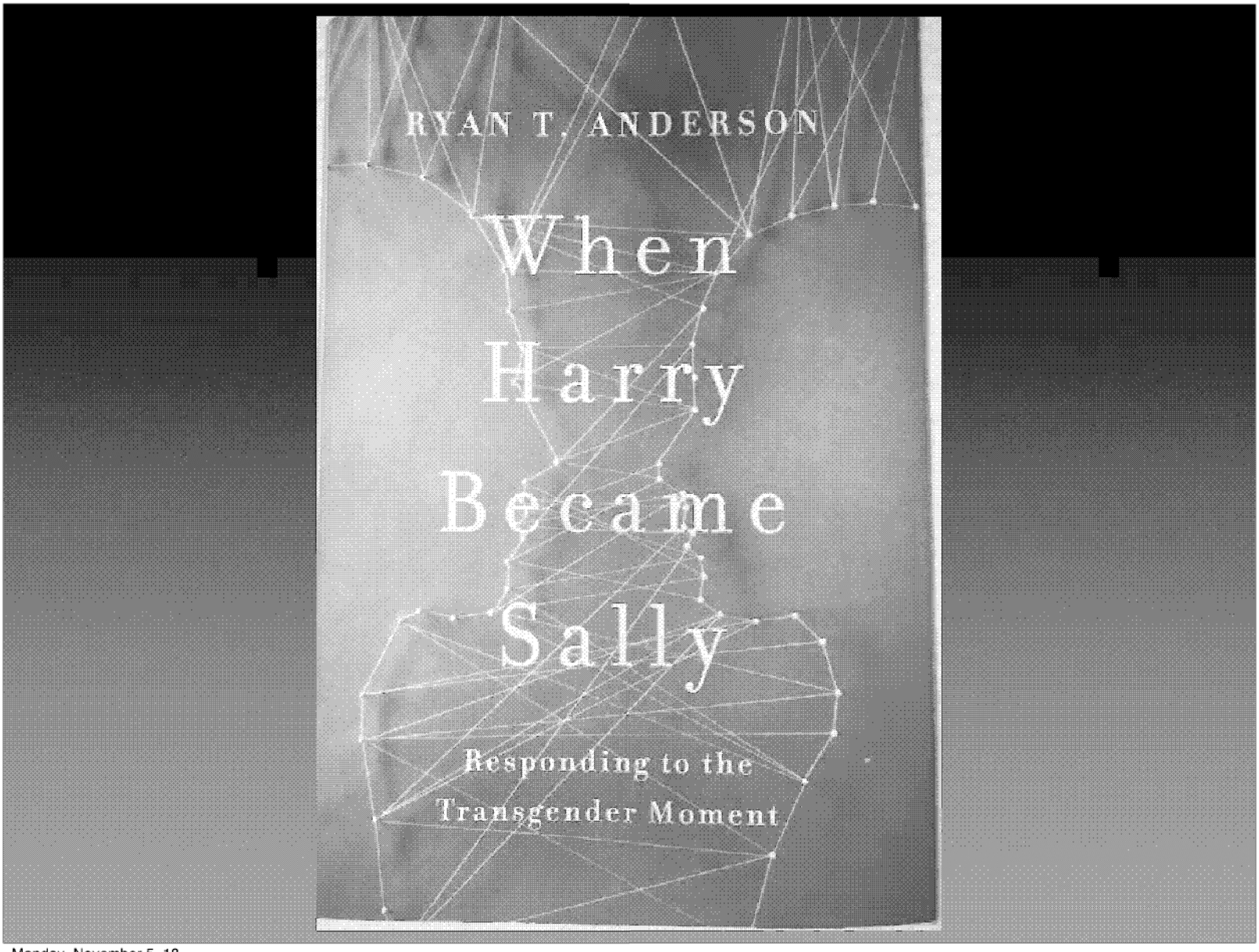
Instructions on lying	• "TL;DR find out what they want to hear if they're gonna give you T and then tell them just that. It's about getting treatment, not about being true to those around you. It's not their business and a lot of time doctors will screw stuff up for you."[a] • "…Get a story ready in your head, and as suggested keep the lie to a minimum. And only for stuff that can't be verified. Like how you were feeling, but was too afraid to tell anyone including your family."[b] • "I'd also look up the DSM for the diagnostic criteria for transgender and make sure your story fits it, assuming your psych follows it."[c]
Urgency to transition	• "…If you don't do it when you are young. You'll be miserable and unhappy with your body for the rest of your life."[d]
Vague and nonspecific symptoms called signs of GD	• "Signs of indirect gender dysphoria: 1. Continual difficulty with simply getting through the day. 2. A sense of misalignment, disconnect, or estrangement from your own emotions. 3. A feeling of just going through the motions in everyday life, as if you're always reading from a script. 4. A seeming pointlessness to your life, and no sense of any real meaning or ultimate purpose. 5. Knowing you're somehow different from everyone else, and wishing you could be normal like them…"[e]
	a. https://www.reddit.com/r/asktransgender/comments/2nt8gi/having_a_psych_eval_soon/?bottom-comments b. https://www.reddit.com/r/asktransgender/comments/4ug76r/is_it_best_to_be_completely_honest_or_lie_a/ c. https://www.reddit.com/r/asktransgender/comments/4hlwar/what_things_should_i_never_tell_my_psychologist/ d. https://www.reddit.com/r/asktransgender/comments/3qn9t4/at_the_final_stage_of_questioning_need_some/?bottom-comments e. https://transgendertoensurvivalguide.tumblr.com/post/162001441046/that-was-dysphoria-6-signs-and-symptoms-of

Britain's Youngest Patient





Although Ms Cooper underwent a thorough psychological assessment and counseling at Hull Royal Infirmary prior to starting her sex change therapy she has suffered such torment living as a woman that she has tried to commit suicide twice.



Monday, November 5, 18

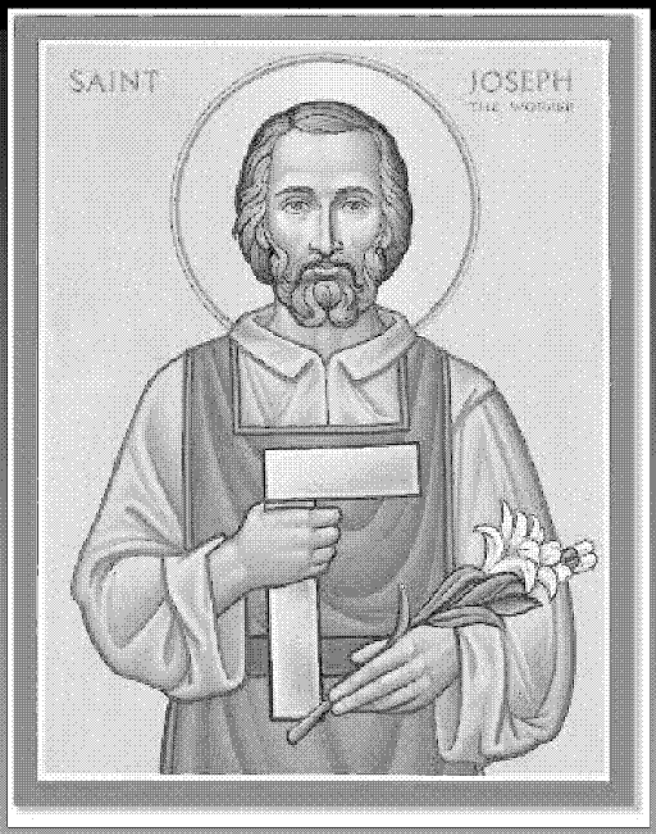
Summary

- Not a new condition. OCD w/ BDD.
- Psychological/ Spiritual wound.
- Ordinary childhood role playing being sexualized/treated with puberty blockers!
- In many cases, permanently mutilating surgeries.
- A huge engine of public opinion, policy, and enforcement aimed at the family, and the church.

- Transgender persons are at high risk for abuse and self harm.
- Care must be based in a true human anthropology.
- Missteps must be anticipated
- Protection from "blind guides".
- Fluency in the language, and knowledge about the erroneous science will permit witnessing with patience and fraternal love.

Let Us Pray

God our Father,
creator and ruler of the universe, in every age you call man to develop and use his gifts for the good of others.
With Saint Joseph as our example and guide, help us to do the work you have asked and come to the rewards you have promised.
We ask this through our Lord Jesus Christ, your Son, who lives and reigns with you and the Holy Spirit, one God, for ever and ever.
Amen




VMFA-451
MARINES

Monday, November 5, 18

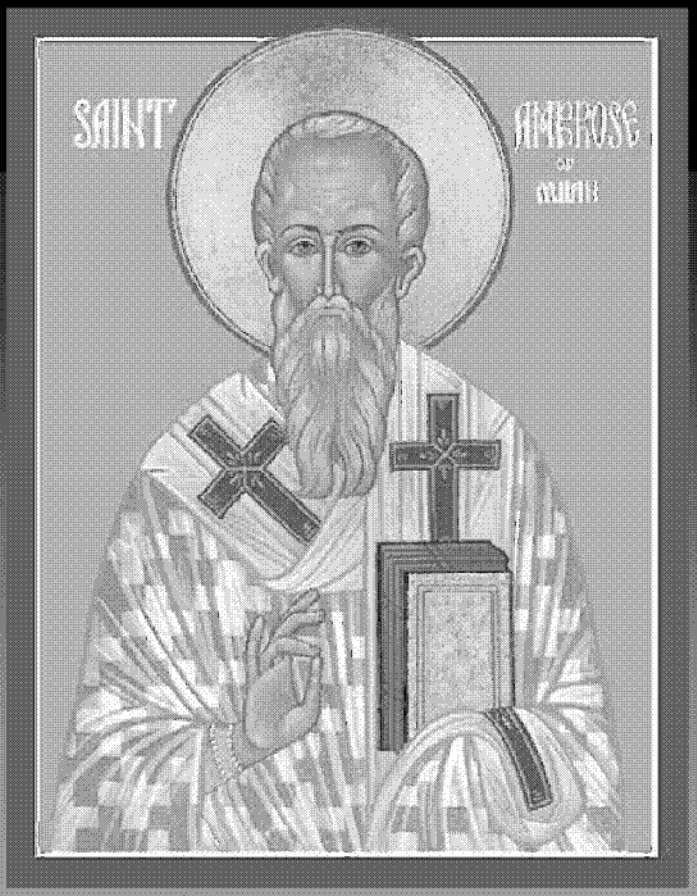
Let Us Pray

Oh glorious martyrs of Christ, Saints Cosmas and Damian, you gave your lives for the love of God, benefiting your fellow man, and crowning your martyrdom with an open and loyal profession of your faith. You taught us to love God above all things, and to love our fellow man as ourselves, professing always, and without fear, the religion of Jesus.Augmenting amongst the faithful populace many miracles, you are glorious indeed. Through your intercession, which brings about deliverance of these miracles, we pray to you for your aid in all things. May your patronage never be far from us in the illness of our body and soul.

Oh great protectors, Saints Cosmas and Damian, assist us with your love and free us from all evils. Amen

Let Us Pray

Lord,
you made Saint Ambrose an outstanding teacher of the Catholic faith and gave him the courage of an apostle.
Raise up in your Church more leaders after your own heart, to guide us with courage and wisdom.
We ask this through our Lord Jesus Christ, your Son, who lives nad reigns with you and the Holy Spirit, one God, for ever and ever.
Amen.



Let us Pray

Almighty God, whose deacon Vincent, upheld by you, was not terrified by threats nor overcome by torments: Strengthen us to endure all adversity with invincible and steadfast faith; through Jesus Christ our Lord, who lives and reigns with you and the Holy Spirit, one God, for ever and ever.
Amen

St. Vincent of Saragossa

Let Us Pray

□□

殉教

God our Father,
source of strength for all your saints; you led Paul Miki and his companions
through the suffering of the cross to the joy of eternal life.
May their prayers give us courage to be loyal until death in professing our faith.
Through Jesus Christ, your Son,who lives and reigns with you
in the unity of the Holy Spirit, one God, for ever and ever.
Amen.

Let Us Pray

O God, almighty Father, you have consecrated us to the work of bringing our brothers and sisters to the life of grace; there to grow in that perfection of our nature which leads to eternal life.
Grant unto us ,O Lord, an unswerving devotion to the service of those suffering from wounds that keep them from that fullness of life which you intend for all of us.
Do not allow us to be mislead by the deceptions of a world that has lost sight of you, and help us to follow in the obedience of your Son, Jesus Christ, who lives and reigns with you in the unity of the Holy Spirit, One God, for ever, and ever.
Amen

Monday, November 5, 18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Reaching Out to Those with Sex Change Regret
This is the book you need in your hands
Paper Genders

The Challenge

- Evangelizing people who are being relentlessly mislead concerning human sexuality.
  - In need of catechesis at all levels.
  - In need of pastoral sensitivity to particular wounds.
  - In need of the sacraments.

B. John Henry Cardinal Newman

Monday, November 5, 18

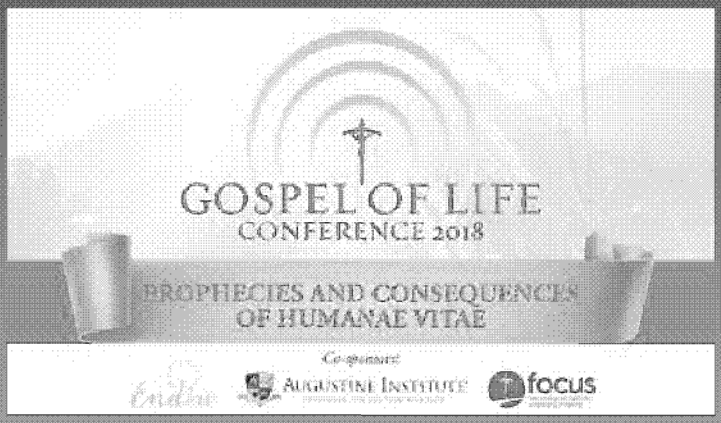
Plea For Mercy

- For The Children!
- To prevent suicide!

Let Us Pray

O Mary, Powerful Virgin; thou art the mighty and glorious protector of the Church; Thou art the marvelous **Help of Christians**; Thou art terrible as an army in battle array; Thou alone hast destroyed every heresy in the whole world. In the midst of our struggles, our anguish, and our distress, defend us from the power of the enemy, and at the hour of death, receive our souls into Paradise.
Amen

Transgender Surgery and Christian Anthropology



COURAGE

Deacon Patrick W. Lappert, MD
Birmingham in Alabama
256-303-8509

AMERICAN PSYCHIATRIC ASSOCIATION

What is Psychiatry?

Psychiatry is the branch of medicine focused on the diagnosis, treatment and prevention of mental, emotional and behavioral disorders.

A psychiatrist is a medical doctor (an M.D. or D.O.) who specializes in mental health, including substance use disorders. Psychiatrists are qualified to assess both the mental and physical aspects of psychological problems.

People seek psychiatric help for many reasons. The problems can be sudden, such as a panic attack, frightening hallucinations, thoughts of suicide, or hearing "voices." Or they may be more long-term, such as feelings of sadness, hopelessness, or anxiousness that never seem to lift or problems functioning, causing everyday life to feel distorted or out of control.

Diagnosing Patients

Because they are physicians, psychiatrists can order or perform a full range of medical laboratory and psychological tests which, combined with discussions with patients, help provide a picture of a patient's physical and mental state. Their education and clinical training equip them to understand the complex relationship between emotional and other medical illnesses and the relationships with genetics and family history, to evaluate medical and psychological data, to make a diagnosis, and to work with patients to develop treatment plans.

Specific diagnoses are based on criteria established in APA's *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5*), which contains descriptions, symptoms and other criteria for diagnosing mental disorders.

What Treatments Do Psychiatrists Use?

Psychiatrists use a variety of treatments – including various forms of talk therapy, medications, psychosocial interventions and other treatments (such as electroconvulsive therapy or ECT), depending on the needs of each patient.

Pl. Trial Ex. 126

Psychotherapy, sometimes called talk therapy, is a treatment that involves a talking relationship between a therapist and patient. It can be used to treat a broad variety of mental disorders and emotional difficulties. The goal of psychotherapy is to eliminate or control disabling or troubling symptoms so the patient can function better. Depending on the extent of the problem, treatment may take just a few sessions over a week or two or may take many sessions over a period of years. Psychotherapy can be done individually, as a couple, with a family, or in a group.

There are many forms of psychotherapy. There are psychotherapies that help patients change behaviors or thought patterns, psychotherapies that help patients explore the effect of past relationships and experiences on present behaviors, and psychotherapies that are tailored to help solve other problems in specific ways. Cognitive behavior therapy is a goal-oriented therapy focusing on problem solving. Psychoanalysis is an intensive form of individual psychotherapy which requires frequent sessions over several years.

Most medications are used by psychiatrists in much the same way that medications are used to treat high blood pressure or diabetes. After completing thorough evaluations, psychiatrists can prescribe medications to help treat mental disorders. While the precise mechanism of action of psychiatric medications is not fully understood, they may change chemical signaling and communication within the brain, which may reduce some symptoms of psychiatric disorders. Patients on long-term medication treatment will need to meet with their psychiatrist periodically to monitor the effectiveness of the medication and any potential side effects.

Class of Medications

- **Antidepressants –** used to treat depression, panic disorder, PTSD, anxiety, obsessive-compulsive disorder, borderline personality disorder and eating disorders.
- **Antipsychotic medications –** used to treat psychotic symptoms (delusions and hallucinations), schizophrenia, bipolar disorder.
- **Sedatives and anxiolytics –** used to treat anxiety and insomnia.
- **Hypnotics –** used to induce and maintain sleep.
- **Mood stabilizers** – used to treat bipolar disorder.
- **Stimulants –** used to treat ADHD.

Psychiatrists often prescribe medications in combination with psychotherapy.

Interventional psychiatry describes procedures used when medications and psychotherapy are ineffective in restoring a patient to full health. Electroconvulsive therapy (ECT), a medical treatment that involves applying electrical currents to the brain, is used most often to treat severe depression that has not responded to other treatments. Deep brain stimulation (DBS), vagus nerve

stimulation (VNS), transcranial magnetic stimulation (TMS), and ketamine treatment are a few of the newer therapies being used to treat some mental health disorders. Psychedelic drugs such as psilocybin are being studied for future treatment potential.

Psychiatric Training

To become a psychiatrist, a person must complete medical school and take a written examination for a state license to practice medicine, and then complete four years of psychiatry residency. In other words, it typically takes 12 years of education after high school to become a general adult psychiatrist, and up to 14 years to become a child and adolescent psychiatrist. The first year of residency training is typically in a hospital working with patients with a wide range of medical illnesses. The psychiatrist-in-training then spends at least three additional years learning the diagnosis and treatment of mental health, including various forms of psychotherapy and the use of psychiatric medications and other treatments. Training takes place in office, hospital, and emergency room settings, and community sites such as primary care.

After completing residency training, most psychiatrists take a voluntary written and oral examination given by the American Board of Psychiatry and Neurology to become a "board certified" psychiatrist. They must be re-certified every 10 years.

Some psychiatrists also complete additional specialized training after their four years of general psychiatry training. They may become certified in the following fellowships which as certified by the Accreditation Council on Graduate Medical Education (ACGME):

- Addiction Psychiatry or Addiction Medicine.
- Child and adolescent Psychiatry.
- Consultation-liaison Psychiatry (patients with complex medical and psychiatric issues).
- Forensic Psychiatry (patients involved in the legal or correctional system).
- Geriatric Psychiatry.
- Hospice and Palliative Medicine (patients with serious illness).
- Pain Medicine.
- Sleep Medicine.

Psychiatrists may also pursue additional training in other areas known as unaccredited fellowships such as:

- Emergency Psychiatry (working with patients in crisis in emergency room settings).
- Public and Community Psychiatry (working with social determinants of health).
- Reproductive psychiatry (pregnant and postpartum women with mental health needs).

Some psychiatrists choose to be trained in 2 or more specialties simultaneously to care for complex patients with both medical and psychiatric issues. Examples include:

- Internal Medicine / Psychiatry.
- Family Medicine / Psychiatry.
- Triple Board Pediatrics / Adult Psychiatry / Child & Adolescent Psychiatry.

Some psychiatrists choose additional training in psychoanalysis or in psychiatric research.

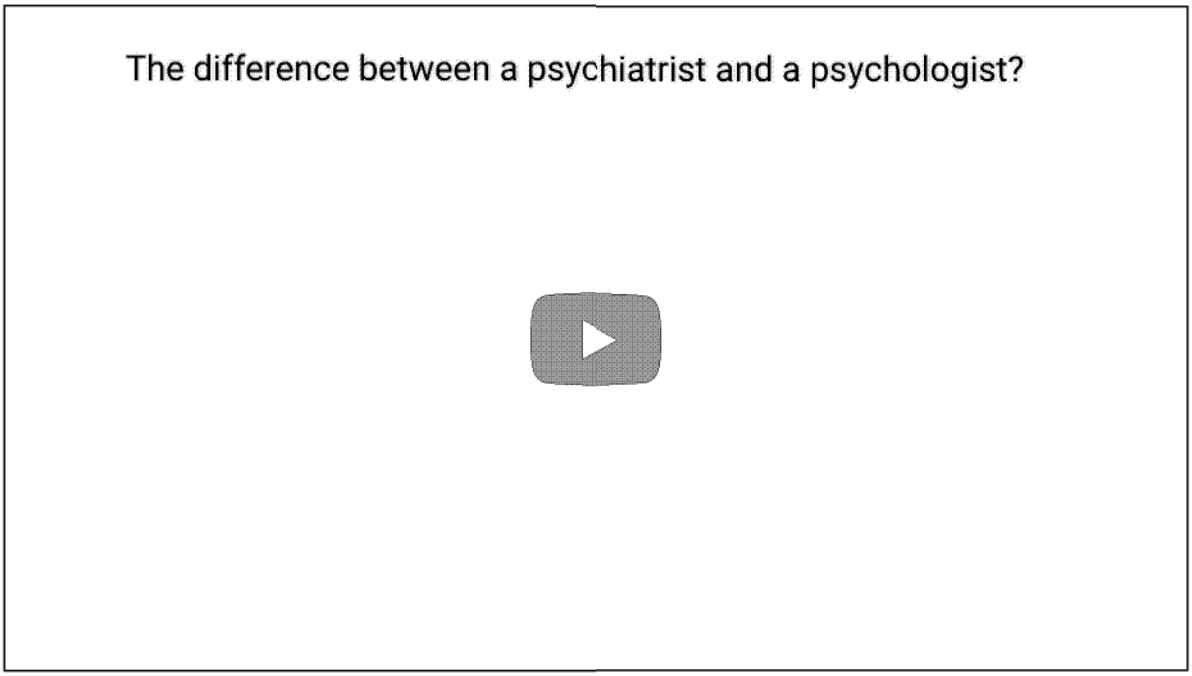
Where Do Psychiatrists Work?

Psychiatrists work in a variety of settings, including private practices, clinics, general and psychiatric hospitals, academic health centers, community agencies, courts and prisons, nursing homes, industry, government, military settings, rehabilitation programs, emergency rooms, hospice programs, and many other places. About half of the psychiatrists in the U.S. maintain private practices and many psychiatrists work in multiple settings. There are about 45,000 psychiatrists in the U.S.

What Is the Difference Between a Psychiatrist and Psychologist?

A psychiatrist is a medical doctor (completed medical school and residency) with special training in psychiatry. A psychiatrist is able to conduct psychotherapy and prescribe medications and other medical treatments.

A psychologist usually has an advanced degree, most commonly in clinical psychology, and often has extensive training in research or clinical practice. Psychologists treat mental disorders with psychotherapy and some specialize in psychological testing and evaluation.



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Physician Review

Howard Liu, M.D.
Chair, Department of Psychiatry, University of Nebraska
Chair, APA Council on Communications
January 2023

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- World Psychiatric Association
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- Association of Gay and Lesbian Psychiatrists

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CHAPTER 5.14 ■ GENDER DYSPHORIA AND GENDER INCONGRUENCE

JACK L. TURBAN III, ANNELOU L. C. DE VRIES, AND KENNETH J. ZUCKER

INTRODUCTION

Transgender (gender incongruent) youth include children and adolescents who experience a marked incongruence between their gender assigned at birth and their gender identity (1). Since the last edition of this volume, which was published 10 years ago (2), there has been a remarkable increase in attention to transgender issues across the life span. Television has begun to highlight transgender individuals from childhood to adulthood (3,4). News outlets from *The New York Times Magazine* to *Le Monde* have explored the life experiences of transgender youth (5–7). Legislative bodies have examined transgender rights through restroom access, hate crime legislation, insurance regulations, and antidiscrimination policies, with physicians playing key roles in these discussions (8). Parallel to this growing attention, there has been a marked increase in the establishment of specialized gender identity clinics for children and adolescents in North America and in Europe (9), which likely reflects the marked increase in referrals that has been noted internationally (10–12). At the same time, the scientific literature on gender incongruence has expanded as well.

TABLE 5.14.1

TERMINOLOGY

Term	Definition
Gender assigned at birth/natal sex/ birth sex	Gender assigned to an infant at birth, generally based on physical characteristics (genitalia, etc.)
Experienced gender/gender identity	An individual's psychological understanding of one's own gender
Affirmed gender	An individual's psychological understanding of one's own gender, typically referring to one who lives socially as that understood gender
Sexuality/sexual orientation	Refers to the types of individuals toward whom one is romantically and/or sexually attracted
Transgender	Refers to an individual whose gender identity is incongruent with that of one's gender assigned at birth. Sometimes also used as a term for an individual whose gender identity is binary opposite one's gender assigned at birth.
Gender dysphoria	Refers to psychological distress in relationship to one's experienced gender; is also the classification used in the DSM 5 (requiring fulfillment of certain clinical criteria)
Cisgender	Refers to an individual whose experienced gender matches that of one's gender assigned at birth
Gender non-conforming/gender variant	Refers to variation from developmental norms in gender role behavior that may be considered as nongender stereotypical. This may include identifying as both genders or identifying with neither gender, among others.
Transsexual	Typically used to refer to individuals who desire medical interventions to align their physiologies with the gender identities. This term is used synonymously with transgender by some and has largely fallen out of favor (though it was used commonly in the past).

with a flux of new studies on co-occurring psychological functioning, long-term follow-up studies, biologic correlates, and outcomes of medical interventions. Practicing child and adolescent psychiatrists should be familiar with the basics of this field to appropriately assess and treat these patients.

TERMINOLOGY AND DEFINITIONS

Terminology in this specialized area is continuously evolving. This section describes terms and definitions that are in most common usage at this time, but different regions, cultures, and families may have their own preferred terminology (Table 5.14.1).

The term *gender assigned at birth* refers to a newborn's gender (boy, girl, indeterminate), as generally declared by a medical professional. Other relevant terms include *natal sex* and *birth sex*. The term *biologic sex* is somewhat vague, as it is unclear whether it would be based on karyotyping of the sex chromosomes, internal reproductive structures, the configuration of the external genitalia, etc. The vast majority of newborns are assigned the gender of boy or girl through prenatal diagnostics or, at birth, based on genital anatomy. A small number of newborns may be classified as having a "disorder of sex development" (DSD), or what others have called "differences of sex development" (13), congenital conditions in which biologic parameters of sex (e.g., the sex chromosomes, the gonads or the configuration of the external genitalia, etc.) are incongruent with one another. These conditions include complete or partial androgen insensitivity syndrome, mixed gonadal dysgenesis, 5-alpha-reductase deficiency, penile agenesis, and congenital adrenal hyperplasia (CAH), among others. Such patients may experience gender identity issues that can be unique from those experienced by those without a DSD (14).

Experienced gender refers to one's gendered sense of self as a boy, as a girl, or some alternative gender that is different from the traditional boy–girl dichotomy (e.g., "gender fluid," "agender," or "nonbinary"). Other terms include *affirmed gender* (typically used for individuals who have transitioned socially to living as the desired gender). For the majority of individuals, experienced gender matches the gender assigned at birth. These individuals are referred to as *cisgender*. For some patients, experienced gender is opposite from the gender assigned at birth, and these individuals are referred to as *transgender*.

Transgender, gender variant, and *gender nonconforming* are sometimes used as terms for individuals whose experienced gender does not strictly match that of their gender assigned at birth. One who experiences psychological distress in relation to one's gender identity may be referred to as *gender dysphoric*. Gender dysphoria is the diagnostic term that has been adopted in the DSM-5 (see below) (1).

Sexual attraction or *sexual orientation* is a separate concept from gender identity. Sexual orientation refers to the types of individuals toward whom one is romantically or sexually attracted. Terms such as androphilia (attraction to males), gynephilia (attraction to females), biphilia (attraction to males and females), and aphilia (attraction to neither males nor females) are used more commonly nowadays, slowly replacing older terms such as heterosexual, bisexual, homosexual, and asexual. In the scientific literature, the sexual orientation of individuals who identify as transgender can be described in relation to their experienced gender or their gender assigned at birth. For example, an adolescent female who identifies as male and is sexually attracted to females can be described as "heterosexual" in relation to experienced gender but as "homosexual" in relation to birth sex (15). From either a clinical or research perspective, it is critical to identify the referent in describing a patient's sexual orientation. Most individuals who identify as transgender will describe their sexual orientation in relation to their gender identity, not their gender assigned at birth (e.g., a transgender woman who is attracted to men would likely consider herself to be heterosexual).

The "genderbread person" has been developed as an educational tool to clarify the distinctions among *gender assigned at birth, experienced gender,* and *sexual orientation* (Figure 5.14.1). Note that as a published educational instrument, this graphic diverges somewhat from the contemporary terminology we described above. Nonetheless, this tool has proven useful for introducing this terminology to families and students new to the topics of gender and sexuality.

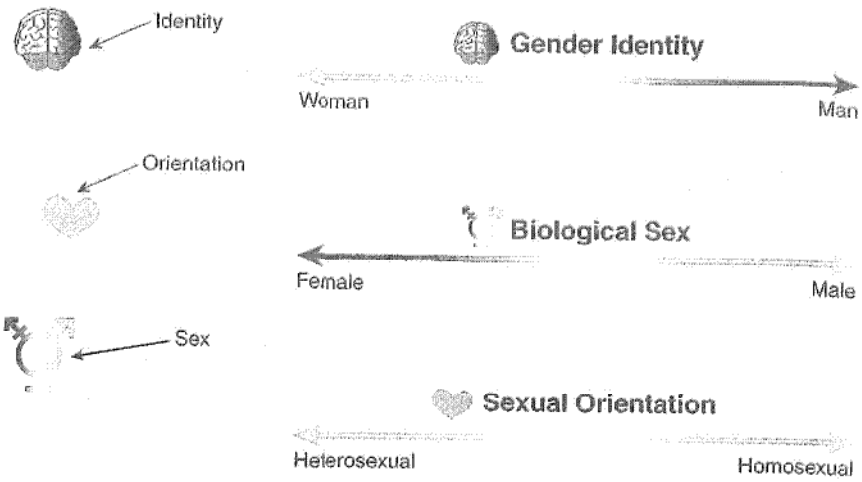

FIGURE 5.14.1. The Genderbread Person. The genderbread person is an educational tool used to explain the distinctions between experienced gender (termed gender identity here), gender assigned at birth (termed biological sex here), and sexual or romantic orientation. This educational tool may be useful for students new to the field and when explaining these phenomena to families with gender incongruent and gender dysphoric children. These terms are further described in Table 5.14.1. (Modified from Killermann S. (2016). *The Genderbread Person.* Available at: itspronouncedmetrosexual.com)

HISTORY OF GENDER IDENTITY AND MEDICINE

John Money (1921–2006) was a psychologist and sexologist whose empirical and theoretical contributions regarding gender identity, gender role, and gender development were innovative and of great influence, beginning in the 1950s. Money originally proposed a theory of "gender neutrality," suggesting that gender identity was predominantly determined by social factors, including the gender assigned at birth and subsequent socialization processes (16). Money proposed that, for individuals with a DSD, early surgical interventions to correct genital ambiguity were often needed so that a child could then be supported with rearing in the gender assigned at birth.

Over the past few decades, Money's original theory of gender neutrality at birth has been challenged by various lines of evidence suggesting the importance of biologic factors, particularly patterns of prenatal hormone exposure, in also contributing to gender identity formation and differentiation. For example, chromosomal females with CAH, assigned female at birth are exposed to elevated levels of prenatal testosterone and many of these girls are behaviorally masculinized and a higher percentage than the general population develop gender dysphoria and transition from male to female (17,18).

Perhaps the most widely cited case pertains to a biologically "normal" male (one of a pair of identical twins) who, after a circumcision accident at the age of 7 months led to penile ablation, underwent a vaginoplasty and was socially reassigned to female at the age of 17 months (19,20).

Although this patient was described by Money (21) as a "tomboy" during childhood, subsequent follow-up revealed that the patient rejected estrogen therapy at the time of puberty and subsequently transitioned back to living as a male (19,20). Tragically, this patient committed suicide at the age of 38 (22). The "John–Joan" case, as it was called, has been used as evidence of the importance of biologic factors in contributing to a person's sense of gender identity. A subsequent summary of seven similar such patients reared as female after traumatic loss of the penis have shown both male and female gender identities in adolescence and adulthood, further complicating the picture (23).

In the 1960s, research into the developmental histories of adults with "transsexualism" suggested that childhood cross-gender identification was common in these individuals (24). This work was then followed by research with children who showed patterns of gender-related behavior similar to the recalled patterns of transsexual adults (24). During this period, there was much less attention given to adolescents with a marked history of cross-gender identification.

By the late 1990s, however, more attention was given to adolescents with a DSM diagnosis of gender identity disorder, including the possibility of treatments with gonadotropin-releasing hormone analogs (GnRHa), as reported by a research team in the Netherlands (25). This approach, described below, was ultimately outlined in the 2009 Endocrine Society Guidelines for the Treatment of Transsexual Persons (26) and in the periodically updated Standards of Care by the World Professional Association for Transgender Health (27). Research into these hormonal interventions has since garnered significant attention, including increased NIH funding to study the long-term benefits and risks of these endocrine treatments (28).

DIAGNOSIS AND ASSESSMENT

Gender identity diagnoses first entered the DSM in its third edition with three diagnoses: transsexualism, gender identity disorder of childhood, and atypical gender identity disorder. The essential feature of these three diagnoses was "an incongruence between anatomic sex and gender identity" (29). Revisions in the DSM-III-R were modest, though in this edition, exclusion of individuals with schizophrenia or a DSD was removed, noting that individuals with either of these diagnoses could also have a gender identity disorder (30).

In the DSM-IV, the three diagnoses from DSM-III were collapsed into the overarching diagnosis "gender identity disorder" with distinct criteria sets for children versus adolescents and adults. This edition also added a criterion stating "The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning" (31).

The DSM-5 renamed "gender identity disorder" as "gender dysphoria," aiming to decrease stigma associated with the diagnosis while maintaining a diagnosis that could be used to secure

access to care for those who needed it (32). The DSM-5 removed sexual orientation subtyping, but noted in the text its relevance in understanding variations in developmental trajectories and for research on biologic factors and long-term outcomes (1). The DSM-5 also made an effort to make the childhood diagnosis stricter, requiring more than just gender nonconforming behavior. The new criteria required that a child expresses an actual desire or insistence of being the other gender. The adolescent and adult criteria simultaneously became more inclusive, allowing for nonbinary gender identities that would allow for gender variant, but not strictly binary, transgender adolescents and adults to receive the diagnosis and subsequently access to care.

Current DSM-5 criteria for gender dysphoria in children require a marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration, as evidenced by at least six of eight criteria, one of which must be a strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one's assigned gender) (1). Additionally, the patient must experience clinically significant distress or impairment in social, school, or other important areas of functioning as introduced in the DSM-IV (Table 5.14.2). DSM-5 criteria for gender dysphoria in adolescents and adults are similar, though with different requirements for the manifestation of gender dysphoria. This diagnosis requires at least two of six manifestations (Table 5.14.3). For a summary and rationale for the DSM-5 changes, see Zucker et al. (33).

Some have argued for use of the term "gender incongruence," including the Working Group on Sexual Disorders and Sexual Health for the forthcoming 11th edition of the

TABLE 5.14.2

DSM-5 CRITERIA FOR GENDER DYSPHORIA IN CHILDREN AND IN ADOLESCENTS AND ADULTS

Diagnostic Criteria

Gender Dysphoria in Children

302.6 (F64.2)

A. A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months' duration, as manifested by at least six of the following (one of which must be Criterion A1):
   1. A strong desire to be of the other gender or an insistence that one is the other gender (or some alternative gender different from one's assigned gender).
   2. In boys (assigned gender), a strong preference for cross-dressing or simulating female attire; or in girls (assigned gender), a strong preference for wearing only typical masculine clothing and a strong resistance to the wearing of typical feminine clothing.
   3. A strong preference for cross-gender roles in make-believe play or fantasy play.
   4. A strong preference for the toys, games, or activities stereotypically used or engaged in by the other gender.
   5. A strong preference for playmates of the other gender.
   6. In boys (assigned gender), a strong rejection of typically masculine toys, games, and activities and a strong avoidance of rough-and-tumble play; or in girls (assigned gender), a strong rejection of typically feminine toys, games, and activities.
   7. A strong dislike of one's sexual anatomy.
   8. A strong desire for the primary and/or secondary sex characteristics that match one's experienced gender.

B. The condition is associated with clinically significant distress or impairment in social, school, or other important areas of functioning.

Specify if:

- With a disorder of sex development (e.g., a congenital adrenogenital disorder such as 255.2 [E25.0] congenital adrenal hyperplasia or 259.50 [E34.50] androgen insensitivity syndrome).
- Coding note: Code the disorder of sex development as well as gender dysphoria.

Gender Dysphoria in Adolescents and Adults

302.85 (F64.1)

A. A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 mo duration, as manifested by at least two of the following:
   1. A marked incongruence between one's experienced/expressed gender and primary and/or secondary sex characteristics (or in young adolescents, the anticipated secondary sex characteristics).
   2. A strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (or in young adolescents, a desire to prevent the development of the anticipated secondary sex characteristics).
   3. A strong desire for the primary and/or secondary sex characteristics of the other gender.
   4. A strong desire to be of the other gender (or some alternative gender different from one's assigned gender).
   5. A strong desire to be treated as the other gender (or some alternative gender different from one's assigned gender).
   6. A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one's assigned gender).

B. The condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

- **With a disorder of sex development** (e.g., a congenital adrenogenital disorder such as 255.2 [E25.0] congenital adrenal hyperplasia or 259.50 [E34.50] androgen insensitivity syndrome).
- **Coding note:** Code the disorder of sex development as well as gender dysphoria.

Specify if:

- **Posttransition:** The individual has transitioned to full-time living in the desired gender (with or without legalization of gender change) and has undergone (or is preparing to have) at least one cross-sex medical procedure or treatment regimen—namely regular cross-sex hormone treatment or gender reassignment surgery confirming the desired gender (e.g., penectomy, vaginoplasty in a natal male; mastectomy or phalloplasty in a natal female).

TABLE 5.14.3

TREATMENT OF TRANSGENDER YOUTH

Timing	Intervention
Prepubertal	No endocrine intervention recommended. Patient should have regular psychotherapy to discuss gender identity and assess possible future need for hormonal intervention.
Early signs of puberty	Pubertal blockade with gonadotropin-releasing hormone analogs to prevent the development of secondary sex characteristics and provide additional time for psychotherapy and consideration regarding partially reversible interventions.
Age 14+ or 16+, depending on the center	Cross-sex hormonal therapy with estrogen or testosterone. Less frequently with other endocrine-acting medications that have less favorable side effect profiles.
Age 18 for most centers	Gender-affirming surgeries may be considered. Note that some surgeries may be performed earlier for select patients (generally mastectomies for transgender males).

International Classification of Diseases. This group suggested that the term gender incongruence highlights that not all transgender individuals experience dysphoria. The group noted that the term gender dysphoria might increase inappropriate stigmatization and pathologization. Only for the practical purpose of preserving access to medical care did the group recognize the necessity of classification. The group additionally argued that the diagnosis be moved out of the chapter on mental health and behavioral disorders and into another section, provisionally termed Conditions Related to Sexual Health (34).

EPIDEMIOLOGY OF GENDER DYSPHORIA AND GENDER NONCONFORMITY

A range of methodologic challenges, including but not limited to shifting terminology and stigma associated with self-identification, have made it difficult to establish the true prevalence of gender dysphoria or gender incongruence.

Prevalence in Adults

In adults, most studies have used the numbers of individuals that seek out clinical care for gender-affirming treatment as a proxy for determining prevalence in a certain country or catchment area. A recent meta-analysis based on 21 studies that applied this method concluded that the prevalence of transsexualism (the definition used in most of these studies) was 6.8 transwomen in 100,000 gender at birth-assigned males (1:14,705) and 2.6 transmen in 100,000 gender at birth-assigned females (1:38,461) (35). A time trend was also found, with recent studies reporting higher prevalence rates. These studies are, of course, limited by the fact that they do not include transgender individuals who do not seek medical care. Indeed, much higher prevalence rates, ranging from 4.2% having an ambivalent gender identity to around 0.5% identifying as transgender and considering medical interventions, are suggested by recent studies that have used broader definitions and probability samples (36–38). A recent population-based survey in the United States found that 0.6% of adults self-identified as transgender, with rates ranging from 0.3% to 0.8% in the states for which data were available. Compared to the older age groups, young adults between 18 and 24 years old were most likely to identify as transgender (39).

Prevalence in Children and Adolescents

Although formal epidemiologic studies of gender dysphoria in children and adolescents have not been conducted, looser or more liberal definitions of "caseness" in children and adolescents have been examined in several recent studies. In a random sample of 2,730 grade 6 to 8 students from San Francisco, Shields et al. (40) found that 1.3% self-identified as "transgender" in response to the question "What is your gender?," with the other response options being female or male. In a random sample of 8,166 high school students from New Zealand, Clark et al. (41) found that 1.2% self-identified as transgender and 2.5% reported that they were not sure about their gender, in response to the question "Do you think you are a transgender?" which was followed by a definition of the term. Interestingly, another 1.7% reported that they did not understand the question.

In the 1999 standardization sample of the Child Behavior Checklist (CBCL) for children aged 6 to 18 years and the Youth Self-Report (YSR) form, aged 11 to 18 years, there is one item pertaining to gender identity ("Wishes to be of opposite sex") (42). On the CBCL (total $N = 3,210$), less than 1% of parents of nonreferred boys and 1.2% of nonreferred girls endorsed this item as either somewhat or sometimes true or very true or often true. The percentages were higher for referred boys and girls (2.8% and 5.4%, respectively). On the YSR, about 10% of nonreferred girls and 2% of nonreferred boys endorsed this item compared to about 18% of referred girls and 3% of referred boys. In the prior 1991 CBCL standardization sample, two age groups were reported (4 to 11 and 12 to 18). For the 4 to 11 year olds, 1% of parents of nonreferred boys and girls endorsed this item compared to 3% and 5% of referred boys and girls. For the 12 to 18 year olds, none of the parents endorsed this item for nonreferred boys and girls compared to 2% and 5% of referred boys and girls. Consistent with the original CBCL and YSR standardization studies, two consistent findings emerge: the item is endorsed more often for girls than for boys and it is endorsed more often for referred than for nonreferred children and adolescents.

Gender Assigned at Birth Ratio

Of prepubertal children referred to gender identity clinics, the majority has a male gender assigned at birth. Among 577 Canadian children referred to a gender identity clinic between 1976 and 2011, the male-to-female ratio was 4.49:1 (12). This was significantly higher than the 2.02:1 ratio in the Netherlands (12). These differences are theorized, in part, to be a reflection of increased parental anxiety regarding gender-variant behavior in males compared to females, particularly in North America. For adolescents with gender dysphoria, the gender ratio is much closer to 1:1 and appears to be more consistent across nations (10). Of note, however, there has been a recent temporal shift from more birth-assigned males (prior to 2006) to more birth-assigned females (2006 to 2013), though the ratio remains closer to 2:1 in either direction (10).

BIOLOGIC AND PSYCHOSOCIAL DETERMINANTS

The etiology of cross-gender identification and behavior continues to be elusive. While psychological and social factors were once the focus of study, especially in normative gender development, attention has shifted to biologic mechanisms more recently. At present, the evidence suggests that both psychosocial and biologic elements are involved. A monocausal mechanism is unlikely and gender dysphoria most likely results from a complex interaction between these factors (43).

Biologic Factors

Twin studies suggest a strong heritable component with additional environmental contributors. In a large-scale CBCL study of Dutch twins (N = 23,393) ages 7 and 10 (44), monozygotic (MZ) and dizygotic (DZ) twins were compared and estimated genetic factors contributed to 70% of cross-gender behavior (as assessed via the two CBCL gender items). Another study of 314 MZ and DZ twins (mean ages 9.4 and 10.1 years, respectively) roughly replicated this finding, with genetic factors contributing to 62% of the variance on a DSM-IV-based gender dysphoria scale (45). In a third study of 3,337 Japanese MZ and DZ twins ranging in age from 3 to 26 years (46), there was also strong evidence for genetic factors for females, but much less so for males.

Many studies, both in animals and humans, have shown that differences in brain anatomy and function in cis-gender males and females underlie the sex differences in their behavioral (47). Sex hormones play an important role in these differences. The *organizational* effect, predominantly prenatally but also during puberty, leads to the sex differences in brain structures. On average, males have larger brain volumes, more white matter, gray matter, and cerebrospinal fluid than females, although when corrected for total volume, females have more gray matter and a larger volume of the cortex (48–50).

The sexual differentiation hypothesis suggests that transgender individuals may have brain structures and brain functioning more closely aligned with their experienced gender (51). Postmortem studies have suggested a sex reversal in several hypothalamic nuclei in transgender adults (52,53). More recent neuroimaging techniques have allowed the in vivo study of brain morphology and functioning of larger numbers of adolescents and adults with gender incongruent feelings (50,54). Findings of these studies are more mixed. Before they received any medical gender affirmative treatment, brain anatomy with regard to volume, gray and white matter, and cerebrospinal fluid did not differ compared to their birth-assigned sex (50). Differences are, however, found with regard to the white matter microstructure, with results of transgender individuals in between males and females (50). In the realm of functional neuroimaging, task-related imaging studies show that transgender people may have either similar reactions as their experienced gender (e.g., smelling odorous steroids (55)) or activity different from their assigned gender as well as their experienced gender (e.g., mental rotation (56)), or not different from their assigned gender (e.g., verbal fluency (57)). The results so far show that we are still far away from a situation where imaging or other medical testing may serve as a diagnostic tool.

In animal studies, where prenatal hormones can be manipulated, the strong effect of prenatal testosterone on gender role behavior is clear (47). The effects on gender identity, however, can only be studied in humans. Individuals with DSD may be exposed to high levels of prenatal testosterone, and XX individuals with CAH (58) indeed have higher rates of gender dysphoria and cross-gender identification (18). The majority of female-raised individuals with CAH (~95%), however, appear to develop a female gender identity (17). Other evidence for the importance of prenatal testosterone comes from studies in XY individuals with complete androgen insensitivity syndrome (CAIS) who lack the receptors necessary to respond to endogenous testosterone. The vast majority of these patients develop a female gender identity, suggesting that downstream testosterone signaling may be important for the development of a male gender identity (59). Others have noted that these patients are reared unambiguously as females and that social factors may play a strong role in their female identity formation (60). Some studies have shown that those with CAIS have lower scores on tests of female identity scales (61) and there have been some case reports of gender dysphoria ultimately leading to gender-affirming surgeries (62). This notably could be secondary to the psychological stress of learning about the diagnosis, as well as the possibility of undetected functional androgen receptors (43). Overall, studies of gender identity in individuals with DSD, while implicating androgens in the development of gender identity, have yet to show a simple direct relationship.

Psychosocial Factors

Past literature has investigated the potential role of parental characteristics on the development of gender dysphoria (maternal wish for a child of the opposite gender, paternal absence, and parental psychological functioning, among others). None of these hypotheses have been validated (43). Mothers of gender dysphoric boys have been noted to have higher scores on the Beck Depression Inventory and the Diagnostic Interview for Borderlines (63), but these higher scores might be due to external pressures placed on these parents by unaccepting social environments and such studies cannot determine the direction of causation. One study noted that gender dysphoric boys were rated as more feminine and "beautiful" by blinded college students (64) while another study of gender dysphoric girls showed that these girls were rated as less "cute" (65), raising the question of whether perceived physical appearance and resultant social treatment may contribute to gender incongruence. An alternative interpretation of this data is that those with a more male gender identity might alter their appearances to appear more "masculine" (e.g., culturally masculine haircuts) while those with a more female gender identity alter their appearances to appear more "feminine" (66). Some have suggested that a lack of parental limit-setting, particularly around cross-gender behavior, is associated with gender dysphoria (67), though this again does not prove causation, as more insistence on cross-gender behavior (i.e., transgender identity or stronger cross-gender behavior preferences) may make this limit-setting more difficult. Overall, there have been no proven causative psychosocial factors in the development of gender incongruence. Since studies on normative gender identity development show that cognitive psychological factors and social environment play a role, this may also be the case for gender nonconforming development.

CLINICAL COURSE

Persistence of Gender Dysphoria from Childhood to Adolescence

The natural history of gender identity for children who express gender nonconforming or transgender identities is an area of active research (68). To date, the long-term follow-up studies of clinic-referred children have been based on samples that have

included children who were either threshold or subthreshold for the gender identity diagnosis in DSM-III, III-R, or IV and some of the earliest studies began prior to the availability of formal diagnostic criteria.

These follow-up studies have classified participants as either "persisters" or "desisters" with regard to their cross-gender identification, using various metrics (semi-structured interviews based on DSM criteria for gender identity disorder, dimensional scores on standardized questionnaires, etc.). Ristori and Steensma (69) have provided the most recent summary of 10 follow-up studies, in which the percentage of participants classified as persisters ranged from 2% to 39% (collapsed across natal boys and girls). In one study (70), the percentage of natal girls who were persisters appeared to be substantially higher than the percentage of natal boys (50% vs. 12%), but in two other studies from the same clinic, the percentage was similar across natal sex (71,72).

One criticism of these studies is that either formal diagnostic criteria were not used (because they were not available at the time of the study) or that subthreshold cases were included. Some studies have found that threshold cases were more likely to be classified as persisters (73), but other studies have not (72). It has also been suggested that more recent cohorts (after the year 2000) have found higher rates of persistence (12% to 39% (61,64–66)) than older cohorts (2% to 9% prior to 2000 (74,75)); however, it is not clear if such differences are related to variations in sampling procedures or something more substantive. Comparisons of persisters with desisters have found that the intensity of gender dysphoria (using dimensional metrics), older age at the time of assessment in childhood, a lower social class background, and having a female gender assigned at birth are associated with higher rates of persistence (72,73). Despite this work, it remains difficult to predict, for an individual child, the likelihood of cross-gender identification persistence from childhood into adolescence (73).

Persistence of Gender Dysphoria from Adolescence to Adulthood

In contrast to the low rates of persistence from childhood into adolescence, it appears that the vast majority of transgender adolescents persist in their transgender identity (76).

Childhood Gender-Variant Behavior and Sexual Orientation

Childhood gender-variant behavior has been found to be a strong predictor of a same-sex sexual orientation (using gender assigned at birth as a reference point) in adults. In a study of 879 Dutch boys and girls, gender-variant behavior was assessed using the CBCL and sexual orientation was assessed 24 years later (77). It was found that the prevalence of a same-sex sexual orientation was, depending on the domain (attraction, fantasy, behavior, and identity), between 8.4 and 15.8 times higher in the gender-variant subgroup as compared to the nongender-variant subgroup. In summary, the current literature, though limited as described above, suggests that the majority of gender incongruent prepubescent children will grow up to identify as cisgender individuals with either a bisexual or a same-sex sexual orientation (70,72,74).

ASSOCIATED COEXISTING PSYCHIATRIC CONDITIONS AND BEHAVIORS

Children and adolescents with gender incongruence exhibit higher internalizing and externalizing psychopathology as compared to nonreferred controls, with internalizing psychopathology being more common, particularly in natal boys (78–84). One hypothesis is that this problem behavior is a result of minority stress and dysphoria toward their gender assigned at birth. These individuals are also subjected to rates of peer bullying as high as 80% (85). Poor peer relations is one of the strongest investigated predictors for behavioral and emotional problems in gender incongruent youth (79). In a study of 105 gender dysphoric Dutch adolescents whose parents completed the Diagnostic Interview Schedule for Children (DISC), 32.4% had one or more psychiatric disorders, with 21% suffering from anxiety, 12.4% from mood disorders, and 11.4% from disruptive disorders (85). A study with the same DISC measure in prepubertal children revealed higher percentages, with 52% having one or more psychiatric disorders other than GD (80).

Chart review studies of gender incongruent youth presenting to specialized gender identity clinics have shown similarly high or even higher rates of psychiatric conditions: mood (12.4% to 64%), anxiety (16.3% to 55%), and disruptive disorders (9% to 11.4%) (82,83,86–88). The prevalence range across studies may be secondary to cultural differences, differing diagnostic criteria, and differing ages of clinical populations. These psychiatric conditions appear to become more common in gender incongruent individuals with increasing age. Some studies have shown that older transgender youth suffer a greater burden of co-occurring psychiatric conditions (82), and that gender incongruent adults suffer a greater burden of co-occurring psychiatric conditions as compared to adolescents (89).

Self-harming Behavior and Suicidality

Self-harming behavior and suicide attempts are prevalent among gender incongruent youth. Gender clinics have reported high rates of past suicide attempts by patients presenting for care: Boston (9.3%, mean age 14.8 (87)), London (10%, mean age 13.5 (82)), Los Angeles (30%, mean age 19.2 (86)). Rates of self-harm and suicidality appear to increase with age within this population (90).

Autism Spectrum Disorder

A number of studies have shown autism spectrum disorder (ASD) symptoms to be over-represented among transgender individuals. Clinical level rates of ASD symptomatology in transgender adults have been reported in the range of approximately 5% to 20% (91–93). A single study of 204 children and adolescents referred for gender dysphoria reported an ASD prevalence of 7.8% as measured by the Diagnostic Interview for Social and Communication Disorders (94). This compares to rates of ASD in the general population of around 1% (95). Two studies found increased gender variance (5.4%, 11.3%), defined by a positive response to "wishes to be of opposite sex" sometimes or often on the CBCL or YSR) in referred children, adolescents, and adults with ASD compared to nonreferred controls (96,97). However, the same was true for an ADHD-referred control sample (97), raising the issue that a higher probability of gender variance is characteristic of clinic-referred samples in general. Several hypotheses for shared underlying etiology that explains the link between these two conditions have been suggested (98–100).

Clinically, the co-occurrence of gender dysphoria and ASD may complicate transgender care, as diagnosing gender dysphoria can be difficult (e.g., in the context of the rigid thinking that is characteristic of ASD). Case reports have described instances cross-gender identification represented a transient preoccupation in youth with ASD (101). Additionally, language difficulties can make expression of gender dysphoria difficult

for patients with ASD. Nonetheless, a comprehensive narrative review of the literature has shown a role for transition with pubertal blockade and cross-sex hormonal therapy in these patients following an extended diagnostic process (99). By use of a Delphi method, a group of experts on the ASD-gender dysphoria co-occurrence developed initial clinical guidelines assessment and treatment for adolescent transgender care (98). Careful diagnosis of both conditions by specific specialists, collaboration of clinicians from both fields, an extended diagnostic phase, and risk assessment and safety issues are part of the suggested management protocol.

THERAPEUTICS

Treatment of Prepubescent Children

Over the past 10 years, best practice treatment for children with gender dysphoria has been the subject of intense controversy (102). As noted below, there are now three broad approaches that have been delineated in the literature: (1) the oldest one—characterized by Dreger (103) as the "therapeutic model"—consists of efforts, either directly (e.g., via specific suggestions that parents can implement in the day-to-day environment) or indirectly (e.g., psychodynamically informed approaches that treat the putative underlying "causes" of the gender dysphoria) and actively attempt to reduce cross-gender identification (104); (2) an intermediate approach, which some have characterized as "watchful waiting" (105), in which no direct efforts are made to "prohibit" a child's gender-variant behavior, but one that also advises parents to keep options open about the child's long-term gender identity and to avoid early social transition; (3) and, more recently, an approach characterized by Ehrensaft (106) as the "affirmative model" that considers all outcomes of gender identity to be equally valid and desirable and allows children who express a desire to socially transition to do so after careful counseling. These approaches have been discussed in great detail in three Task Force reports (107–109), in a special volume of the *Journal of Homosexuality* (102), and various other essays and case reports, the references for which can be found in these major reviews.

For the nonspecialist, there are several key issues to keep in mind when appraising this literature: (1) Some of these approaches may be influenced by particular theoretical formulations regarding the determinants of gender dysphoria and these formulations guide or influence recommended treatment plans; (2) there are no randomized controlled trials that have compared the effects of these treatments with regard to both short-term and long-term outcomes. Indeed, Byne et al. (109) noted that, by and large, "the highest level of evidence…can best be characterized as expert opinion" (p. 762); (3) with some rare exceptions (110), there are no manualized or even semi-manualized treatments that a clinician can follow in developing a therapeutic plan. Thus, the clinician needs to self-educate by reading about the therapeutic model that one intends to follow and tailor it on a case-by-case basis. Below, we provide relatively brief summaries of these three treatment approaches.

Promoting Identification with the Gender Assigned at Birth

This first approach aims, through psychosocial interventions, to reduce the child's cross-gender identification and gender dysphoria. These treatments (which have been described in the literature since the 1960s) have, however, been quite varied. They include classical behavior therapy, psychodynamic therapy (including psychoanalysis and dynamically informed play psychotherapy), parental counseling, and parent-guided interventions in the naturalistic environment (e.g., encouragement of peer relations of the same natal sex) (110,111).

Perhaps the underlying assumption of all of these approaches rests on the view that gender identity is not yet fixed in childhood and may be malleable through psychosocial treatments. There is also an implicit assumption or value judgment that might be inferred from this approach, namely that all things considered a child's long-term adaptation might be easier if he or she could come to feel content with a gender identity that matches their natal sex and to avoid the necessity of a lifelong regimen of cross-sex hormonal treatment and sex-reassignment surgery (or what nowadays is also called gender-affirming surgery).

Critics of this approach have argued that there is nothing inherently "wrong" with a cross-gender identity and have challenged the view that trying to change such an identity is warranted. Indeed, there are now several US states and one province in Canada that have passed legislation stating that it is inappropriate to try and change a minor's gender identity when the minor is unable to consent to the treatment, but exempt from this directive is "identity exploration" (112). Critics have also rightly noted that some of the earliest proponents of this treatment held the belief that it might also reduce the odds of the child's later development of a same-sex sexual orientation (113), although other proponents of this treatment rejected this as an ethically defensible treatment goal (111). Another expressed concern has been that this type of treatment might cause a child to feel shame or other negative and maladaptive feelings (108).

Watchful Waiting

The second approach takes an intermediate therapeutic position. On the one hand, it does not recommend an early gender social transition on the grounds that the extant follow-up studies have shown that the majority of children with gender dysphoria desist for one reason or another. On the other hand, it does not explicitly recommend any type of limit-setting on the child's gender-variant behavior, with the exception that in certain environments it might be risky or dangerous to display such behavior, which Hill et al. (114) described as the "only at home" rule.

This approach also does not privilege one type of long-term outcome over another, noting that it is difficult to predict outcome for an individual child and that the more important focus should be on the child's general psychosocial adjustment and well-being. This approach does, however, include recommendations to parents that they try to encourage in their child a variety of gender-related interests and social affiliation with children of both genders. In some respects, the "watchful waiting" label is a bit of a misnomer because clinical protocols appear to include information provided to the parents that is more than "wait-and-see." As noted by de Vries and Cohen-Kettenis (115), appropriate limit-setting with good explanation of why the limits are set to their child may be helpful so that the child will learn "that not all desires will be met," which is important because "someone's deepest desire or fantasy to have been born in the body of the other gender will never be completely fulfilled." Although social transition according to this approach is not recommended at a very young age, an increasing number of children have already socially transitioned when they come to gender identity clinics (115). Some of these children may have no clear memories of a time that they were socially living in the birth-assigned gender and have stopped talking about being born different from their experienced gender. In these cases, it is encouraged that parents create an open situation where the child has the possibility of returning to the birth-assigned gender. It is discussed with the child that when gender identity feelings change, it is

nothing to be ashamed of, that nobody will be angry, that the child may speak out, and that it is good to have tried. A form of psychotherapy that helps the child to verbalize his or her feelings may be advised so that, by the time the child may come back for GnRHa, the child is able to talk about his or her feelings and can give informed consent.

Affirmative Approach

The affirmative approach theorizes that clinician and parental attempts to push children with gender incongruence toward conforming to their gender assigned at birth might produce shame and stigma that can ultimately lead to internalizing psychopathology (108). The approach considers all outcomes of gender identity to be equally desirable and affirms any gender identity the child expresses.

Though similar to the watchful waiting approach, an important departure is in its approach regarding early social transition. In the affirmative model, prepubertal children who ultimately express a desire to socially transition and live full time in their experienced gender (i.e., using cross-gender pronouns, a cross-gender name, cross-gender clothing, etc.) are allowed to do so. The approach to social transition must be carefully individualized with a nuanced understanding of the child's gender identification and the level of support within the child's community; there must also be an open discussion with the child highlighting that despite the social transition that the patient is free to transition back at any time (115).

Some have noted cases where this transition back to living as one's birth gender can be particularly difficult mostly due to fear of peer judgment (116), though this must be weighed against the potential negative consequences of refusing to affirm a child's identity and desire to transition socially. The affirmative model predicts that this lack of affirmation might lead to shame and consequent internalizing psychopathology (117). The therapeutic relationship in these cases could also be negatively affected if the clinician strongly discourages an early transition for a patient who ultimately persists in cross-gender identification.

Critics of social transitions in prepubertal children have raised the question of whether early social transition increases the rates of gender incongruence persistence from childhood into adolescence. Indeed, a multivariate regression analysis revealed that early social transition was associated with persistence (73). However, the direction of this association cannot be determined by this study. While some believe that prepubertal social transition makes children more likely to persist, the alternative interpretation is that those likely to persist are also more likely to undergo early social transition, due to currently unidentified factors. This additionally raises the ethical question of whether persistence should be considered an undesirable outcome. The affirmative model suggests that all outcomes of gender identity are equally desirable.

Separate from the question of persistence is the question of mental health outcomes following social transition. There is a relative paucity of literature studying the effect of prepubertal social transition. One study examined 73 American prepubertal children who were transgender in a binary fashion and allowed to socially transition. Parents of these children completed short forms for anxiety and depression at an unspecified time following the transition (118). Data from these scales revealed that these children had notably lower rates of internalizing psychopathology than previously reported children who did not transition. Furthermore, socially transitioned children in this study showed developmentally normal levels of depression and only minimally elevated (subclinical) levels of anxiety. It is important to note that families in this study had a relatively high median income, raising the question of whether this cohort is representative of a broader sociodemographic cohort (119). Though this early work suggests that socially transitioned children have better mental health metrics than previously reported children who did not socially transition, future research is needed to fully understand the dynamic and long-term effects of social transition in a broader population (119).

Treatment of Adolescents

Once children have reached puberty, transgender identity persists in the vast majority of cases, and medical intervention is often considered. At present, the effectiveness of an approach that includes puberty suppression and is followed by cross-hormones and surgeries has been evaluated in two studies on the same cohort of Dutch adolescents. The first study evaluated gender dysphoria and psychological functioning at two time points; first, when the 70 adolescents entered the clinic (mean age, 13.65 years), and second, just before they started cross-hormones (mean age, 16.64 years). Of interest, while adolescents improved with regard to psychological functioning on several domains, gender dysphoria did not improve and all adolescents went on with the next step of gender-affirming hormones (120). The second study added a third assessment, around one year after gender affirmative surgeries, when the first 55 adolescents who had been in this treatment protocol had reached young adulthood (mean age, 20.70 years). This time, gender dysphoria was resolved and psychological functioning measures had even further improved with scores that were comparable to normative samples. The same accounted for quality of life, subjective happiness, and satisfaction with life scores (121). These positive results are promising and give trust that starting treatment at a relatively young age is possible. However, the results come from only one clinic and concern a highly selected sample that received support from their parents and often their further school and social environment that started the treatment only after extensive assessment and received further mental health counseling during the years of treatment. Whether the same positive results can be expected for the larger number of adolescents that are treated at clinics that strongly vary in their approach to gender-variant adolescents has yet to be determined.

Assessing Eligibility

According to Endocrine Society Guidelines, hormonally based medical intervention may be initiated at the earliest signs of puberty (i.e., Tanner 2 or 3) (26). Other eligibility criteria include meeting criteria for gender dysphoria (termed gender identity disorder in the 2009 guidelines), experiencing dysphoria toward early pubertal changes, having adequate psychological and social support for treatment, understanding the risks and benefits of treatment, and not suffering from a psychiatric comorbidity that would interfere with treatment (26). To assess eligibility, most clinics offer an assessment by a mental health professional that sees the adolescent and his or her family over a longer period of time before decisions regarding medical interventions are made. This time is used to prepare for the long period of medical treatment with lifelong consequences that is likely to follow and weigh the pros and cons of treatment so that an informed decision can be made. Although many adolescents come with a clear wish for medical treatment, some are not sure yet and want to explore their gender dysphoric feelings more broadly. Sometimes co-occurring psychiatric difficulties like ASD with rigid thinking, severe depression with acute suicidality or anxiety with worrisome avoidance and school refusal, complicate this diagnostic work and make coming to regular medical checkups and taking medication impossible. Treatment of these psychiatric disorders may then be necessary before endocrine intervention. The importance of parental support for the psychological well-being of

adolescents is widely acknowledged (122). The time that is used for assessment may also be helpful in addressing parents' concerns and improving the adolescent–parent relationship. The time that is needed before medical intervention is provided may vary for each individual case, but tends to be longer when psychosocial comorbidities occur (115,123).

Fully Reversible Interventions (Pubertal Blockade)

The first such intervention (implemented at Tanner 2 or 3 of puberty) is pubertal blockade with GnRHa. Gonadotropin-releasing hormone is produced by neurons in hypothalamus. In prepubertal children, this hormone is secreted at very low levels. At the initiation of puberty, release of gonadotropin-releasing hormone becomes cyclical. This cyclical release of hormone results in release of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) from the anterior pituitary. These hormones then enter the peripheral circulation, where they initiate the production of sex hormones (estrogen in natal women and testosterone in natal men). These hormones then initiate the irreversible development of secondary sex characteristics.

GnRHa (either implants, depot injections, or regular injections) maintain high levels of gonadotropin-releasing hormone in the circulation. Without physiologic cyclical fluctuations in GnRH levels, FSH and LH are not released and all downstream signaling is prevented. This allows the patient to remain in a prepubertal state (124).

Pubertal blockade prevents the development of irreversible secondary sex characteristics (voice deepening, breast development, etc.) and provides additional time for gender dysphoric children to decide if they wish to fully transition physically into the body of the opposite sex. Therefore, it does not need to be considered actual gender affirmative medical treatment, but rather may function as an extended diagnostic phase. If the GnRHa implant is removed or the injections discontinued, the effects of the medication are reversible. With removal or discontinuation of the GnRHa, the patient will undergo natal puberty. Follow-up studies into young adulthood on the first cohort of puberty-suppressed adolescents are reassuring with regard to side effects. Although there was some deprived bone density, there were no concerns regarding liver and kidney functioning and lipid profile (125,126). Some advise clinicians to evaluate bone age for these patients every 3 months (26) and have regular blood monitoring to ensure that the central axis of puberty is sufficiently suppressed (26).

Partially Reversible Interventions (Cross-sex Hormonal Therapy)

Around the age of 16, patients may choose to move onto the next intervention of cross-sex hormonal therapy with estrogen or testosterone, according to Endocrine Society guidelines. Some groups have noted that cross-sex hormones can be instituted earlier, as delaying puberty outside the developmentally appropriate age may cause social problems for these youth (127). Additional criteria for cross-sex hormonal therapy are identical to those for GnRHa in the Endocrine Society guidelines.

Cross-sex hormones will initiate the development of secondary sex characteristics of the desired puberty. These interventions are mostly irreversible and carry a more significant side-effect profile. The most prominent side effect of estrogen therapy is hypercoagulability, though clinicians prescribing these medications should be aware of the full spectrum of side effects. Of note, this hypercoagulability can be particularly problematic for patients undergoing high-risk surgery such as vaginoplasty. Patients on these medications should be regularly monitored for serum hormone concentrations and maintained within normal testosterone and estrogen serum concentrations for their desired gender. Spironolactone has been used for its antiandrogenic properties in select cases but is generally not considered a first-line treatment given its unfavorable side-effect profile as a diuretic (26).

Irreversible Interventions (Gender-Affirming Surgeries)

At the legal age of adulthood, patients may choose to undergo a variety of surgical interventions, including vaginoplasty, phalloplasty, scrotoplasty, breast augmentation, facial reconstruction, hysterectomy, reduction thyroid chondroplasty, among others. Patients should be carefully counseled on the risks and benefits of surgery. Specific surgical interventions are many and are out of scope for the purpose of this review. Of note, some surgical interventions may be considered earlier in the course of treatment. In the WPATH's Standards of Care, mastectomies are being considered earlier than age 18 (27).

Fertility Considerations

There is a paucity of research on the effects of pubertal blockade and cross-sex hormonal therapy on future fertility. Interested patients should be counseled on fertility preservation options early in treatment. Include LGBT Health study showing that most transgender youth do not desire fertility preservation, however most adults which they had. More longitudinal research needed (128).

SUMMARY

Gender incongruent and gender dysphoric youth represent a vulnerable demographic with high rates of co-occurring psychiatric conditions and suicidal behavior, likely secondary to minority stress and dysphoria related to living in a body that does not match one's experienced gender. Prepubescent children with gender-variant behavior or identification are best supported with psychotherapy. For those children who continue to have strong cross-sex identification in adolescence, pubertal blockade, and cross-sex hormone therapy to align patients' bodies with their identities have been shown to improve mental health outcomes.

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TECHNICAL REPORT

Memo Outlining Evidence for Change for Gender Identity Disorder in the DSM-5

Kenneth J. Zucker · Peggy T. Cohen-Kettenis · Jack Drescher · Heino F. L. Meyer-Bahlburg · Friedemann Pfäfflin · William M. Womack

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Introduction

In 2008, when the diagnostic Work Groups for the DSM-5 were established and formally announced by the American Psychiatric Association, one of the first tasks was to review the existing diagnostic categories and to conduct literature reviews. The Gender Identity Disorders (GID) subworkgroup was one of three subworkgroups of the Sexual and Gender Identity Disorders Work Group. Like other working groups, its charge was to evaluate what was, if anything, "good" about the existing diagnosis of GID in the DSM-IV-TR and what, if anything, required changes. The subworkgroup published four literature reviews in which some initial proposals and recommendations were made (Cohen-Kettenis & Pfäfflin, 2010; Drescher, 2010; Meyer-Bahlburg, 2010; Zucker, 2010). The subworkgroup had feedback from its advisors, from other professionals, and from the public, including three periods of APA-sponsored feedback on the DSM-5 website.

Around mid-way during the DSM-5 preparation period, which ended on 1 December 2012, the Task Force added to the review phase two additional committees. One was a Scientific Review Committee (SRC) and the second was a Clinical and Public Health Committee (CPHC).

The SRC was charged with providing feedback on all proposed changes to the diagnostic criteria that were based on empirical evidence. The CPHC was charged with providing feedback with regard to additional parameters, such as clinical utility and public health concerns.

Each Work Group or subworkgroup of the DSM-5 Task Force justified the proposed changes of diagnostic categories in a report entitled Memo Outlining Evidence for Change (MOEC). With the permission of the American Psychiatric Association, we reproduce here the final version of the MOEC prepared by the GID subworkgroup ("in press" references have been updated and typographical errors corrected). Publication of the MOEC thus makes transparent the argumentation advanced by the subworkgroup for interested readers. Comments on the proposal are welcome in the form of a Letter to the Editor of this Journal.[1]

Memo Outlining Evidence for Change

Eleven substantive changes were proposed:

1. Change in name of the diagnosis from GID to Gender Dysphoria (GD).

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[1] Letters can be submitted to the Editor of *Archives of Sexual Behavior* at Ken.Zucker@camh.ca. Letters should be no more than 10 pages in length, double-spaced, with the use of APA reference style.

2. Decoupling of the GID diagnosis from the Sexual Dysfunctions and Paraphilias (Sexual and Gender Identity Disorders in the DSM-IV-TR) and placement in a separate chapter.
3. Change in the introductory descriptor to the Point A criterion.
4. Merging of what were the Point A and B criteria in the DSM-IV-TR.
5. For children, the A1 criterion is proposed to be a necessary indicator for the GD diagnosis.
6. For children, there are minor wording changes to the diagnostic criteria, especially A1–A6. The wording for A7–A8 has been simplified compared to DSM-IV-TR (examples will be given in the text).
7. For adolescents and adults, the proposed diagnostic criteria are much more detailed than they were in DSM-IV-TR and, like the proposed criteria for children, are polythetic in form.
8. For the Point B criterion (in the current diagnostic proposal for DSM-5), we have proposed a particular change in wording to capture distress, impairment, and increased risk of suffering or disability.
9. Elimination of the sexual attraction specifier for adolescents/adults.
10. Inclusion of a subtype pertaining to the presence (or absence) of a disorder of sex development (DSD). A DSD includes (but covers more than) what, in the past, were termed physical intersex conditions.
11. Inclusion of a "Post-transition" specifier (for adolescents/adults).

For each proposed change, we summarize the reasons and, when based on data, indicate the empirical basis that we believe justifies the change. For some of the proposed changes noted below, we relied on secondary data analyses utilizing the best data available to us since the DSM-5 Task Force did not include GID in its field trials.

Evidence for Change

Change in Name of the Diagnoses to GD in Children and GD in Adolescents and Adults

In response to criticisms in some quarters that the term GID was stigmatizing (Drescher, 2010), we originally proposed to replace it with the term Gender Incongruence. This was also accompanied by a re-definition of the condition (see the Point A descriptor in Tables 2, 3). The new term, Gender Incongruence, was descriptive and avoided any presupposition of the presence of clinically significant distress or impairment as a requirement for the diagnosis (Meyer-Bahlburg, 2010). In part, this presupposition was based on a more general discussion in the DSM-5 Task Force on separating out the distress/impairment criterion, with these parameters evaluated as separate dimensions (note, however, that it is very likely that the distress/impairment criterion will be retained in DSM-5, so this line of thinking by us has been abandoned—see below). The proposed change in name, and its rationale, was documented on the DSM5.org website in February 2010 at the time of the first round of commentaries by other professionals and the general public, including "consumers" of psychiatric services and by transgender communities and their supporters.

On the open APA website, we received many favorable comments about the proposed name change, particularly with regard to the removal of the "Disorder" label from the name of the diagnosis. We also had support for this name change in an international survey of consumer organizations that we conducted (Vance et al., 2010). However, we also received many comments from reviewers of the open APA website, as well as from members of the World Professional Association for Transgender Health (WPATH, formerly the Harry Benjamin International Gender Dysphoria Association), expressing concerns that the new descriptive term could easily be misread as applying to individuals with gender-atypical behaviors who had no gender identity problem.

Many commentators recommended "gender dysphoria" as a semantically more appropriate term (e.g., De Cuypere, Knudson, & Bockting, 2010) because it captures an aversive emotional component. In this regard, it should be noted that the term "gender dysphoria" has a long history in clinical sexology (see Fisk, 1973) and thus is one that is quite familiar to clinicians who specialize in this area. Thus, in our revised posting of May 4, 2011, we made public a second proposed change in the diagnostic term from GID to GD. This proposed name change is also consistent with the general argument that the diagnostic term should, in a more transparent way, indicate that it pertains to "distress" (dysphoria) and not identity per se (Knudson, De Cuypere, & Bockting, 2010). Indeed, in the September 2011 release of the 7th version of *Standards of Care* issued by WPATH (2011), the term gender dysphoria is used to outline both assessment and therapeutic approaches for children, adolescents, and adults.[2]

In summary, it is our view that the proposed name change from GID to GD will (1) highlight a conceptual change in the formulation of the diagnosis (which we will amplify in the text description of the diagnosis) and (2) satisfy critics concerned about the stigmatizing use of the "disorder" term in the name of the diagnosis. The proposed name change to GD has been quite favorably received during the second round of public postings, is acceptable to WPATH experts, and is consistent with some other diagnostic terms in the DSM, such as Anorexia Nervosa,

[2] Subsequently published in Coleman et al. (2011).

Encopresis, and Enuresis, which do not have the term "disorder" in the diagnostic name.

Decoupling of the GID Diagnosis from the Sexual Dysfunctions and Paraphilias

In the DSM-III, the GID diagnosis was placed in the section called Psychosexual Disorders, along with Paraphilias and Psychosexual Dysfunctions (now termed Sexual Dysfunctions). In the DSM-III-R, the three main GID diagnoses (GID of Childhood, Transsexualism, and GID of Adolescence or Adulthood, Nontranssexual Type) were moved to the section termed Disorders Usually First Evident in Infancy, Childhood or Adolescence whereas the Paraphilias and Sexual Dysfunctions appeared in the section termed Sexual Disorders. In the DSM-IV and DSM-IV-TR, the three major diagnostic classes (GID, Sexual Dysfunctions, and the Paraphilias) all appeared in the section termed Sexual and Gender Identity Disorders.

The placement of these three diagnostic classes in the same section in DSM-IV was probably influenced by several considerations, including clinical utility (e.g., that clinicians and researchers who study these phenomena tend to affiliate at common scientific meetings, tend to publish in the same periodicals, and probably have at least some familiarity with all of the conditions more so than clinicians and researchers who specialize in other areas of interest to psychiatry).

Yet, it is also recognized that each of these three diagnostic classes have their own specialists and the theoretical overlap among these conditions is far from complete. For example, sexual dysfunctions are of little direct relevance to GID as it manifests in children. Some critics have also complained that inclusion of GID in a section of the manual that also includes the paraphilias is somewhat stigmatizing.

Although there can be a co-occurrence of one paraphilia, Transvestic Fetishism, with GID in adolescents and adults, it was the consensus of the entire Sexual and Gender Identity Disorders Work Group that the three diagnostic classes be uncoupled, with each having a separate chapter in DSM-5. As of this writing, this recommendation has been accepted by the DSM-5 Task Force.

Change in the Introductory Descriptor to the Point A Criterion

In both GD of Childhood and GD of Adolescence and Adulthood, the proposed introductory descriptor reads as follows: "A marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months duration, as manifested by at least…" In the DSM-IV-TR, the introductory descriptor reads as follows: "A strong and persistent cross-gender identification (not merely a desire for any perceived cultural advantages of being the other sex)." The reasons for the proposed changes are as follows:

(a) The use of the term "incongruence" is a descriptive one that better reflects the core of the problem, namely, an incongruence between, on the one hand, the identity that one experiences and/or expresses and, on the other hand, how one is expected to live based on one's assigned gender (usually at birth) (Meyer-Bahlburg, 2010; Winters, 2005). In our view, this is preferable to the term "cross-gender identification" in that a strictly binary gender identity concept is no longer in line with the spectrum of gender identity variations that one sees clinically.

(b) The term "sex" has been replaced by assigned "gender" in order to make the criteria applicable to individuals with a DSD (Meyer-Bahlburg, 2009, 2010). During the course of physical sex differentiation, some aspects of biological sex (e.g., 46,XY genes) may be incongruent with other aspects (e.g., the external genitalia); thus, using the term "sex" would be confusing. The change also makes it possible for individuals who have successfully transitioned to the preferred gender to "lose" the diagnosis after satisfactory treatment (see Inclusion of a "Post-transition" specifier below). This resolves a problem that, in the DSM-IV-TR, there is no "exit clause," meaning that individuals once diagnosed with GID will always be considered to have the diagnosis, regardless of whether they have transitioned and are psychosocially adjusted in the identified gender role (Winters, 2008). The diagnosis without a post-transition specifier will still be applicable to transitioned individuals who have regrets, because they did not feel like the other gender after all. For instance, a natal male living in the female role and having regrets experiences an incongruence between the "newly assigned" female gender and the experienced/expressed (still or again male) gender.

(c) We recommend deletion of the "perceived cultural advantages" proviso. This was also recommended by our predecessor in the DSM-IV Subcommittee on GID (Bradley et al., 1991). There is no reason to "impute" one causal explanation (in this case, a cultural advantage hypothesis) for GD without mentioning any others (Zucker, 1992, 2010). Deleting this phrase would be consistent with a purely phenomenological approach that eschews any reference to putative underlying causal mechanisms with regard to the diagnostic criteria.

(d) The 6 month duration was introduced to make at least a minimal distinction between very transient GD (Linday, 1994) and persistent GD. The duration criterion was decided upon by clinical consensus. Unfortunately, there is no clear empirical literature supporting this particular period (e.g., 3 vs. 6 months or 6 vs. 12 months). There was, however, consensus in the GID subworkgroup that a lower-bound duration of 6 months would be unlikely to yield false positives.

Merging of the Point A and B Criteria from the DSM-IV-TR

In the DSM-IV-TR, there are two sets of clinical indicators (Criteria A and B). The descriptor for Criterion A was noted above. In DSM-IV-TR, the descriptor for Criterion B reads as follows: "Persistent discomfort with his or her sex or sense of inappropriateness in the gender role of that sex."

This distinction is not supported by factor analytic studies. The existing studies suggest that the concept of GD is best captured by one underlying dimension (Cohen-Kettenis & van Goozen, 1997; Deogracias et al., 2007; Green, 1987; Johnson et al., 2004; Singh et al., 2010; Zucker et al., 1998). Historically, it is of interest to note that our predecessor, the Subcommittee on GID (Bradley et al., 1991) for DSM-IV, had already recommended a merger of the Point A and Point B criteria based, in part, on secondary data analysis (Zucker et al., 1998). For reasons that were never made clear to the Subcommittee, this proposal was rejected. Subsequent to DSM-IV, factor-analytic studies continue to provide evidence in favor of one underlying factor. Mokken scale analysis also supported the merger of the Point A and B criteria (Paap et al., 2011).

For Children, the A1 Criterion Is Proposed to be a Necessary Indicator for the GD Diagnosis

In DSM-IV-TR, there are five symptom indicators for the Point A criterion, of which four (or more) are required to meet the threshold for diagnosis. The A1 criterion reads as follows: "repeatedly stated desire to be, or insistence that he or she is, the other sex." Given that four symptoms are required to meet threshold for Point A, it is possible that a child would meet threshold based on behavioral surface markers of "cross-gender identification," i.e., A2–A5. The DSM-IV Subcommittee on GID (Bradley et al., 1991) had argued that there might be a small number of children who showed all the signs of a GID (including the criteria from Point B) (see Table 1), yet did not express the desire to be of the other gender, perhaps because of reasons of social desirability, a harsh social environment, etc. It was therefore argued at the time that the desire to be of the other gender need not be a necessary symptom indicator.

As reviewed in Zucker (2010), some critics of the DSM-IV criteria were concerned that some children who showed pervasive cross-gender behavior (gender nonconformity or gender variance), yet who did not express a desire to be of the other gender, might be inappropriately diagnosed with GID (false positives).

In an attempt to address this criticism, Zucker (2010) conducted a secondary data analysis in which it could be shown that the expressed desire to be of the other gender correlated quite strongly with a series of cross-gender surface behaviors that correspond to the A2–A5 indicators in the DSM-IV. These analyses can be found in Zucker (2010, pp. 484–486). Subsequent to Zucker (2010), we conducted an identical analysis of child patients from a gender identity clinic in Amsterdam (headed by Dr. Cohen-Kettenis, the chair of the GID subworkgroup) and replicated quite precisely the findings reported on by Zucker (2010). These replication findings can be found in Figs. 1–4 of this document. To better understand them, the SRC would find it helpful to first read the findings reported on pp. 484–486 in Zucker (2010).[3]

It was, therefore, argued that, in DSM-5, the currently proposed A1 criterion be a necessary symptom in making the GD diagnosis. We contend that the presence of this symptom will, if anything, make the diagnosis more restrictive and conservative (Zucker, 2010). Given the critiques leveled at the DSM-IV

Table 1 DSM-IV-TR criteria for Gender Identity Disorder

A. A strong and persistent cross-gender identification (not merely a desire for any perceived cultural advantages of being the other sex).
In children, the disturbance is manifested by at least four (or more) of the following:
1. Repeatedly stated desire to be, or insistence that he or she is, the other sex
2. In boys, preference for cross-dressing or simulating female attire; in girls, insistence on wearing only stereotypical masculine clothing
3. Strong and persistent preferences for cross-sex roles in make-believe play or persistent fantasies of being the other sex
4. Intense desire to participate in the stereotypical games and pastimes of the other sex
5. Strong preference for playmates of the other sex
In adolescents and adults, the disturbance is manifested by symptoms such as a stated desire to be the other sex, frequent passing as the other sex, desire to live or be treated as the other sex, or the conviction that he or she has the typical feelings and reactions of the other sex.
B. Persistent discomfort with his or her sex or sense of inappropriateness in the gender role of that sex.
In children, the disturbance is manifested by any of the following: in boys, assertion that his penis or testes are disgusting or will disappear or assertion that it would be better not to have a penis, or aversion toward rough-and-tumble play and rejection of male stereotypical toys, games, and activities; in girls, rejection of urinating in a sitting position, assertion that she has or will grow a penis, or assertion that she does not want to grow breasts or menstruate, or marked aversion toward normative feminine clothing.
In adolescents and adults, the disturbance is manifested by symptoms such as preoccupation with getting rid of primary and secondary sex characteristics (e.g., request for hormones, surgery, or other procedures to physically alter sexual characteristics to simulate the other sex) or belief that he or she was born the wrong sex.
C. The disturbance is not concurrent with a physical intersex condition.
D. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
Specify if (for sexually mature individuals):
Sexually attracted to males
Sexually attracted to females
Sexually attracted to both
Sexually attracted to neither

[3] These figures are not reproduced here but can be found in Zucker (2010).

criteria, it was deemed that reduction of false positives is preferable to false negatives.

The subworkgroup has also recommended that "strong desire" replace "repeatedly stated desire" to capture some children who, in a coercive environment, may not verbalize the desire to be of the other gender. The text will note that the clinician needs to be attentive to the child's psychosocial environment in considering the presence of this symptom. This will afford the clinician some latitude in forming a judgment about the presence of the A1 indicator.

For Children, There are Minor Wording Changes to the Diagnostic Criteria

For the proposed A2–A8 criteria (see Table 2), there are minor wording changes. For A7 and A8, the wording has been simplified to capture the underlying construct. The desire for the anatomy of the other gender is separated from the rejection of one's own anatomy. Examples will be provided in the text.

Table 2 Proposed DSM-5 **criteria for Gender Dysphoria (in children)**

A. A **marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months duration, as manifested by at least 6 of the following indicators (including A1)**:

1. **A strong** desire to be **of the other gender** or **an** insistence that he or she is the other **gender (or some alternative gender different from one's assigned gender)**
2. In boys, **a strong** preference for cross-dressing or simulating female attire; in girls, **a strong preference for** wearing only **typical** masculine clothing **and a strong resistance to the wearing of typical feminine clothing**
3. **A** strong preference for cross-**gender** roles in make-believe play or **fantasy play**
4. **A strong preference for the toys,** games**, or activities** of the other **gender**
5. **A** strong preference for playmates of the other **gender**
6. **In boys, a strong rejection of typically masculine** toys, games, and activities and **a strong avoidance** of rough-and-tumble play; **in girls, a strong rejection of typically feminine toys, games, and activities**
7. **A strong dislike of one's sexual anatomy**
8. **A strong desire for the primary and/or secondary sex characteristics that match one's experienced gender**

B. **The condition is associated with clinically significant distress or impairment in social, school, or other important areas of functioning, or with a significantly increased risk of suffering such distress or disability.**

Subtypes

With a DSD

Without a DSD

The proposed changes are in boldface

For Adolescents and Adults, the Proposed Diagnostic Criteria are Much More Detailed than They were in DSM-IV-TR and, Like the Proposed Criteria for Children, are Polythetic in Form

In DSM-IV, the GID criteria for adolescents and adults were somewhat sketchy and, for some, even lacked a reference to intensity or frequency (e.g., "a stated desire to be the other sex"). This has been viewed as problematic (Zucker, 2006).

Although the DSM-IV diagnosis of GID encompasses more than transsexualism, it is still often used as an equivalent to transsexualism (Sohn & Bosinski, 2007). For instance, a man can meet the two core criteria if he only believes he has the typical feelings of a woman and does not feel at ease in the male gender role (see Table 1). The same holds for a woman who just frequently passes as a man (e.g., in terms of first name, clothing, and/or haircut) and does not feel comfortable living as a conventional woman. Someone having a GID diagnosis based on these subcriteria clearly differs from a person who identifies completely with the other gender, can only relax when permanently living in the other gender role, has a strong aversion against the sex characteristics of his/her body, and wants to adjust his/her body as much as technically possible in the direction of the desired gender. Those who are distressed by having problems with just one of the two criteria (e.g., feeling uncomfortable living as a conventional man or woman) will have a GIDNOS diagnosis. This is highly confusing for clinicians. It perpetuates the search for the "true transsexual" in order to identify the right candidates for hormone and surgical treatment instead of facilitating clinicians to assess the type and severity of any type of GD and offer appropriate treatment. Furthermore, in the DSM-IV, gender identity and gender role were described as a dichotomy (either male or female) rather than a multi-category concept or spectrum (Bockting, 2008; Bornstein, 1994; Drescher, 2010; Ekins & King, 2006; Lev, 2007; Røn, 2002). The current formulation makes it more explicit that a conceptualization of GD acknowledging the wide variation of conditions will make it less likely that only one type of treatment is connected to the diagnosis. Taking the above regarding the avoidance of male–female dichotomies into account, in the new formulation, the focus is on the discrepancy between experienced/expressed gender (which can be either male, female, in-between or otherwise) and assigned gender (in most societies male or female) rather than cross-gender identification and same-gender aversion (Cohen-Kettenis & Pfäfflin, 2010).

For the adolescent/adult criteria, we have, therefore, proposed a more nuanced description of the symptom indicators (see Table 3) and they have been written in a polythetic format.

Based on secondary data analysis, we suggest that the presence of at least two indicators (out of 6) is needed to meet the diagnostic criteria for GD. This was based on an analysis of 154 adolescent and adult patients with GID compared to 684 controls (Deogracias et al., 2007; Singh et al., 2010). From a 27-item

Table 3 Proposed DSM-5 criteria for **Gender Dysphoria (in adolescents/adults)**

A. A **marked incongruence between one's experienced/expressed gender and assigned gender, of at least 6 months duration, as manifested by at least 2 or more of the following indicators**:
1. A marked incongruence between one's experienced/expressed gender and primary and/or secondary sex characteristics (or, in young adolescents, the anticipated secondary sex characteristics)
2. A strong desire to be rid of one's primary and/or secondary sex characteristics because of a marked incongruence with one's experienced/expressed gender (or, in young adolescents, a desire to prevent the development of the anticipated secondary sex characteristics)
3. A strong desire for the primary and/or secondary sex characteristics of the other gender
4. A strong desire to be of the other gender (or some alternative gender different from one's assigned gender)
5. A strong desire to be treated as the other gender (or some alternative gender different from one's assigned gender)
6. A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one's assigned gender)
B. The condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning, or with a significantly increased risk of suffering, such as distress or disability
Subtypes
With a DSD
Without a DSD
Specifier
Post-transition, i.e., the individual has transitioned to full-time living in the desired gender (with or without legalization of gender change) and has undergone (or is preparing to have) at least one cross-sex medical procedure or treatment regimen, namely, regular cross-sex hormone treatment or gender reassignment surgery confirming the desired gender (e.g., penectomy, vaginoplasty in a natal male, mastectomy, phalloplasty in a natal female).

The proposed changes are in boldface. It should be noted that, for adolescents and adults, the criteria in DSM-IV-TR were written in a relatively vague manner and were not in polythetic format

dimensional measure of gender dysphoria, the Gender Identity/Gender Dysphoria Questionnaire for Adolescents and Adults (GIDYQ), we extracted five items that corresponded to the proposed A2–A6 indicators (we could not extract a corresponding item for A1). Each item was rated on a 5-point response scale, ranging from Never to Always, with the past 12 months as the time frame. For the current analysis, we coded a symptom as present if the participant endorsed one of the two most extreme response options (frequently or always) and as absent if the participant endorsed one of the three other options (never, rarely, sometimes). This yielded a true positive rate of 94.2 % and a false positive rate of 0.7 %. These findings suggest that the proposed diagnostic criteria will have a very high true positive rate and a very low false positive rate.

Regarding the A2 criterion, in referring to secondary sex characteristics, anticipation of the development of secondary sex characteristics has been added for young adolescents. Adolescents increasingly present at gender identity clinics requesting gender reassignment, before the first signs of puberty are visible (Delemarre-van de Waal & Cohen-Kettenis, 2006; Zucker & Cohen-Kettenis, 2008).

For the Point B Criterion (in the Current Diagnostic Proposal for DSM-5), We have Proposed a Particular Change in Wording to Capture Distress, Impairment, and Increased Risk of Suffering or Disability, Including "A Significantly Increased Risk of Suffering Such Distress or Disability"

This is based on a consensus in the subworkgroup that some adolescents who are planning gender change and are undergoing puberty-blocking hormonal therapy are not distressed when a clear path towards gender change is mapped out for them, but may become strongly distressed if parents or others try to strongly block this path.[4]

Elimination of the Sexual Attraction Specifier for Adolescents/Adults

In DSM-IV, for sexually mature individuals, there is a specifier pertaining to sexual attraction (sexual orientation): sexually attracted to males, sexually attracted to females, sexually attracted to both, sexually attracted to neither.

There is considerable evidence that the sexual attraction specifier (perhaps better characterized as a subtype) is associated with meaningful differences among GD adolescent and adult patients (see, e.g., Blanchard, 1994; Lawrence, 2010; Nieder et al., 2011; Smith, van Goozen, Kuiper, & Cohen-Kettenis, 2005; Zucker et al., 2012), such as age-of-onset of GD symptoms, degree of expression of cross-gender behavior in childhood, age at presentation for clinical evaluation, marital status, co-occurrence with Transvestic Disorder, etc. These findings likely reflect underlying differences in causal mechanisms among subgroups of GD patients.[5] This has been particularly so for natal males with GD, who show much more variability in their sexual attraction patterns than do natal females with GD (Kreukels et al., 2012). Lawrence (2010), among others, has provided an exhaustive review on this topic.

The subworkgroup reviewed this literature carefully and came to the conclusion that sexual attraction (sexual orientation) per se

[4] This proposal did not make its way into the DSM-5 (American Psychiatric Association, 2013). Instead, the DSM-5 adopted a common template with regard to distress/impairment across most diagnoses: "The condition is associated with clinically significant distress or impairment in social, school, or other important areas of functioning" or "The condition is associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning."

[5] "…differences in casual mechanisms…" could have been phrased as "differences in developmental pathways."

plays only a minor role in contemporary treatment protocols or decisions. This is very different from what happened clinically in the early years of gender-reassignment surgery decisions that were managed by psychiatrists in specialized gender identity clinics who would only provide treatment to individuals attracted to their own natal sex and would not endorse the medical creation of post-operative "homosexuals." This change in treatment protocols for adults is reflected in the recent Standards of Care issued by the WPATH (2011).[2] In the entire document, the term sexual orientation or sexual attraction is not even mentioned, suggesting a contemporary consensus that sexual orientation or sexual attraction is of minimal importance to treatment providers.

Although it is accurate to state, for example, that cases of "regret" after gender-reassignment surgery occur most often among natal males with a gynephilic or bisexual sexual orientation (e.g., Blanchard, Steiner, Clemmensen, & Dickey, 1989; Olsson & Möller, 2006), the absolute percentage of regrets is rather low (Gijs & Brewaeys, 2007; Green & Fleming, 1990; Pfäfflin & Junge, 1992, 1998). As a result, the subworkgroup has recommended deleting this specifier. Because sexual attraction (sexual orientation) subtyping is of interest to researchers in the field, it is recommended that reference to it be addressed in the text (but not as a specifier).[6] This recommended change (from a specifier to text) should also reduce the widespread suspicion,[7] especially in LGB (lesbian, gay, bisexual) circles, that the GID diagnosis was originally introduced into the DSM as a cryptic way to maintain the psychopathologization of homosexuality (Drescher, 2010; Zucker & Spitzer, 2005). Lastly, it is noted here that the Paraphilias subworkgroup, for the diagnosis of Transvestic Disorder, has recommended that there be a specifier termed With Autogynephilia (Sexually Aroused by Thought or Image of Self as Female) (Blanchard, 2010) or With Autoandrophilia (Sexually Aroused by Thought or Image of Self as Male) (see www.dsm5.org).

Inclusion of a Subtype Pertaining to the Presence (or Absence) of a DSD

In DSM-III, the presence of a DSD was not an exclusionary criterion for GD, but it became one in DSM-IV.

In the meantime, considerable additional evidence has accumulated that some individuals with a DSD experience GD and may wish to change their assigned gender; the percentage of such individuals who experience GD is syndrome-dependent (Cohen-Kettenis, 2005; Dessens, Slijper, & Drop, 2005; Mazur, 2005; Meyer-Bahlburg, 1994, 2005, 2009, 2010). From a phenomenologic perspective, DSD individuals with GD have both similarities and differences to individuals with GD with no known DSD (Meyer-Bahlburg, 1994, 2009; Richter-Appelt & Sandberg, 2010). Developmental trajectories also have similarities and differences. The presence of a DSD is suggestive of a specific causal mechanism that may not be present in individuals without a diagnosable DSD.

Inclusion of a "Post-transition" Specifier

For adolescents and adults, we proposed a new specifier provisionally labeled "Post-transition." The addition of this specifier is prompted by the observation that many individuals, after transition, do not meet any more the criteria set for GD; however, they continue to undergo chronic hormone treatment, further gender-confirming surgery, or intermittent psychotherapy/counseling to facilitate the adaptation to life in the desired gender and the social consequences of the transition. Although the concept of "post-transition" is modeled on the concept "in [partial or full] remission" as used for mood disorders, "remission" has implications in terms of symptom reduction that do not apply directly to GD. Cross-sex hormone treatment of gonadectomized individuals could, of course, be coded as treatment of hypogonadism, but this would not apply to individuals who have not undergone gonadectomy but receive hormone treatments. In the text, we will, however, also mention that the course specifier of "full remission" in its original meaning does apply to many children with the diagnosis of GD and, perhaps, to a small number of adolescents and adults.

Antecedent Validators

Familial Aggregation

Within sex, there is evidence that the broad construct of gender identity/gender role behavior has a heritable component along with evidence for both shared and non-shared environmental influences (Bailey, Dunne, & Martin, 2000; Elizabeth & Green, 1984; Iervolino, Hines, Golombok, Rust, & Plomin, 2005; Knafo, Iervolino, & Plomin, 2005; Mitchell, Baker, & Jacklin, 1989; van Beijsterveldt, Hudziak, & Boomsma, 2006). In terms of the more narrow construct of GID or GD, there is also evidence of a heritable component (Coolidge, Thede, & Young, 2002). In a review of the twin literature on GID, including unpublished case series from specialized gender identity clinics, concordance for GID was significantly higher among MZ twins than among DZ same-sex twins (Heylens et al., 2012). There is also some evidence that GID runs in families when one studies non-twin siblings (Gómez-Gil et al., 2010), but, in terms of absolute numbers, familiality among non-twin siblings is quite low.

[6] In Dr. Drescher's response to a query from the Board of Trustees, he wrote that "The absence of a sexual orientation specifier should not inhibit research in this area, any more than the absence of a 'gender specifier' for Major Depression or Schizophrenia inhibits research on sex differences in those (or any other) diagnostic categories."

[7] The word "concern" would have been preferable to "suspicion."

Sociodemographic and Cultural Factors

The prevalence of GD may well be higher among natal males than among natal females. In terms of referral rates in childhood (perhaps an indirect marker of prevalence), the sex ratio has favored boys to girls in a number of samples in the U.S., Canada, and the Netherlands (Cohen-Kettenis et al., 2003; Green, 1987). It is possible that the threshold for referral is lower in boys than in girls, since cross-gender behavior in boys is less tolerated than such behavior is in girls and subject to more social sanctions. However, in one study, the percentage of boys and girls diagnosed with GID was comparable (Cohen-Kettenis et al., 2003), but there is also some evidence that girls referred clinically for gender problems show more extreme behavior than boys on dimensional measures (Zucker, Bradley, & Sanikani, 1997a).

The sex ratio in referral rates, however, appears to narrow by adolescence but males still outnumber females (Garrels et al., 2000; Kreukels et al., 2012; Zucker & Lawrence, 2009; Zucker et al., 2012).

GD appears to be expressed in many cultures, including non-Western countries (e.g., Koon, 2002). In Samoa, for example, the fa'fafine constitute a kind of "third gender" category, who, from a phenomenological perspective, bear striking similarity to the Western category of transsexualism or GD. Fa'fafine are biological males who gradually transition to live in this labeled third gender category. The term itself translates into "in the fashion of a woman" (Bartlett & Vasey, 2006; Besnier, 1994). Interestingly, there is very little indication of a corresponding third gender category for natal females in Samoa.

Compared to base rates in the general population, clinic-referred boys with GD show an overrepresentation among adoptees (Zucker & Bradley, 1998) although it is quite likely that the rate is not higher than in clinic-referred children in general.

Individuals with specific DSD diagnoses are at heightened risk for GD. Chromosomal females who have been exposed to higher than normal levels of prenatal androgen, as in the case of congenital adrenal hyperplasia, have an elevated rate of GD compared to population base rates (Dessens et al., 2005). Chromosomal males with at least some degree of male-typical levels of prenatal androgen exposure, who are nevertheless assigned female at birth because of marked genital ambiguity, also show an elevated risk for GD as do chromosomal males with apparently normal prenatal androgen levels who are assigned female because of a congenital absence of the penis or its extremely poor differentiation as in the case of cloacal exstrophy (Meyer-Bahlburg, 2005).

Environmental Risk Factors

Boys with GD (both children and adolescents) have an excess of brothers and are later born among their siblings, particularly brothers (Blanchard, Zucker, Bradley, & Hume, 1995; Blanchard, Zucker, Cohen-Kettenis, Gooren, & Bailey, 1996; Schagen, Delemarre-van de Waal, Blanchard, & Cohen-Kettenis, 2012; Zucker et al., 1997b). Similar findings have been reported for adult males with GD, including Samoan fa'fafine (Blanchard & Sheridan, 1992; Gómez-Gil et al., 2011; Green, 2000; Poasa, Blanchard, & Zucker, 2004; VanderLaan & Vasey, 2011). This fraternal birth order effect, which has also been found repeatedly in gay men without GD, has been postulated to result from a progressive maternal immune response to male fetuses that affects the sexual differentiation of the brain but without affecting the sex-dimorphic differentiation of the genitalia (for review, see Blanchard, 2001; Bogaert & Skorska, 2011).

Boys with GD also have a lower birthweight after taking into account the number of older brothers (Blanchard et al., 2002).

Prior Psychiatric History

No data are available for this parameter.

Concurrent Validators

In providing an appraisal of concurrent validators, one line of evidence has been to identify variables in which there is a shift in the direction of the desired gender or a way from the natal gender. Although this model does not necessarily apply to all relevant validators, it is common enough to alert the reader to this underlying conceptual model (for a sketch of this conceptual model, see Meyer-Bahlburg, 2011).

Cognitive, Emotional, Temperamental, and Personality Correlates (Unrelated to the Diagnostic Criteria)

Boys with GD perform relatively more poorly on visual-spatial tasks than on verbal tasks taken from standardized IQ tests (Zucker & Bradley, 1995, pp. 167–171). Two studies of GD adults have also shown that sex-dimorphic cognitive ability patterns appear to be intermediate between that of control males and females (Cohen-Kettenis, van Goozen, Doorn, & Gooren, 1998; van Goozen, Slabbekoorn, Gooren, Sanders, & Cohen-Kettenis, 2002). In one fMRI study, Schöning et al. (2010) showed that GD adult males, during a spatial cognition task, had less activation of the left parietal cortex (BA 40) than control males.

Boys with GD have a lower parent-reported physical activity level (a sex-dimorphic dimension of temperament) than control boys whereas girls with GID have a higher parent-reported activity level than control girls. Indeed, parent-reported activity level of GD children is sex-inverted compared to control children (Zucker & Bradley, 1995, pp. 189–193).

Biological Markers

Genetics There are no published molecular genetic studies of GD patients. It is unusual to find an abnormal sex chromosome karyotype in patients with GD (Inoubli et al., 2011), but it is possible that the prevalence is elevated compared to base rates in the general population. Nonetheless, most specialized gender clinics do not routinely screen for abnormal sex chromosome patterns.

Hormonal Factors In adult natal females with GD, some reports suggested an elevated rate of polycystic ovary syndrome (e.g., Balen, Schachter, Montgomery, Reid, & Jacobs, 1993; Bosinski et al., 1997; Futterweit, Weiss, & Fagerstorm, 1986), including an astonishing prevalence of 56 % in one Japanese sample (Baba et al., 2007). One recent more rigorous methodological study using the Rotterdam 2003 criteria, however, suggested no elevated rate compared to controls (Mueller et al., 2008).

Sexual differentiation of the mammalian brain is influenced by prenatal sex hormone activity. Consequently, it has been hypothesized that abnormalities in genes that code for sex hormone receptors or for enzymes that catalyze the synthesis or metabolism of sex hormones might show associations with GD/transsexualism. Candidate genes include those coding for the androgen receptor (AR), estrogen receptor alpha (ERα), estrogen receptor beta (ERβ), and progesterone receptor (PR) and for the enzymes aromatase (CYP19), 17-alpha-hydroxylase (CYP17), and 5-alpha-reductase, type II (SRD5A2). Most studies have investigated differences between transsexual/GD patients and same-sex controls in mean repeat numbers of specific polymorphisms in candidate genes or in the frequencies of specific mutant alleles or genotypes. None have attempted to differentiate between transsexual/GD subtypes. In these studies, all of the probands studied were GD patients without a co-occurring DSD.

Henningsson et al. (2005) found no significant differences between GD males and same-sex controls for the AR or CYP19 genes, but did find a significant difference for the ERβ gene. Hare et al. (2009) examined the same three candidate genes in GD males and same-sex controls, but obtained different results: No significant differences for the CYP19 or ERβ genes, but a significant difference for the AR gene, albeit using a one-tailed test; a two-tailed test would have been non-significant (moreover, the "false positive" rate among the controls was substantial). Bentz et al. (2007) reported no differences between GD males and same-sex controls or GD females and same-sex controls for the SRD5A2 gene. Bentz et al. (2008) found no differences between GD males and same-sex controls for CPY17 alleles and genotypes, but did find a significant difference in the case of GD females and same-sex controls. Ujike et al. (2009) detected no significant differences between GD males and same-sex controls or GD females and same-sex controls for the AR, ERα, ERβ, PR, or CYP19 genes. In summary, there is mixed evidence at present that abnormalities related to molecular genetics account for GD/transsexualism: Most investigations have yielded negative results and most positive results have not been replicated by other investigators.

Neuroanatomy Luders et al. (2009) used MRI to compare regional gray matter volumes in 24 GD males (6 androphilic, 18 non-androphilic) and male and female control subjects; the pattern observed in the GD males more closely matched the male controls. Subsequent MRI studies, however, have been more suggestive of an intermediate pattern of sex-dimorphic neural structures between that of control males and control females (Rametti et al., 2011a, b; Savic & Arver, 2011). This has been shown to be particularly true for GD adults with an "early onset" (i.e., in childhood, not adolescence) of GD traits (Savic & Arver, 2011).

The central division of the bed nucleus of the stria terminalis (BSTc), a hypothalamic or limbic nucleus, is sexually dimorphic: significantly larger in men than in women. Zhou, Hofman, Gooren, and Swaab (1995) conducted a postmortem study of six GD males and found that mean BSTc was small in size and in neuron number and female-typical, a sex-reversed pattern. The GD males supposedly included both the androphilic and non-androphilic subtypes. Kruijver et al. (2000) studied the same six GD males and found that mean neuron number in the BSTc was also sex-reversed. Similar postmortem findings in a GD male who had never received hormone therapy suggested that cross-sex hormone therapy could not account for the sex-reversed pattern. Kruijver et al. proposed that "transsexualism may reflect a form of brain hermaphroditism" (p. 2041).

The validity of this putative marker was challenged by the discovery that the BSTc does not become sexually dimorphic until adulthood, long after the symptoms of GD typically appear (Chung, De Vries, & Swaab, 2002). Magnetic resonance imaging (MRI) studies also demonstrated that hormone therapy in MtF transsexuals was associated with significant reductions in the volume of the brain globally and the hypothalamus particularly (Hulshoff Pol et al., 2006). Hulshoff Pol et al. conjectured that, in the Zhou/Kruijver studies, "the altered size of the bed nucleus of the stria terminalis could have been due to the exposure of cross-sex hormones in adult life" (p. S108). Additional information about the sexual orientation of the six Zhou/Kruijver GD males, reported by Garcia-Falgueras and Swaab (2008), was consistent with the hypothesis that all were non-androphilic.

In another study of 11 GD males, Garcia-Falgueras and Swaab (2008) reported that the INAH-3 subnucleus of the hypothalamic uncinate nucleus was similar to that of control females with regard to volume and number of neurons.[8]

[8] The material in this section was drawn from Lawrence and Zucker (2012).

Cerebral Dominance and Anthropometrics Several studies have identified an elevated rate of left-handedness or non-right-handedness in GD boys and GD adult males (Green & Young, 2001; Zucker, Beaulieu, Bradley, Grimshaw, & Wilcox, 2001). However, it is not yet clear if this elevation is diagnostic-specific or characteristic of clinical populations in general. Note here that these findings, if valid, suggest an "exaggerated" male-typical pattern since natal males are more likely to be left-handed than natal females. Evidence for an elevation in non-right-handedness in GD adult females was also reported by Green and Young (2001).

The ratio between the length of the second and fourth digit (2D:4D) shows a strong sex-dimorphic pattern, with a smaller ratio found in natal males than in natal females. There is some evidence for a masculinized pattern of 2D:4D in adult females with GD, but the evidence is much more mixed with regard to adult males with GD (Wallien, Zucker, Steensma, & Cohen-Kettenis, 2008). One study did not find any evidence for an altered 2D:4D pattern in children with GD (Wallien et al., 2008).

Patterns of Co-morbidity

On standardized parent-report measures of behavior problems, such as the Child Behavior Checklist (CBCL), both boys and girls with GD in clinical samples have rates of behavior problems comparable to that of other clinic-referred children (especially when matched carefully for demographic factors) and higher than that of non-referred children, including siblings (Cohen-Kettenis et al., 2003; Zucker & Bradley, 1995). On the CBCL, boys with GD have a predominance of "internalizing" as opposed to "externalizing" behavior problems whereas for girls with GD the pattern is more equally distributed across these two broad-band types of behavior problems. Similar findings have been obtained using teacher ratings using the Teacher's Report Form variant of the CBCL (Steensma, Zucker, Kreukels, & Cohen-Kettenis, 2012; Zucker & Bradley, 1995). There is also some evidence that boys with GD have elevated rates of separation anxiety traits (Coates & Person, 1985; Zucker, Bradley, & Lowry Sullivan, 1996). Lastly, one study showed that children with GD had an elevation in skin conductance level, a physiological marker of anxiety, during a psychological challenge task (Wallien, van Goozen, & Cohen-Kettenis, 2007). Adolescents with GD have elevated rates of behavior problems on the Youth Self-Report Form variant of the CBCL compared to non-referred youth (de Vries, Postema, Steensma, & Cohen-Kettenis, 2011; Zucker et al., 2012). Adults with GD also have elevated rates of psychiatric problems although there is a great deal of variance as a function of method and measures (for review, see Lawrence & Zucker, 2012). There is now also emerging evidence of a relation between GD and autism-spectrum disorders (de Vries et al., 2010; Jones et al., 2012). This is of interest because both disorders are expressed early in development and both show a sex ratio that favors natal males.

Lastly, one important population-based matched cohort study found that the overall morbidity and mortality for GD patients was higher at follow-up than for same-sex controls (Dhejne et al., 2011). There was an increased risk for suicide attempts and a higher rate of psychiatric inpatient care. There was also a higher rate of death, particularly death from suicide.

The higher rate of psychiatric co-morbidity is likely related to a number of factors, including the stigma associated with having GD (e.g., peer ostracism, familial rejection, societal discrimination) as well as generic risk factors, such as the presence of various psychiatric disorders in first-degree relatives.

Predictive Validators

Diagnostic Stability

If one follows children with GD longitudinally, the "persistence" of GD into adolescence and adulthood is variable, ranging from 2 % to 50 % (e.g., Green, 1987; Drummond, Bradley, Badali-Peterson, & Zucker, 2008; Wallien & Cohen-Kettenis, 2008; Zucker, 2011; Zuger, 1984); however, relative to base rates of GD in the general population (however that may be defined), the persistence rate is markedly higher. It should be noted that these follow-up reports cannot be characterized as "natural history" studies, as the children were all seen in clinical settings and one could argue that clinician recommendations, involvement in therapy, etc. contributed, at least in part, to the high rate of "desistance." Nonetheless, that there is some indication of persistence provides evidence for diagnostic stability.

In adolescents and adults, there is considerable evidence of diagnostic stability. For many adolescents and adults, the gender-related distress does not lessen until there is treatment with contra-sex hormones and/or gender-reassignment surgery and the patient transitions to living in the preferred gender (Gijs & Brewaeys, 2007; Green & Fleming, 1990; Pfäfflin & Junge, 1992, 1998).

Course of Condition

The information here is similar to that for diagnostic stability. In general, it appears that the course of GD becomes more fixed over developmental time, with a narrowing of plasticity as affected individuals reach adolescence or adulthood.

Response to Treatment

By definition, full social transitioning and legal sex/gender reassignment make the diagnostic criteria no longer applicable, although these steps support the behavior pattern that was incongruent with the natal sex. These steps also usually reduce

or relieve the distress of the individual. Note that psychosocial and medical approaches that assist individuals with GD in transitioning to a life-style commensurate with their desired gender has no parallel in any other psychiatric category.

There is a great deal of empirical evidence that, in adolescents and adults, the institution of biomedical treatments, such as cross-sex hormonal therapy or gender-reassignment surgery, reduces the gender dysphoria (e.g., Cohen-Kettenis & van Goozen, 1997; Mate-Kole, Freschi, & Robin, 1990; Smith, van Goozen, & Cohen-Kettenis, 2001). Of course, such treatments would not be applied to clinical patients with other psychiatric conditions, so one cannot argue for specificity effects as one might attempt to demonstrate in a pharmacotherapy trial in which patients with diagnosis A respond to the medication, but patients with diagnosis B do not.

More in line with psychiatric treatment approaches in general, several studies and case reports suggest that some psychological treatment approaches may be associated with "desistance," i.e., reduction of cross-gender behavior and desires in children (for review, see Zucker, 2007). Yet, there are no randomized controlled studies in which some children with GD were given a particular treatment compared to a no-treatment comparison group or even a "sham" treatment.

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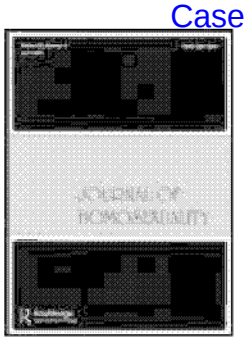

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A Developmental, Biopsychosocial Model for the Treatment of Children with Gender Identity Disorder

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This article provides a summary of the therapeutic model and approach used in the Gender Identity Service at the Centre for Addiction and Mental Health in Toronto. The authors describe their assessment protocol, describe their current multifactorial case formulation model, including a strong emphasis on developmental factors, and provide clinical examples of how the model is used in the treatment.

KEYWORDS gender, gender identity, gender identity disorder, gender identity disorder of childhood, gender identity disorder of adolescence, gender variance, transgender, transsexual, treatment

In this article, we will outline the therapeutic approach for children that has evolved in the Gender Identity Service, Child, Youth, and Family Program at the Centre for Addiction and Mental Health in Toronto. Since our clinic was established in the mid-1970s, we have evaluated a total of 590 children (age range, 2–12 years) who were referred to our service. In organizing this article, we will attempt to address the majority of questions provided to the contributors by the guest editors.

WHAT CONSTITUTES AN ASSESSMENT?

Tables 1–2 show the assessment protocol that we currently use in our clinic. As is the case for most children referred for a psychiatric and psychologic

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TABLE 1 Clinical assessment protocol

Interview schedule	Approximate duration
Telephone intake interview	.5–1.5 hours
Family interview	3 hours
Individual interviews with parents	2–5 hours/parent
Psychological testing of the child	4 hours
Individual interview with child	1 hour
Feedback session	1–2 hours

Note. In Canada, there is universal health care coverage. When a child is seen in a hospital setting, the Canadian health care plan covers the entire cost. A psychiatrist bills directly the health care system for all face-to-face contact. Psychologists who work in a hospital setting are paid an hourly rate, but do not bill the health care plan. For child psychiatrists in private practice, they also bill the health care plan for all face-to-face contact. Psychologists in private practice operate on a fee-for-service basis. Clients pay the psychologist directly. If they have private health insurance, at least some of the costs are covered by the individual health care plan.

TABLE 2 Psychological testing protocol and parent-completed questionnaires

Test/task/questionnaire	Comment/reference
Child measures	
IQ test	WPPSI-III or WISC-IV
Quality of attachment (mother-child observation)	Used with children 3–6 years of age. Cassidy and Marvin (1992)
Feelings, Attitudes, and Behaviors Scale for Children	Used with children 6–10 years of age. Beitchman (1996)
Youth Self-Report Form	Used with children 11–12 years of age. Achenbach and Edelbrock (1986a)
Rorschach	Zucker, Lozinski, Bradley, and Doering (1992)
Draw-a-Person test	Zucker, Finegan, Doering, and Bradley (1983)
Free play task	Zucker, Doering, Bradley, and Finegan (1982)
Playmate and Play Style Preferences Structured Interview	Fridell, Owen-Anderson, Johnson, Bradley, and Zucker (2006)
Color preference task	Chiu et al. (2006)
Gender Identity Interview for Children	Wallien et al. (2009) and Zucker et al. (1993)
Parent/teacher measures	
Separation Anxiety Interview schedule	Used for boys only. Zucker, Bradley, and Lowry Sullivan (1996)
Child Behavior Checklist	Achenbach and Edelbrock (1983)
Teacher's Report Form	Achenbach and Edelbrock (1986b)
Temperament questionnaire	Zucker and Bradley (1995)
Games Inventory	Bates and Bentler (1973)
Gender Identity Questionnaire for Children	Johnson et al. (2004)
Symptom Checklist-90	Derogatis (1983)
Dyadic Adjustment Scale	Spanier (1976)
Recalled Childhood Gender Identity/Gender Role Questionnaire	Zucker et al. (2006)

Note. We no longer use the two gender constancy assessment measures reported on by Zucker et al. (1999). The Children's Depression Inventory is used on an ad hoc basis.

assessment, a referral is invariably initiated on the part of parents or a health professional (e.g., the pediatrician, a family physician, a teacher or a mental health professional currently involved in the care of the child and the family). Upon receipt of the referral, the first phase in our assessment protocol is to conduct an intake telephone interview with a parent or another primary caregiver (e.g., a child protection worker). In this intake telephone interview, which varies between 30 and 90 minutes, parents provide information about why they have contacted us, their concerns, and their goals. We collect information about their child's gender development (asking questions about behaviors that correspond to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR, American Psychiatric Association, 2000) diagnosis of Gender Identity Disorder), whether there are other concerns about the child's socioemotional development (including other *DSM* diagnoses), previous mental health contacts, the child's physical health, and whether or not there is a family history of psychologic problems/psychiatric disorders. If a child has had previous mental health contacts, this information is requested for review prior to our own assessment. An intake interview is as follows:[1]

> An intake telephone interview was conducted with Zack's mother, lasting approximately 45 minutes. Ms. Aziz appeared to be quite distracted during the phone call, often excusing herself to attend to her children, who were heard screaming in the background. Zack, age 3, lives with his parents and 6-month-old sister. Both parents are employed full-time as managers of business firms.
>
> Ms. Aziz explained why the referral to our clinic was initiated. She described Zack as exhibiting an array of behaviors that she believes to be female-typical. For example, he will color his fingernails to mimic nail polish, will wear her shoes, wrap a blanket around himself to make a skirt, and appears to be very fascinated by jewelry. She said that she first noticed these behaviors just over a year ago and that they have increased since then. Ms. Aziz said that she initiated contact with our clinic to learn how to deal with these behaviors.
>
> Ms. Aziz stated that she believes that Zack knows that he is a boy and has a penis. She thinks that he notices the anatomical differences between himself and his sister. She said that she saw him "pushing his penis in" about 3 months ago. In terms of gender identity statements, Zack has said that he is a girl and that he wants to be a girl. Ms. Aziz said that she has responded to these statements by asking Zack, "Why?" Ms. Aziz explained that Zack is not able to express himself very well through speech, so has not been able to answer this question with clarity.
>
> Ms. Aziz said that Zack displays a range of behaviors, acting in a gender-typical fashion at times. He enjoys playing with other children and has both male and female friends. It was reported that Zack's best friend is a boy and, together, they will play in a rough-and-tumble manner. However, Ms. Aziz believes that Zack likes being around same-aged

girls more. With girls, Zack is said to be less active, sitting back and watching them with a look of fascination. He has made comments about liking the clothing of the girls in his class.

In terms of the feedback Zack has received regarding his cross-gender behaviors, Ms. Aziz said that she believes they have been inconsistent. Starting at the age of 1.5 years, Zack attended a daycare run by a woman, who Ms. Aziz thinks encouraged and taught some of his female-typical behavior because she found it "entertaining." For example, at this daycare, Zack was taught how to belly dance. Ms. Aziz sees the movements involved in belly dancing as being quite feminine and said that Zack enjoys showing them off. Zack's teachers have noticed some cross-gender behaviors but do not discourage them unless they are potentially harmful. For example, they will only intervene if they see him painting on his own skin.

Ms. Aziz said that her family identifies as Muslim. She explained that cross-gender behaviors are unacceptable in the Muslim faith, but said that their family is not very observant. Ms. Aziz has seen her husband get quite agitated by Zack's female-typical behavior and said that he "hates the idea" of Zack being girly. Mr. Aziz has made disapproving comments to Zack, like "you look silly" when he dresses up like a girl.

Ms. Aziz believes that she has contributed to Zack's gender confusion herself somewhat. Until recently, she has read him fairy tales like Cinderella, with female characters that Zack has seemed to really connect with. At first, she tried to ignore his cross-gender tendencies and not make any comments. However, she said that since reading online about Dr. Zucker's approach, she has tried to replace the feminine things that Zack is interested in with more masculine things. For example, she has taken away fairy tales and replaced them with stories about male characters, like Diego. Zack reportedly pays some attention to the newly introduced items, but appears to miss the female-typical things. Ms. Aziz said that he will throw a tantrum when something he likes is removed. For example, when his makeshift skirt was taken away, he cried and expressed that he wanted it back. She said that she still tries to remain neutral on the subject because she does not want to "cause harm," but has told him many times that he is a boy and has a penis.

Within the family, Zack is said to be closest with his mother, who has been his "primary caregiver." Ms. Aziz said that she has always been responsible for Zack's daily routine and she described Zack as being very attached to her. She has noticed separations from her, like when he goes to daycare, as being difficult for him. Zack is also said to be quite close with his grandmother, who is said to be very female typical. He often appears to be fascinated by her jewelry and makeup. She said that he just appears to like having someone around, even if he is playing by himself. He is also said to have a good relationship with his father. Together, they will read stories, build blocks, and ride bikes in the summer. Ms. Aziz said that Zack seemed to hate the idea of having a younger sister when she was pregnant. For example, he made a comment about sending the baby on a train to go to his aunt's house. Zack appears to have gotten used

to the idea of having a younger sister. Ms. Aziz stated that Zack loves his sister and will sometimes appear to be frightened that something bad might happen to her.

Ms. Aziz said that her relationship with her husband has been contentious at times. When Zack was 1.5 years old, Ms. Aziz and her husband had their biggest fight. Ms. Aziz described this fight as "traumatic," as Zack witnessed his father hold a gun to his mother's chest. As a result, the police were involved. Ms. Aziz said that she is not sure if Zack remembers this incident because he has not said anything about it, but she believes it might have affected him. This fight was an isolated episode in terms of magnitude, but there have been other instances of argumentativeness. Zack is said to always take his mother's side in these arguments, asking his father why he is being "bad to mommy."

Ms. Aziz's pregnancy with Zack was the result of in vitro fertilization. He has been exposed to three languages all at once, so she believes that his speech has been slow to progress as a result. When asked why she thought Zack displayed these cross-gender behaviors, Ms. Aziz cited many environmental explanations. She said that she thinks it is likely related to his attachment to her. She noted that he sees her all the time and that she has always been the one to take care of his routine. She said that, although she does not see herself as being very "girly," she thinks that she has encouraged his identification with females by reading him fairy tales. Ms. Aziz also believes that his daycare provider is somewhat responsible for teaching and encouraging female-typical behaviors. Finally, she thinks that he is more likely to behave in this way if he is "lacking attention" or bored.

Prior to the assessment, parents are provided with information about the temporal course of the assessment (typically 3–4 visits) and what it will involve. Parents are asked what they will inform their child about the assessment, who they are going to see, and why they are coming to see us. In our experience, this is an important phase in the assessment process in terms of establishing appropriate assessment rapport, particularly with anxious parents. For the majority of parents, they do not have a particular difficulty or problem in explaining to their child that they are coming to see some "talking doctors who know a lot about families" (a script that we suggest). They are able to frankly discuss with their child that they are coming to see a talking doctor to understand better why their child wishes to be of the other gender. This is usually because the issue has been on the table within the family environment.

There are, however, a minority of parents who are very uncertain and torn about what to tell their child. A common comment is, "I don't know what to tell him. I don't want him to think that there is anything wrong with him." Our suggestion for these parents is to, first, state that the issue is not a matter of right or wrong. Rather, the issue is to understand better why their child feels the way that he or she does and the purpose of the assessment is to determine how to best help them and their child. For these parents,

we have found this suggestion to usually be helpful and they might be able to say something like, "You know how you have been telling mommy that you want to be a girl, that you like 'girls' toys,' that you like to dress-up in mommy's clothes? Well, mom and dad want to understand better how you are feeling about yourself and we are going to go and see some talking doctors who know a lot about kids." In our experience, almost all reluctant parents who contact us are able to provide this information. However, for the very small minority who cannot provide this information due to severe anxiety or ambivalence, we will meet only with the parents. If after meeting us, they are comfortable bringing their child, the usual assessment protocol follows. If not, the assessment is conducted only with the parents. Since 1975, only five assessments were conducted only with parents.

The assessment protocol usually allows us to acquire enough information to decide whether or not the child meets the DSM criteria for Gender Identity Disorder (GID) and any other psychiatric disorder. Multiple sources of information are used, including the open-ended material gleaned from the clinical interviews, a review of the psychological testing of the child, and an examination of the relevant parent-report questionnaires. The assessment also attempts to understand the general functioning of the family matrix (e.g., the parent's relationship, parent-child relationships, sibling relationships, etc.) and how the child is functioning at school, in the peer group, etc. An effort is made to gain an understanding of how the parents have made sense of their child's gender development (e.g., its origins), how the parents have responded to their child's cross-gender behavior prior to the assessment, what goals the parents have with regard to their child's gender development, and so on.

ON WHAT BASIS IS IT DECIDED THAT TREATMENT IS INDICATED?

Prior to providing parents with feedback, we have a case formulation conference among the team members involved in the assessment. It is obvious that a case formulation requires some type of conceptual model to guide it. Accordingly, we will comment here on some of the parameters that underlie what we would like to characterize as a developmental, biopsychosocial model that we use in case formulations and in generating treatment decisions and recommendations. It is a model informed by a variety of theoretical and empirical advances that have emerged in the clinical and scientific literature over the past several decades.

1. Is gender identity fixed and unalterable in childhood? For the vast majority of children, it is probably safe to say that gender identity is a stable trait. A girl who "has" a female gender identity at age 3 is very much likely to have a female gender identity at age 13, at age 23, and so on

throughout the life course. In this sense, one might argue that the gender identity at age 3 was fixed and unalterable. But, for most children, no one tries to alter their gender identity after it is first expressed, for a host of psychological and social reasons. To formally answer the question of whether or not a young child's gender identity is fixed and unalterable, one would have to conduct a randomized psychosocial trial in which, for half the children, some type of intervention was attempted to alter the child's gender identity. It is unlikely that such an "experiment of nurture" would attract many volunteer parent participants.

For children who present clinically with the diagnosis of GID, long-term follow-up studies suggest that their gender identity is not necessarily fixed. The majority of children followed longitudinally appear to lose the diagnosis of GID when seen in late adolescence or young adulthood, and appear to have differentiated a gender identity that matches their natal sex (Drummond, Bradley, Badali-Peterson, & Zucker, 2008; Green, 1987; Singh, Bradley, & Zucker, 2010; Wallien & Cohen-Kettenis, 2008; Zucker, 2008a).[2] In this sense, one could argue that their childhood gender identity was alterable—that there was plasticity and malleability—although the mechanisms that underlie this change are far from fully understood. Thus, when we provide feedback to parents about their child's gender identity, we make use of the empirical information that is currently available about "natural history."

2. In our view, gender identity development can be best understood using a multifactorial model that takes into account biological factors, psychosocial factors, social cognition, associated psychopathology, and psychodynamic mechanisms. In the model, biological factors (e.g., possible genetic factors, prenatal sex hormones, temperament) are conceptualized as possible predisposing factors for the expression of a particular gender identity phenotype. They are not conceptualized as fixed factors leading to invariant gender identity differentiation across developmental time. The other parameters can be conceptualized as predisposing, precipitating or perpetuating factors.

Biological Factors

Let us use a dimension of temperament (activity level; AL) as an example of a possible predisposing biological factor. Activity level, the propensity for intense physical energy expenditure and the proclivity for rough-and-tumble play, is a sex-dimorphic trait, with likely genetic and prenatal hormonal influences (Campbell & Eaton, 1999; Eaton & Enns, 1986). Via a parent-report measure, we have shown that AL is inverted in children with GID: Boys with GID have a lower AL than control boys and girls with GID have a higher AL than control girls. Indeed, girls with GID have a significantly higher AL than boys with GID (Zucker & Bradley, 1995). If one construes

AL as a temperamental trait, one could conceptualize, for example, a boy with a low AL to find the behaviors of girls, on average, as more compatible with his own temperamental style than the behaviors of boys and could, conceivably, lead to a greater affiliation with girls regarding sex-of-playmate preference. In turn, this could lead to a greater interest in the toys and activities of girls which could, in theory, have a feedback effect on the child's gender identity, especially during early development when cognitive reasoning is fairly rigid and black and white.

> Frank was a 7-year-old boy who met the *DSM* criteria for GID. In contrast to his two brothers, Frank was described by his parents as more sensitive and emotional. He had a long history of an avoidance of rough-and-tumble play, complaining that other boys were both mean and aggressive. Indeed, one of his brothers, who had a history of severe disruptive behavior, had often been mean and aggressive towards him. The problematic relationship with his brother appeared to generalize to Frank's view of all boys, as he complained that all boys were mean. He affiliated primarily with girls and, with them, engaged in a variety of stereotypical feminine activities. By age 5, he began to voice the wish to be a girl, stating that if he were a girl, then all of his problems would be solved.
>
> If one conceptualized Frank's sensitive temperament as a predisposing, presumably biological factor, one could argue for an intervention that, in part, would focus on helping Frank recognize that there are a variety of ways to be a boy and that there are likely some boys in his social environment who are not pervasively mean or aggressive. Exposure of Frank to other boys whose temperament was more a match to his own could, in theory, help him to develop a more nuanced understanding of gender: that there are different ways to be a boy, that one does not have to be a girl as a fantasy solution to cope with his difficulties with his aggressive brother or the more boisterous boys in the school environment, and so on.

Psychosocial Factors

Psychosocial factors constitute a second parameter in case formulation. One example pertains to the parental response to cross-gender behavior as it emerges early in development. In our view, it is common for the initial parental response to cross-gender behavior to be either neutral or encouraging (reinforcement). Early cross-gender behavior is often viewed by parents as either cute or only a phase.[3] For some parents, they seek out a clinical assessment only after some kind of threshold is crossed, and they now no longer believe that the behavior is cute or only a phase (Zucker, 2000). The threshold might pertain to emergent social ostracism in the peer group, the child's intense verbalization that he or she either is or wants to be the

other gender, or other factors. In our case formulation, parental neutrality or encouragement of cross-gender behavior is viewed as a perpetuating factor (in relatively rare cases, in which, e.g., the mother overtly cross-dresses her son, acting out her desire for a daughter, such behavior could be viewed as a precipitating factor).

> Roy was a 4.5-year-old boy with a two-year history of pervasive cross-gender behavior. At the time of assessment, Roy did not express the wish to be a girl; rather, he insisted that he was a girl. Since he first began to display signs of cross-gender behavior, the parental response was to "go with it." They bought him stereotypical girls' toys, allowed him to wear his mother's clothes on a daily basis, and would often videotape his activities when he dressed up as a girl. Apart from his gender identity development, the parents identified one other major concern about his socioemotional development, namely that he would have intense and extremely disorganized temper tantrums when frustrated. During these episodes, he was experienced as inconsolable. By history, the parents reported that they had never "challenged" Roy when he insisted that he "was" a girl. They came to the assessment wanting to know if this was "really who Roy was" and if they were doing the "right thing" by allowing Roy to consistently enact behaviors that allowed him to, in effect, see himself as a girl.

Social Cognition

In the literature on normative gender development, it has long been noted that young children do not have a full understanding of gender constancy. Gender constancy refers to a child's cognitive understanding that gender is an invariant part of the self. It has been argued that in the early stages of gender constancy (e.g., the capacity to self-label oneself as a boy or a girl or to understand the constancy of gender over time) that children do not fully understand its invariance. Until children develop the capacity for concrete operational thought, typically between the ages of 5 and 7 years, they often conflate gender identity with surface expressions of gender behaviors (Kohlberg, 1966; Ruble, Martin, & Berenbaum, 2006). Thus, it is not particularly unusual for a 4-year-old girl to express the belief that, if she wore boys' clothes and engaged in boys' activities, then this would mean that she was a boy. It has also been reported in the normative gender development literature that younger children tend to have more rigid beliefs than older children about what boys and girls can do or should do (Ruble et al., 2006). In our own research, we have reported that children with GID appear to have a developmental lag in gender constancy acquisition (Zucker et al., 1999). Although it is unclear if this developmental lag can be understood as a predisposing factor, it can certainly be understood as a perpetuating

factor (e.g., pervasive enactments of surface cross-gender behaviors could contribute to the maintenance of cognitive gender confusion).

In some respects, gendered social cognition provides a window into how children with GID construct a subjective sense of self as a boy or as a girl. For example, when asked why he wanted to be a girl, one 7-year-old boy said that it was because he did not like to sweat and only boys sweat. He also commented that he wanted to be a girl because he liked to read and girls read better than boys. An 8-year-old boy commented that "girls are treated better than boys by their parents" and that "the teacher only yells at the boys." His view was that, if he was a girl, then his parents would be nicer to him and that he would get into less trouble at school. One 5-year-old boy talked about having a "girl's brain" because he only liked Barbie dolls. In this particular boy's treatment, he created drawings of his own brain, writing in examples of what made his brain more like a girl's brain and what made his brain more like a boy's brain (e.g., when he developed an interest in Lego). Over time, the drawings of the size of his girl's brain shrunk and the size of his boy's brain expanded.

It could, of course, be argued that gendered social cognition is merely an epiphenomenon of a more fundamental developmental process pertaining to gender identity, that is, it is simply a way that children attempt to explain to themselves their gender identity. On the other hand, it could be argued that young children's limited understanding of gendered social cognition calls for caution in assuming how fixed their gender identity is and that, with development, some children will develop a more flexible understanding that there are different ways one can be a boy or a girl.

Co-Occurring Psychopathology

When there is co-occurring psychopathology in children with GID, it can be understood in several ways: a) as a result of social ostracism; b) as related to generic family risk factors for psychopathology; and c) as a possible cause of the GID. Regarding this last possibility, Coates and Person (1985), for example, argued that severe separation anxiety preceded the expression of feminine behavior in GID boys, which emerged in order "to restore a fantasy tie to the physically or emotionally absent mother. In imitating 'Mommy' [the boy] confuse[s] 'being Mommy' with 'having Mommy.' [Cross-gender behavior] appears to allay, in part, the anxiety generated by the loss of the mother" (p. 708).

In recent years, various clinicians working with children with GID have noted that some of these youngsters also appear to show signs of autism spectrum disorder (ASD), particularly at the high-functioning end of the spectrum. This clinical observation, which is now supported by some systematic empirical data (de Vries, Noens, Cohen-Kettenis, van Berckelaer-Onnes, & Doreleijers, 2010), opens up another avenue regarding the role of

associated psychopathology in children with GID. In our experience, children with GID generally show intense, if not obsessional, interests, in cross-gender activities. This propensity for intense interests may be magnified even further in those youngsters with a co-occurring ASD. Thus, a bridge between GID and ASD may be the predisposition for obsessional or focused interests and extreme rigidity in thinking. Moreover, any attempt to interfere with the obsessionality may evoke intense anxiety. It is common for parents of these youngsters to report a series of obsessions (e.g., with a particular color, with a particular book that must be read over and over in ritualistic fashion, with specific objects, such as washing machines, vacuum cleaners, etc.).

Gender can become a site for obsessionality, perhaps a magnification of intense interests in typically developing children (DeLoache, Simcock, & Macara, 2007). One 5-year-old boy with co-occurring GID and ASD had many obsessional interests that preceded his gender obsession. Unlike his earlier obsessions, which the parents tried to ignore, they were less certain if they should ignore his gendered obsessions and, thus, bought him an array of girls' toys and allowed him to wear his mother's clothes on a daily basis. At the time of assessment, this youngster had been insisting that he was a girl and, at school, where gendered line-ups were common, would join the girls in their line. In the course of the assessment, the mother reported that he was now developing a new obsession: "He now thinks that he is a computer." She thought that this was preferable to him believing that he was a girl. The child psychiatrist who has followed this youngster reported that, at age 12, the symptoms of GID had remitted. At age 12, this youngster had an "obsession" with male heavy metal rock stars (a particular musical genre) and wore his hair long to emulate them.

> David was referred at the age of 5 by a child psychiatrist, following remarks to his parents that he wished to be a girl and to cut off his penis. Apart from a GID, David had a number of socioemotional difficulties, including persistent and pervasive struggles with self-regulation, behavioral rigidity, obsessive behaviors, anxiety, and poor social functioning. In our assessment, we concluded that he met criteria for Asperger's Disorder. Play therapy was initiated to help explore David's gender dysphoria. As appropriate, additional therapeutic strategies were drawn upon in order to support the development of self-regulation (e.g., with regard to sexualized behavior directed towards the therapist, temper tantrums), social skills, and the management of areas of obsessive focus. In the therapeutic context, struggles with the parent-child relationship, self-concept, peer relations, and anger and guilt were consistent themes.
>
> Over the course of four years in therapy, David evidenced a strong tendency towards obsessions/restricted interests (e.g., trains, airports, certain television shows, and book series), with each lasting between 3 to 6 months in duration. The gender-related preoccupation stood out in terms of its relationship to identity. The gender dysphoria began to

wane around age 7. At age 9 years, in the 112th therapy session, David initiated discussion about his history of obsessions/restricted interests. He requested that his therapist write out each of his areas of interest (in chronological order) and he proceeded to summarize the "rationale" behind each. Early in the list placed his preoccupation with cross-gender materials. David paused on this area and reflected it had carried special meaning for him. He went on to say that this may have been more than just an interest in this topic area, and that, in fact, he had wanted to *be* a girl. He reflected on the reinforcing aspects of many of the feminine interests and behaviors (e.g., the feeling of pretend long hair, how "beautiful" things looked, etc.), with a focus on the associated visual and tactile stimulation. When asked about his understanding of his involvement in therapy, starting at age 5 years, David reflected that his parents may have been concerned about his desire to be a girl, as they knew that he was "really a boy." He recalled his parents' efforts to curtail his cross-gender behaviors by limiting his time and access. He discussed his belief that this was not the right approach, and that they should have just allowed him to grow out of this interest, as he had all of the previous and subsequent ones.

In reflecting on his development of gender dysphoria, David discussed his experience of bullying from peers for his gender atypical areas of interest. He speculated that, in many ways, his desire to become a girl may have been an effort to avoid the bullying from peers. David again reiterated the very reinforcing aspects of many of his female-typical interests. Finally, he reflected on his negative feelings about himself and his behavior and we considered his gender dysphoria as an effort to cope with these feelings. David continues to demonstrate a tendency towards preoccupations but, at present, has no symptoms characteristic of GID. He continues to benefit from therapeutic support for self-regulation, social skills, and management of his restricted interests/preoccupations.

Psychodynamic Mechanisms

Psychodynamic mechanisms can be understood, in part, as a transfer of unresolved conflict and trauma-related experiences from parent to child. Sometimes these kinds of experiences are consciously recognized by parents (but, nonetheless, acted out), but certainly not always. Children, themselves, may vary in their understanding of what drives their behavior.

Tom was a 4-year-old boy with an approximate one-year history of pervasive cross-gender behavior, including the repeated wish to be a girl. Tom's mother was an intense, volatile, and extremely anxious woman, with strong narcissistic personality traits. She viewed Tom as a perfect child, until he began to express the desire to be a girl. She then experienced Tom as less than perfect, which, for her, was a severe narcissistic

injury. Tom's father played little role in his day-to-day life, working 18-hour days, 7 days/week.

We understood Tom's GID to develop in the context of the birth of his younger sister when he was just shy of his third birthday. He felt abandoned by his mother, who seemed to transfer much of her psychologic investment to the sister. She adorned the baby sister in pink (in early therapy sessions with Tom, he only used the color pink in his numerous drawings). In part, we conceptualized Tom's GID as the result of feeling an intense psychologic abandonment by his mother and an intense jealous rage towards his sister ("If you could be a girl like Suzie, then mom would pay more attention to you"). In our view, one of the factors in helping Tom work through his gender identity conflict was to make him more conscious of his jealous feelings and how they organized his day-to-day life within the family matrix.

Rose was a 9-year-old girl with a long history of cross-gender behavior, including the strong desire to be a boy. Rose was raised by her biological mother. At the age of 4, Rose discovered her mother's body at the bottom of the staircase. She had been murdered by a boyfriend. For various reasons, there were no biological relatives to care for Rose and so she was adopted at the age of 6.

At the time of assessment, Rose looked like a boy, based on her hairstyle and clothing style. During the assessment, Rose commented that she wanted to be a boy because boys were stronger than girls. She told her adoptive mother that when they walked down the street together that her mother need not be afraid, because "I look like a boy and no one will hurt you." Rose acknowledged that she has had the recurring thought that, had she been a boy, then she would have been able to protect her mother from the boyfriend because "boys are stronger than girls."

We conceptualized Rose's desire to be a boy as an unusual symptom emanating from a Post-Traumatic Stress Disorder. Perhaps due to the rigid normative social cognitions about gender, Rose had constructed, for herself, an unusual fantasy solution: had she been a boy ("because" boys are stronger than girls), she could have saved her mother's life.

In the case of Roy described above, one issue that was discussed in the case formulation conference was why the parents had never attempted to tell Roy that he was, in fact, "a boy." We wondered about why the parents were so "paralyzed" in this regard. One element of the family history that seemed relevant was that his mother had been subject to a long history of psychological and physical abuse by her father. We wondered if any signs of more boy-typical behavior on Roy's part might be conflated with viewing him as an "abuser-in-the-making," like her own father. In addition, Roy's mother had been subject to very severe peer ostracism during her own childhood (e.g., being made fun of because she wore glasses, had dental problems, etc.). These experiences were extremely difficult for her and she cried profusely (30 years

later) as she described them. She worried that, if she said anything to Roy about his insistence that he was a girl, he would experience this in the same traumatic way that she experienced the peer group teasing in her own childhood. Roy's father also had had a lot of difficult experiences in the peer group because of a speech impediment and he was also extremely worried that if he said anything to Roy about his girlish behaviors that Roy would experience this as representing a "defect," just like he experienced his speech problem as a defect.

Jim was the last of four boys born to a middle-class family. When seen at age 4, he had a strong desire to be a girl. Jim's mother acknowledged a very strong wish for a daughter, as she knew that this was her "last chance." Although rare, Jim's mother's reaction to giving birth to a fourth son was consistent with what we have characterized as pathological gender mourning (Zucker, Bradley, & Ipp, 1993). She became deeply depressed after his birth, wanting little to do with the baby for a couple of weeks. She had florid dreams about having given birth to a daughter. When Jim was a year old, her female friends bought her a life-sized female baby doll. As far as we could tell, Jim's mother had little insight into the significance of this gift. She asked plaintively, "Do you think it's because my desire for a daughter was so apparent to my friends?"

In the case formulation conference, we wondered whether or not it would be useful to organize treatment for the mother around helping her to understand the meaning of the wish for a daughter and what it represented for her and to help her mourn the loss of having given birth to a child of the non-preferred gender. We also wondered how the mother's disappointment/despondency might have been transmitted to Jim across his development.

WHEN TREATMENT IS INDICATED, WHAT ARE THE RATIONALES AND GOALS FOR TREATMENT AND, AS SPECIFICALLY AS POSSIBLE, HOW DOES TREATMENT PROCEED?

When treatment is recommended, it might include the following: a) weekly individual play psychotherapy for the child; b) weekly parent counseling or psychotherapy; c) parent-guided interventions in the naturalistic environment; and d) when required for other psychiatric problems in the child, psychotropic medication. The goals for treatment are formulated on a case-by-case basis. In some cases, the focus might be only on the child's GID, as the child shows little in the way of associated psychopathology and the parents are generally functioning well. In other cases, the focus of treatment is much broader: If the child has other significant socioemotional problems

and if the parents have significant psychopathology or marital discord, then these issues also need to be addressed.

If the parents are clear in their desire to have their child feel more comfortable in their own skin, that is, they would like to reduce their child's desire to be of the other gender, the therapeutic approach is organized around this goal. Any co-occurring psychopathology is also treated and the approach depends heavily on the understanding of the sources of the associated psychopathology. If parents are uncertain about how best to address their child's GID, we offer to address this further in the course of therapeutic sessions and will suggest to the parents that we hold off on making any specific decisions about intervention options. Table 3 provides a summary of treatment recommendations and disposition for 26 children evaluated in 2008.

When we conduct open-ended play psychotherapy (or simply talk therapy) with children, like any psychotherapeutic intervention for any issue, therapy begins with educating the child about the reason that they are in therapy. This is tailored to the child's developmental level and cognitive sophistication. Some children are simply told that they are going to meet with an individual therapist to understand better their gender-related feelings and, during sessions, they are free to play with whatever they want (boys' toys, girls' toys, dress-up clothing, neutral and educational activities, etc.), to draw, to talk about day-to-day life, to report on their dreams, and so on. Principles of confidentiality are reviewed.

For other children, they have a very sophisticated understanding of why they are in treatment and the educative process is less formal. One 4-year-old girl, for example, had actually asked her parents to take her to see a therapist (she was very intelligent) because she was confused about why she wanted to be a boy. After the assessment, she seamlessly entered into a therapeutic process about her gender feelings. Other children are substantially more guarded and require a much longer period of time before they are comfortable discussing their feelings. One 3-year-old boy, for example, in the course of a two-year treatment, was never able to talk about his day-to-day life with his therapist: It was all enacted literally via play with repetitive family scenarios in which he labeled the characters as himself and his parents. In both of these cases, the GID remitted in full.

Individual open-ended psychotherapy enables many children with GID to discuss and to play out their gender identity issues, it affords them the opportunity to make sense of their internal representational world, and, in general, to master various developmental tasks with which they may be struggling. There is a reasonably large psychoanalytic case report literature on GID, for which the interested reader can glean some good examples of the process of open-ended psychotherapy (see Zucker, 2006a, 2008b; Zucker & Bradley, 1995).

TABLE 3 Treatment recommendations for cases evaluated in 2008 ($N = 26$)

ID	Sex	Age	Individual Therapy	Parent Therapy	Medication	Other	Comment
1	F	10	No	Yes	On Concerta for ADHD prior to assessment	Support provided to child by school psychologist	Diagnosed with ODD and ADHD Outpatient services difficult to access in community
2	F	7	Yes	Yes	Consult recommended for ADHD	Feedback provided to school psychologist	Dropped out of treatment; mother sought advice from a nurse practitioner who specialized in naturopathy; significant discord between parents, who were separated; diagnosed with ODD and ADHD
3	F	5	Yes	Yes	No		Mourning the sudden death of father was one focus of treatment
4	M	6	Yes	Yes	Consult recommended for ADHD	In day treatment for behavioral problems (diagnosed with ODD and ADHD)	Father seen in counseling; mother refused treatment (has bipolar disorder and on long-term disability); parents separated; father has custody
5	M	9	No	No	No		Sibling of ID 2; subthreshold for GID; feminine behaviors of no concern to mother; father "denies" observing any feminine behaviors
6	M	5	No	Yes	No	Feedback provided to school psychologist and to child protection agency	Subthreshold for GID; behavioral problems at school; in foster care

7	M	3	No	No	No	Recommendations to parents for interventions in naturalistic environment	Family lives in a small town, with no mental health resources available
8	M	7	No	No	No	Recommendations to parents for interventions in naturalistic environment	Parents wanted to try interventions on their own prior to considering formal therapy
9	M	6	Yes	Yes	No	Recommendations to parents for interventions in naturalistic environment	When informed that the "odds" of persistent gender dysphoria were quite low for the patient, the mother "sobbed" with relief. She did not feel that formal therapy was, therefore, required, that she could "handle the rest" on her own.
10	M	8	Yes	Yes	No		Referred for immediate surgery for undescended testicles
11	F	12	Yes	Yes	On Celexa, Strattera, and Seroquel prior to assessment		Patient had transitioned to living as a boy prior to assessment; diagnosed with PDD-NOS
12	M	8	Yes	Yes	No		Raised by maternal grandmother; both biological parents were drug addicts; father diagnosed with Schizophrenia

(*Continued*)

TABLE 3 (Continued)

ID	Sex	Age	Individual Therapy	Parent Therapy	Medication	Other	Comment
13	M	7	Yes	Yes	No	Consult recommended for pharmacologic treatment for anxiety	Diagnosed with ASD prior to our assessment; referred to a child psychiatrist in private practice
14	M	6	No	No	No	Recommendations to parents for interventions in naturalistic environment	Parents wanted to try interventions on their own prior to considering formal therapy
15	M	7	Yes	Yes	No		Parents, who were separated, refused treatment; parent-initiated a social gender change in child after assessment; diagnosed with Separation Anxiety Disorder
16	M	6	Yes	Yes	No		query ODD
17	M	4	Yes	Yes	No		
18	F	10	Yes	Yes	No		adopted
19	M	6	Yes	Yes	No	Recommendations to parents for interventions in naturalistic environment	Parents wanted to try interventions on their own; query ASD; r/o chronic motor tic disorder; local mental health resources not available

20	M	3	Yes	Yes	No		Co-occurring disorder of sex development (46,XX ova-testicular DSD); male gender assignment shortly after birth; speech and language delay; significant behavior problems
21	F	10	Yes	Yes	Yes	On Concerta prior to assessment; Risperdal recommended	adopted at 20 months from Russia; language delay; Reactive Attachment Disorder (in remission); query PDD-NOS; significant behavior problems (one brief in-patient hospitalization)
22	M	6	Yes	Yes	No		Marfan syndrome; significant obsessional behavior; query Separation Anxiety Disorder; significant family stress, including OCD in older sister; discontinued treatment because of distance and family stress; referred to local resources for continued therapeutic support
23	M	4	Yes	Yes	No		Parents agreed to therapy, but then did not follow up
24	F	5	Yes	Yes	No		
25	M	4	Yes	Yes	No		
26	F	5	No	Yes	No		Referred mother for local mental health support

Note. F = natal female; M = natal male; ADHD = attention-deficit/hyperactivity disorder; ASD = autism spectrum disorder; ODD = oppositional defiant disorder; OCD = obsessive-compulsive disorder; PDD-NOS = pervasive developmental disorder not otherwise specified.

With parents, the focus of treatment that is specific to GID considers two issues: a) the potential role of parental factors in the genesis and maintenance of the GID, and b) naturalistic interventions. For parents for whom there may be significant psychodynamic and interpersonal factors in the genesis/maintenance of GID, we attempt to work on these issues. For example, we have posited that "identification with the aggressor" may be one factor involved in GID in girls (Zucker & Bradley, 1995). One 7-year-old girl, for example, had a long-standing conflicted relationship with her father. Her father was extremely critical, abrasive, and mean to this her. She had numerous socioemotional problems: extreme oppositional behavior with the parents, intense jealousy directed toward a younger sister, many sensory sensitivities that resulted in ritualistic behaviors, and was, in general, a very challenging child to parent. A large part of the treatment with the father focused on discussing how his rage toward his child was not helpful and likely made matters worse.

When parental psychopathology revolves around a gender-related axis, effort is made to explore the impact of this on their feelings toward the child. One mother of an 8-year-old boy wanted little to do with him. She was extremely depressed and withdrawn from her parenting role. She had been date raped as an adolescent and recalled that she dealt with this by becoming promiscuous ("Better to fuck them than to get fucked"). She acknowledged that she hated men. The only maneuver this boy could use to be close to his mother was to comb her hair (she was a hairdresser). In our view, these kinds of pathological processes require a long time to work on in psychotherapy with parents and are not particularly amenable to brief interventions.

When parents have significant reservations about setting limits on their child's cross-gender behaviors and to provide alternative activities, this requires considerable discussion. In our work, we emphasize that authoritarian limit setting is not the goal (limit setting per se is not the goal of treatment, but part of a series of interventions); rather, the goal is to help the child feel more comfortable in his or her own skin. Limit setting is discussed in context of the overall case formulation. If, for example, a young boy is driven by the desire to cross-dress, we explore with parents their understanding of what might underlie it.

For example, one 8-year-old boy was cared for by his mother (the father had died in a car accident) who worked two jobs. He was often left in the care of a neighbor while his mother worked the swing shift. In this context, he began to cross-dress and created a transitional mother object that he slept with. Helping the mother understand the possible link between his separation anxiety and his gender identity issues motivated her to spend more time discussing with him why she needed to work long hours, provided him with pictures of her to sleep with while she worked, called him a couple of times prior to his bedtime, and made more of an

effort to be with him on her days off. This resulted in a significant reduction in both the separation anxiety and his desire to be a girl. In general, our approach with parents is to make the point that the surface behaviors of GID are, in effect, "symptoms" and that symptoms can best be helped if the underlying mechanisms are better understood. As an example, we might explain to parents of girls that forcing them to wear dresses or other feminine clothing (which creates severe anxiety in many girls with GID) should not be the focus of treatment and that it would likely be unhelpful. Instead, it would be more helpful to focus on the underlying gender dysphoria.

In the naturalistic environment, we typically target the improvement of same-sex peer relations, since peer relationships are often the site of gender identity consolidation (Maccoby, 1998; Meyer-Bahlburg, 2002). For young children, this can be implemented via parent-arranged play dates with temperamentally compatible same-sex peers; with older children, this can be implemented via enrollment in community activities, such as gymnastics, drama clubs, and team sports. The goal here is to see if children with GID are able to develop a broader range of friendships that include same-sex peers. For parents who are free of major life stressors or significant psychopathology that interferes with their parenting role, this task can be implemented fairly easily; however, when parents are overwhelmed with their own difficulties, they often feel depleted and unable to work on these kinds of interventions.

WHAT IS THE DISPOSITION OF REFERRED CASES FOR WHICH NO CLINICALLY SIGNIFICANT GENDER-VARIANT BEHAVIOR IS OBSERVED?

In our clinic, we almost never receive a referral in which we conclude from the intake interview that the case is a false positive. About 70% of the children we evaluate meet the complete *DSM* criteria for GID; the remainder of referrals are subthreshold (gender variant), some of whom had met the full criteria when younger. Of the 26 cases evaluated in 2008 (Table 3), only one youngster (ID 6) showed no signs of GID although he had voiced to the referring child psychiatrist a strong wish to be a girl. Psychological testing confirmed the absence of clinically significant gender identity issues. In this case, this youngster was dealing with the stressor of having been placed in foster care because of maternal neglect and had significant behavior problems at school and at home. Another youngster (ID 5) was the sibling of ID 2 and was subthreshold for GID. As noted in Table 3, the mother did not have any concerns about his feminine behavior and the father denied observing any. Because his sister had a severe GID, oppositional behavior, and ADHD, and because the parents had significant relational discord

(they were separated), the focus of the recommendations were directed elsewhere.

The question posed by the guest editors of this special issue of the *Journal of Homosexuality* is relevant especially for children who are subthreshold for GID. Do these youngsters still have clinically significant gender identity issues that need to be monitored or even treated? In our view, the answer is sometimes yes and sometimes no. Some children may be subthreshold for GID, yet, the clinical impression is that these children may well be struggling with their gender identity and, for these children, a trial of therapy can certainly be beneficial to explore the issue further. If they have substantial other psychologic or psychiatric issues, these can also be a focus of treatment. One could argue that some children who are subthreshold for GID may be at risk for the later development of a full-blown GID (e.g., see Zucker, 2004, 2006b).

HOW ARE THE RELATIVE RISKS AND BENEFITS OF TREATMENT AS WELL AS THE IMPACT OF TREATMENT ON OUTCOME EXPLAINED TO CAREGIVERS?

In providing feedback to parents, we attempt to articulate our case formulation in a manner that is understandable. We identify the factors that we have found useful in understanding the child and the family. Parents vary in their psychologic sophistication and capacity for reflective functioning, so feedback is done in a way that is client centered. We provide a rationale for our treatment recommendations.

In the era of the Internet, some parents are quite familiar with the controversies about treatment of children with GID; others are not. For parents who are interested in discussing the philosophical differences among care providers, we discuss the varying perspectives. Benefits of treatment that we argue in favor of include the reduction in gender dysphoria, the attendant social ostracism that can ensue from GID persistence, the complexities of sex-reassignment surgery and its biomedical treatment, and the importance of reducing family psychopathology and stress, when it is present. The risks of treatment are discussed: Perhaps the child will not respond to the treatment; perhaps the parents will find it too stressful to attempt naturalistic interventions. As noted earlier, we explain that the goal of treatment is not to prevent the child from developing a future homosexual sexual orientation. For some parents, this is a non-issue; for other parents, it remains their goal. One concern parents have is that their child may go underground with his or her gender dysphoric feelings. We are mindful of this concern (the development of a false self in the Winnicottian sense) and emphasize that this is not a good outcome–the goal is to help the child work through their gender dysphoric feelings.

IS PREVENTION OF ADULT TRANSSEXUALISM A REASONABLE TREATMENT GOAL, AND GIVEN THE LOW FREQUENCY WITH WHICH GID PERSISTS INTO ADULTHOOD, HOW IS IT POSSIBLE TO DETERMINE THE EFFICACY OF TREATMENT IN ATTAINING THAT GOAL?

> . . . we cannot rule out the possibility that early successful treatment of childhood GID will diminish the role of a continuation of GID into adulthood. If so, successful treatment would also reduce the need for the long and difficult process of sex reassignment which includes hormonal and surgical procedures with substantial medical risks and complications. (Meyer-Bahlburg, 2002, p. 362)

> Relatively little dispute exists regarding the prevention of transsexualism, though evidence about the effectiveness of treatment in preventing adult transsexualism is also virtually nonexistent. (Cohen-Kettenis & Pfäfflin, 2003, p. 120)

The guest editors of this special issue have posed a provocative question about the prevention of transsexualism (GID) in adulthood. Here, we can pose an ancillary question to illustrate, in part, the centrality of social values: Is prevention of homosexuality a reasonable treatment goal? On this point, most secular clinicians would answer "no." In our own clinic, we have never advocated for the prevention of homosexuality as a treatment goal for GID in children. At the same time, we are sensitive to the fact that some parents bring their child to the clinic, in part, because they are worried that their child will grow up to be gay or lesbian (for all the reasons one might imagine—parental homophobia, worries about social ostracism, worries about HIV/AIDS, worries that this will result in a more difficult life, cultural factors, religious factors, etc.).

Over the years, our approach has been a psychoeducational one and also a pragmatic one: a) we explain to parents that there are no empirical studies that suggest that alteration of a child's gender identity will also alter their eventual sexual orientation; b) that homosexuality per se is not considered a mental disorder; c) that gay men and lesbians can lead productive and satisfying lives (as banal as this sounds) and that, over time, if their child develops a homoerotic sexual orientation, then it will be their job (and ours) to support their child in adapting to whatever stressors may be associated with their sexual identity. In our experience, the majority of parents are satisfied with this psychoeducational approach and, for some, it involves mourning the loss of the expected heterosexual child and whatever fantasies and aspirations are associated with this. Many of the parents that we work with do not have a particular problem if their child were to grow up gay or lesbian. Many of these parents do, however, hold the aspiration

that they would like their child to be comfortable in his or her skin. In other words, they can see that growing up transsexual or transgender may augur a more complicated life.

Although we do not have a particular quarrel with the prevention of transsexualism as a treatment goal for children with GID, we believe that this should be contextualized. If, for example, children with GID who persist in their desire to be of the other gender showed a better psychosocial adjustment and adaptation than children with GID who desist (e.g., become gay or lesbian or heterosexual without gender dysphoria), then one could, quite reasonably, question the prevention of transsexualism as a legitimate treatment goal. If a child grew up comfortable in their own skin, but was generally miserable otherwise, one could hardly argue with unabashed enthusiasm for the prevention of transsexualism.

From a developmental perspective, we take a very different approach when we work with adolescents with GID than when we work with children with GID. This is because we believe that there is much less evidence that GID can remit in adolescents than in children. Whether this is due to different populations of clients seen in adolescence versus childhood or whether this is due to a narrowing of plasticity and malleability in gender identity differentiation by the time of adolescence is open to debate. But, if the clinical consensus is that a particular adolescent is very much likely to persist down a pathway toward hormonal and sex-reassignment surgery, then our therapeutic approach is one that supports this pathway on the grounds that it will lead to a better psychosocial adaptation and quality of life (Zucker, Bradley, Owen-Anderson, et al., 2011).

Because the treatment literature is lacking in terms of rigorous comparative evaluations (e.g., Treatment X vs. Treatment Y or Treatment X vs. no treatment, etc.), one has to rely on a patchwork of empirical evidence about natural history. Thus, for example, natural history data suggest, to date, a much higher rate of desistance of GID in child samples than in adolescent or adult samples (Zucker et al., 2011).

The guest editors have made reference to the low frequency with which GID persists into adulthood and the implications of this fact in the evaluation of treatment efficacy. Persistence rates have varied fairly substantially in long-term follow-up studies. For example, Green (1987) reported that only 1 of 44 previously feminine boys appeared to be gender dysphoric at the time of follow-up. In contrast, Wallien and Cohen-Kettenis (2008) reported that 50% of 18 GID girls were persisters at follow up. In our own follow-up studies, we have found a persistence rate of 12% for GID girls ($n = 25$; Drummond et al., 2008) and a persistence rate of 13.3% for GID boys ($n = 135$; Singh et al., 2010). Thus, there is a fair bit of variation in persistence rates.

How can this variation be understood? One possibility is sampling differences. Another possibility pertains to the degree of GID in childhood.

Both Wallien and Cohen-Kettenis (2008) and Singh et al. (2010) showed that several metrics of GID severity in childhood predicted persistence at follow-up. Another possibility is to contextualize the natural history data.

Is there really such a thing as natural history for GID or does its developmental course vary as a function of contextual factors? If, as in our clinic, treatment is recommended to reduce the likelihood of GID persistence, perhaps the data can only be interpreted in that context. In any event, we require more comparative data to draw conclusions about the natural history of GID in children and its relation to contextual factors.

WHAT CONSTITUTES A SUCCESSFUL OUTCOME? WHAT CONSTITUTES A TREATMENT FAILURE?

If one goal of treatment is to reduce the gender dysphoria, then, by definition, a successful outcome would be its remission and a failure would be its persistence. If, however, a successful outcome also takes into account a child's more general well-being and adaptation to various developmental tasks, then the definitions of success and failure must be broader. Consider, for example, the vignette described earlier of the 7-year-old girl who had an extremely strained relationship with her father. Six years after therapy commenced (and still continues), the GID has fully remitted and there has been a lessening of the sensory sensitivities and rituals. Although this now young adolescent girl functions reasonably well at school and has friends, parent-child relations remain severely strained and there continues to be substantial parental psychopathology (in each parent and in their marriage). Success? Failure? In between?

For Tom, the 4-year-old boy who experienced his younger sister's birth as an extreme threat to his relationship with his mother, at the age of 13 his GID has remitted fully. In the course of many years of therapy, he has intermittently struggled with various issues (episodic encopresis, peer conflicts, behavioral compliance with parental expectations), but he functions extremely well at school and has many close friends. Although his development has been marked with various stressors and challenges, we would gauge his current outcome as pretty successful.

For children whose gender dysphoria persisted into adolescence or adulthood, some are functioning quite well; others are not. One natal male, originally seen at age 5, was seen for follow up at age 35. At follow up, she was living as a woman, but had elected to neither take exogenous female hormones or to have genital reassignment surgery ("A woman does not need a vagina to be a woman"). Because this individual was quite overweight, idiopathic gynecomastia was sufficient for the appearance of female breasts. She had a boyfriend who was sexually attracted to "she-males." She engaged in sex work, also attracting men interested in she-males. She used,

on a daily basis, oxycontin and heroin. She was on long-term psychiatric disability, with various diagnoses: ADHD, bipolar disorder, and adult baby syndrome (she and her boyfriend planned on getting an apartment and creating a baby's room for her). Apart from the ADHD, the patient had no complaints about her life. Success? Failure?

Another natal female was originally seen for assessment at the age of 12 years and followed up at the age of 26. He had transitioned to the male gender in adolescence, but had not sought out either hormonal suppression or cross-sex hormonal therapy. He was very content living as a man. Ben worked full time, owned his own house, and had had long-term relationships with women. However, he struggled with severe alcohol abuse, abused recreational drugs, had been frequently arrested for getting into fights while intoxicated, and was occasionally suicidal. Success? Failure? In between?

Our long-term follow-up studies of both girls and boys with GID suggest that many of these youngsters, regardless of their later gender identity and sexual orientation, are a psychiatrically vulnerable group (Drummond, 2006; Drummond et al., 2008; Singh et al., 2010). Although some of this vulnerability might be understood in relation to the stressors associated with an atypical gender identity and/or sexual orientation, it is our belief that it is also related to other risk factors, including biological and psychosocial parameters within their families.

NOTES

1. We have used Clifft's (1986) guidelines for confidentiality in reporting clinical material.

2. These children are sometimes referred to as *desisters*, while those who do not "lose" the diagnosis are referred to as *persisters*.

3. There are more parents nowadays who interpret the cross-gender identification as a marker of the child's "essential" gender identity (Brill & Pepper, 2008; Dreger, 2009; Kilodavis, 2009).

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Statement on Dr. Kenneth Zucker and Gender Identity Disorder (5/23/2008)

Kenneth J. Zucker, Ph.D., C.Psych., the Chair of the DSM-V Sexual and Gender Identity Disorders work group, is a widely respected and pre-eminent scholar in the world of academic sexology research. As Chair of the work group for Sexual and Gender Identity Disorders, Dr. Zucker's role is to coordinate and facilitate the work of the three sub-work groups addressing Sexual Dysfunctions, Paraphilias, and Gender Identity Disorders. Further information on the DSM-V development process can be found at:
http://www.psych.org/MainMenu/Research/DSMIV/DSMV/APAStatements/APAStatementonGIDandTheDSMV.aspx

Dr. Zucker has published 97 peer-reviewed journal articles, 48 book chapters, and a landmark textbook. His published work addresses psychosexual differentiation and its disorders, based on a wide range of empirical research studies on children and adolescents with gender identity disorder, with a focus on diagnosis and assessment, and their associated behavioral and psychological distress. As the current Editor of *Archives of Sexual Behavior*, the premier human sexuality research journal, he also has a wide familiarity with the disparate areas of sexual dysfunctions and paraphilias. Since 2001, he has been the Psychologist-in-Chief at the Centre for Addiction and Mental Health (CAMH), is a Professor in the Departments of Psychiatry and Psychology at the University of Toronto, and is on the Scientific Staff (Division of Child Psychiatry) at the Hospital for Sick Children. He was the President of the International Academy of Sex Research in 2005-2006.

Dr. Zucker and his service team at CAMH in Toronto have the longest standing research-clinical service for children and youth with gender identity problems in North America. Since the mid-1970s, Dr. Zucker and his team have evaluated over 900 children and youth with gender identity issues. Dr. Zucker is one of the few researchers who is doing long-term follow-up of the patients he has treated.

The philosophy of Dr. Zucker's team is to provide client-centered care that maximizes benefit and minimizes harm to each child or youth. The goal of treatment is a well-adjusted youth, regardless of ultimate gender identity or sexual orientation, who feels she or he has been genuinely helped by her or his healthcare providers. Dr. Zucker has offered a variety of treatment options, understanding that options may vary greatly with the age of the client. For younger clients, therapy options include helping the child to overcome discomfort with his or her body, i.e., helping clients learn to live comfortably in their natal sex. Diagnosis and treatment of other problems that may be present, such as anxiety, depression, or substance abuse are also available, as are services for family members.

For adolescent patients (including those who first came to the clinic as young children), Dr. Zucker follows the Standards of Care Guidelines of the World Professional Association for Transgender Health. The treatment options include helping patients make a satisfactory transition to the opposite sex, including the institution of hormonal treatment to facilitate transition. In some cases, treatment may include helping an interested adolescent obtain sex-reassignment surgery.

For all patients, regardless of age, the focus of therapy is the patient's gender identity, not the patient's sexual orientation. Dr. Zucker's therapeutic approach has no relationship to so-called reparative or sexual conversion therapies that attempt to change homosexual orientations to heterosexual ones. The goal of his therapy is the opposite of conversion therapy in that he considers well-adjusted transsexual, gay, lesbian or bisexual youth to be therapy successes, not failures.