

The International Journal of Transgenderism

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symposion

ISSN 1434-4599

Volume 2, Number 2, April - June 1998

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Originally published as: Fleming M, Steinman C, Bocknek G (1980), Methodological Problems in Assessing. Sex-Reassignment Surgery: A Reply to Meyer and Reter. Arch. Sex. Behav. 9: 451-456.

Methodological Problems in Assessing Sex-Reassignment Surgery: A Reply to Meyer and Reter

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Citation: Fleming M., Steinman C., Bocknek G. (1998) Methodological Problems in Assessing

Sex-Reassignment Surgery: A Reply to Meyer and Reter. IJT 2,2,
<http://www.symposion.com/ijt/ijtc0401.htm>

Since the Christine Jorgensen report there has been a great deal of controversy surrounding the use of operative procedures to change the genitalia of an individual to that which s/he considers congruent to his/her gender. Called gender dysphoric, transsexual, or psychotic, such individuals who request surgical "sexual reassignment" procedures continue to increase in number, as do the reports on the psychosocial results of such surgery (Hamburger *et al.*, 1953; Benjamin, 1966; Randall, 1969; Money, 1971; Edgerton and Meyer, 1973). Virtually all researchers in the field agree that such outcome studies are fraught with a tremendous number of methodological problems.

Meyer and Reter (1979) have reported the results of a follow-up of 50 transsexual patients from the Johns Hopkins Gender Identity Clinic (GIC). This study has been widely cited by professionals and has appeared in the popular press as proof that there are "no differences in long-term adjustment between transsexuals who go under the scalpel and those who do not" (*Time*, 1979). The *New York Times* (1979) quotes Dr. Meyer: "My personal feeling is that surgery is not a proper treatment for a psychiatric disorder and it's clear to me that these patients have severe psychological problems that don't go away following surgery." The following article attempts to investigate the soundness of the methodology employed and raises questions about its conclusions.

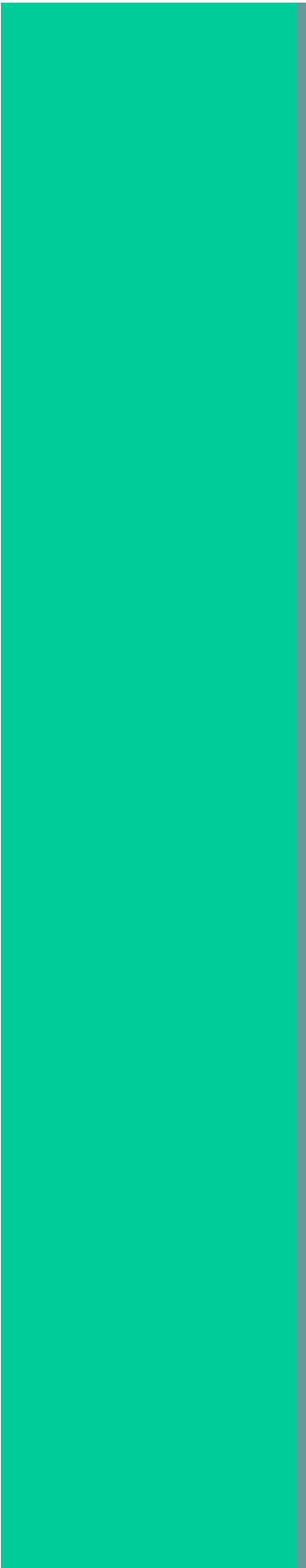
Meyer and Reter compared three groups, all of whom had come to the GIC asking for surgical reassignment: 15 were operated on before 1971 when the study began; 14 were operated on between 1971 and 1974 when the study ended; and 21 had not been operated on by the time the follow-up ended in 1974. Those operated on before 1971 were followed for an average of 62 months; the latter two groups were followed for an average of 25 months. The major variables used to assess adjustment before and after the surgery were arrest records, cohabitation with members of the "appropriate" or "inappropriate" sex, psychiatric records, and employment history.

Perhaps the most serious failing of the study has to do with Meyer's selection and definition of these as his only major outcome variables. His "Adjustment Scoring System" is presented on Table I. It is on the basis of observing that operated-on and not-operated-on groups show similar changes in "Adjustment Scores" over the follow-up period that Meyer concludes, "Although other constructions are possible, the most conservative interpretation of the data is that among the applicants for sex reassignment there are operationally two groups who in the face of a trial period will self select for or against surgery and that in either instance improvement will be demonstrated over time, as judged by observable behavioral variables."

Perhaps the most serious problem with this scale is its arbitrary character. For example, it assigns the same score (-1) to someone who is arrested and someone who cohabits with a non-gender-appropriate person. From this same set of cryptic values comes the assertion that being arrested and jailed (-2) is not as bad as being admitted to a psychiatric hospital (-3) or that having a job as a plumber (Hollingshead level 4) is as good (+2) as being married to a member of the gender-appropriate sex (+2).

Table I.: Adjustment Scoring System

	Category	Score
Legal	<i>Arrested only</i>	-1
	<i>Arrested and jailed</i>	-2
Economic	<i>Hollingshead job level</i>	
	1 or 2	+3
	3 or 4	+2
	5 or 6	+1
	7 or 8	0
Cohabitation	<i>Cohabit</i>	
	Gender appropriate Non gender appropriate	+1 -1
	<i>Marriage</i>	
	Gender appropriate Non gender appropriate	+2 -2
	<i>Psychiatric</i>	



Contact	-1
Outpatient treatment	-2
Hospitalization	-3

On what basis are these values assigned? Should we infer from a score assignment of (-1) that anyone who has any psychiatric contact is in trouble? Psychiatry has for too long proselytized that all of us can gain from seeking psychiatric guidance for Meyer to reassign a stigma to seeking such help. It also seems appropriate that people who have experienced extreme gender dysphoria to the point of seeking surgical "correction" should have sought psychiatric aid.

Further, there is confusion on the variable of cohabitation, particularly since Meyer never specifies whether this implies sexual intimacy, interpersonal sharing, or both. One can infer from the scoring assignment that a transsexual would be better living with no one (0) than with a person of the non-gender-appropriate sex (-1). Should it be inferred that to have a roommate of the same derived gender is a bad thing? A preoperative transsexual, for example, is moving toward full-time cross-living and in so doing is experimenting with new interpersonal and social role behaviors. It is not uncommon for such an individual to do this slowly and to not simply drop the most important and intimate relationships with the opposite biological sex. Intimate relationships are not entirely determined by sexual and social role conventions. Does Meyer mean to say that living in isolation is more adaptive than living with someone whatever his/her sex? In our work with gender dysphorics, we have seen a number of pre- and postoperative patients who have found that living with someone of the same felt gender as a close and loving friend to be natural as well as helpful for modeling of new behaviors. Even if "cohabit" means "sexual" it would be helpful to have a more detailed statement of what constitutes sexual. Are kissing and holding sexual? If genital sex has occurred once early in the relationship but has never occurred again does this constitute a sexual relationship? Finally, on what basis is this so negative (Feinbloom et al., 1978)?

The next point of concern is the reporting of adjustment scores in terms of the three subjects groups. Of particular interest is the range of scores between -18 and +4 for the operated-on group at their initial assessment. Given that the sum of the maximum negative scores for each category on the Adjustment Scoring System Chart (Table I) would total only -7, we can only assume that an event that occurs several times receives several scores. Thus an individual who goes to jail once for 10 years (-2) gets a lower score than someone who has been arrested 3 times and goes to jail for each crime for a year, thus receiving three separate scores of (-2). One big crime, from

Table II.: Adjustment Scores Initially and at Follow-Up, with Change Scores

	Initial	Follow-up	Change

Group	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Operated	-2.07	-18 to +4	6.68	+1.07	-1 to +4	1.53	+3.13 ^a	-2 to +19	6.33
Operated during follow-up	-1.14	-9 to +2	2.91	+0.21	-4 to +2	1.89	+1.36	-3 to +10	3.03
Unoperated	-1.33	-7 to +2	2.61	+1.10	-4 to +4	1.97	+2.43 ^b	-2 to +8	2.73

^aBorders on significance: $p < 0.10$ (two-tail); $p < 0.05$ (one-tail).
^bSignificant: $p < 0.001$ (two-tail).

this perspective, indicates greater adjustment than a lot of little ones. Similar reasoning would lead one to assume that entering a psychiatric hospital for two separate 1-month stays is twice as bad as entering one for 2 months. It is clear that the Adjustment Scale from which Meyer's conclusions are drawn suffers from some major problems.

Further confusion is introduced by treating the not-operated-on group as if they will always remain so. We are told that of the original 35 unoperated patients 14 went on to have surgery. Thus, when Meyer compares the job and education levels of "operated" and "unoperated" patients, he is really comparing groups "operated on by 1971" and "not operated on by 1971." Had he chosen 1974 as his cutoff date, the operated group would have included 29 patients instead of 15. Obviously, this arbitrary chronological grouping raises serious doubts about any comparison.

Further, the remaining 21 "still stated an active interest in sex reassignment without either completing the trial period or pushing onto surgery." Are these really patients who "self-select against surgery" or are they people who take longer to move toward the awesome decision of surgery? Given the incredible number of situational, personal, and interpersonal problems to be faced, it seems reasonable that not everyone wishing surgery will enter the trial period within a limited and arbitrarily chosen time frame. To treat the nonoperative patients as a control group is erroneous, especially when we learn that over a third have gone on for surgery and the remaining still had an interest in surgery. With regard to surgery, Meyer does not report on the postsurgical success or failure of the sex-reassignment procedure and its relationship to the psychiatric evaluation. The vast number of postsurgical complications that may arise warrant attention in any assessment.

Beyond these problems of time and numbers lies an area clearly more unwieldy and muddled but crucial to any understanding of the transsexual phenomenon: that of feelings. Although Meyer and Reter said that material collected as part of the follow-up included family relationships, adaptational patterns, fantasy, dreams, and sexual material, they discounted such affective data and turned instead to the "observable and objective factors in

adjustment." We have shown that these objective factors are filled with great ambiguities and wonder if reporting emotional data could have been any worse. Meyer and Reter seem to forget the value judgments that underlie their study almost as if assignment of a numerical value rids one of the findings' subjective and qualitative elements and thus raises ones findings to a level of "pure science." Emotional needs are certainly as important as the behavior we manifest, and those who interpret behavior often assign meaning to it without realizing their own feelings which determine their interpretations. Meyer and Reter's classification of gender-appropriate and non-gender-appropriate cohabitation is a good example of this problem.

Finally, although Meyer and Reter's article is clearly a step in contributing to our understanding of transsexualism, one cannot help but look beyond the actual article to its general impact. Meyer is reported by the Associated Press as saying that the study shows that "surgical intervention has done nothing objective beyond what time and psychotherapy can do" (*Science*, 1979).. There have been no disclaimers on his part. Should we infer that he categorically believes this? If this is so, we have shown reason for him to be equivocal. More importantly we would question his not being more cautious about what impact his statements would have on the current perception of transsexualism by the general public. Was Dr. Meyer unaware of how congruent his statements are with the sentiments of people who are against any variation in sexual object choice or the questioning of traditional sex roles?

We sense a growing fear of transsexualism which has found a voice in the public press in a number of current works (Raymond, 1979; Starr, 1978). These deal not with empirical investigations but with ideas which are too often heralded and received as fact. We are not asking for an end to reasonable debate but only an admittance of the value-laden nature of such investigations. We are not advocating surgical reassignment but rather the necessity for careful investigation of its appropriateness and results. All researchers have a responsibility to ask themselves how their results are to be used and by whom. Even if the press has misquoted Dr. Meyer, we can't help but wonder about his willingness in the conclusion of his article (1979) to overgeneralize without seemingly being aware of its impact on the general populace. The finality with which he makes his assertions merits criticism when one realizes how much further research is necessary and how many people will use his results to treat transsexualism as a psychological problem which warrants no more attention than simply letting time heal.

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