

A Validation of Blanchard's Typology: Comment on Nuttbrock et al. (2010)

Anne A. Lawrence

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In a recent article, Nuttbrock et al. (2010) attempted to assess the validity of Blanchard's (1985, 1989a, b, 1991, 1992) sexual orientation-based typology of male-to-female (MtF) transsexualism, which categorized MtF transsexuals as either homosexual (exclusively sexually attracted to males) or nonhomosexual and *autogynephilic* (sexually attracted to the thought or image of themselves as female) and further subdivided nonhomosexual/autogynephilic transsexuals into heterosexual, bisexual, and asexual or *analloerotic* (not sexually attracted to other people) subgroups. I wish to offer these observations concerning Nuttbrock et al.'s methodology, results, and conclusions:

1. Nuttbrock et al. chose to survey a nontranssexual population and to examine only one manifestation of autogynephilia, transvestic fetishism (TF); these choices limited their ability to accurately assess the validity of Blanchard's typology.
2. Despite these limitations, Nuttbrock et al. did validate several important elements of Blanchard's typology, although the authors did not emphasize this.
3. Nuttbrock et al. observed that TF was significantly more prevalent in heterosexual than in bisexual participants, whereas Blanchard (1985) had not; but a difference in the prevalence of TF between nonhomosexual subgroups has no theoretical importance. In any case, Blanchard (1985) found a comparable difference in the prevalence of TF

between heterosexual and bisexual subgroups, but the difference did not achieve statistical significance in his study, due to smaller sample sizes.

4. Nuttbrock et al. claimed that their finding of a monotonic relationship between TF and gynephilia (sexual attraction to women) was inconsistent with Blanchard's (1991, 1992) theory and data, but their claim reflects misrepresentations of both Blanchard's theory and his data.
5. Nuttbrock et al. observed that age and ethnicity, as well as sexual orientation, were significant predictors of TF, but these three predictor variables were substantially intercorrelated, and the authors' results do not, therefore, invalidate or challenge Blanchard's typology.

The population that Nuttbrock et al. (2010) surveyed was not ideally suited to an assessment of the validity of Blanchard's typology, which was developed to describe MtF transsexuals: gender-dysphoric males who reported that they felt like women "at all times and for at least one year" (Blanchard, 1985, p. 250; 1989b, p. 618). The informants surveyed by Nuttbrock et al., in contrast, were not exclusively MtF transsexuals: They were simply persons who were "assigned male at birth but subsequently did not regard themselves as completely male in all situations or roles." Only 63% agreed that they saw themselves as completely *female* in all situations or roles; 26% disagreed and 11% were unsure (L. Nuttbrock, personal communication, January 27, 2010). Moreover, Blanchard's studies of autogynephilia were not limited to TF, but also involved sexual arousal to autogynephilic thoughts or images that did not involve or emphasize cross-dressing per se (i.e., *anatomic*, *physiologic*, and *behavioral autogynephilia*; Blanchard, 1991). Nuttbrock et al. ignored these widely recognized and arguably more important manifestations of autogynephilia. It should be obvious that an investigation of only a single element of autogynephilia, conducted in a nontranssexual male population, would have

A. A. Lawrence
Department of Psychology, University of Lethbridge,
Lethbridge, AB, Canada

A. A. Lawrence (✉)
6801 28th Avenue NE, Seattle, WA 98115, USA
e-mail: alawrence@mindspring.com

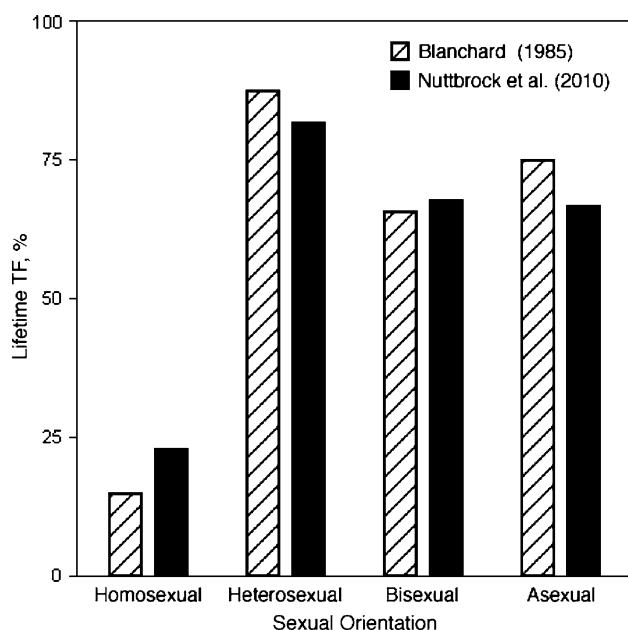


Fig. 1 Lifetime prevalence of transvestic fetishism (TF) versus sexual orientation as reported by Blanchard (1985) and Nuttbrock et al. (2010)

significant limitations as a means of assessing the validity of Blanchard's sexual orientation-based typology of MtF transsexualism.

These limitations, however, should not obscure the fact that Nuttbrock et al.'s (2010) results did validate several important aspects of Blanchard's typology. As Fig. 1 depicts, Nuttbrock et al.'s data concerning the relationship between sexual orientation and lifetime TF closely resemble Blanchard's (1985), even though the two studies involved dissimilar sample populations. Nuttbrock et al. not only confirmed Blanchard's (1985) observation that lifetime TF was significantly more prevalent in nonhomosexual participants than in their homosexual counterparts, but also demonstrated that the same was true for life-course-persistent TF and adolescent-limited TF. Moreover, these differences between nonhomosexual and homosexual participants were observed in a sample population that plausibly was more diverse in age and ethnicity than Blanchard's sample population. Like Blanchard (1985), Nuttbrock et al. observed that some ostensibly homosexual participants reported TF and that some nonhomosexual participants denied it. These deviations from the predictions of Blanchard's (1989b) theory probably reflected the recognized tendencies of some nonhomosexual MtF transgender persons to misrepresent their sexual orientation (Freund, 1985; Lawrence, 2005) and of other nonhomosexual MtF transgender persons to deny TF, despite experiencing physiological arousal (Blanchard, Racansky, & Steiner, 1986).

Surprisingly, Nuttbrock et al. (2010) did not emphasize that their results provided a significant validation of Blanchard's typology. Instead, they chose to highlight three minor

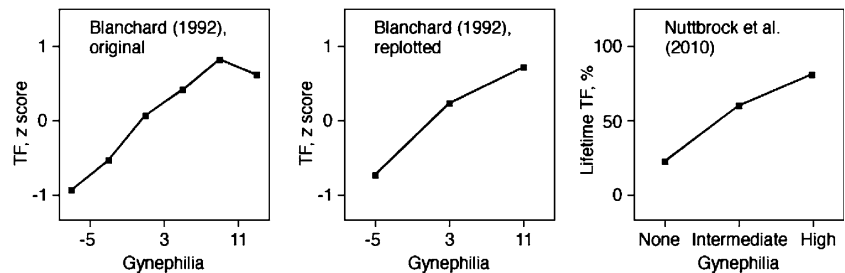
differences between their results and Blanchard's. On close examination, however, these differences turn out to be exaggerated and theoretically unimportant.

First, Nuttbrock et al. (2010) emphasized that "contrary to Blanchard, differences in transvestic fetishism were observed across subtypes of non-homosexuals"; specifically, that TF was significantly more prevalent in heterosexual than in bisexual participants. This difference has no theoretical importance: There is no theoretical basis for expecting that every component of autogynephilia should be of equal intensity among all non-homosexual MtF subtypes. Blanchard (1989b) observed, for example, that *autogynephilic interpersonal fantasy*, "the sexual fantasy of being admired, in the female persona, by another person" (p. 619), was especially characteristic of bisexual MtF transsexuals. Moreover, as Fig. 1 illustrates, Blanchard (1985) actually found a greater difference in the prevalence of TF between heterosexual and bisexual participants (22 percentage points) than did Nuttbrock et al. (14 percentage points), but the numbers of heterosexual and bisexual participants in Blanchard's study were too small for the difference to achieve statistical significance. In short, Nuttbrock et al. chose to emphasize a difference that was not only theoretically unimportant but that resulted simply from a disparity in sample sizes.

Second, Nuttbrock et al. (2010) highlighted a supposed difference in the pattern of association between TF and gynephilia. Blanchard (1992) had observed that TF increased monotonically across five levels of increasing gynephilia, but then exhibited a slight but nonsignificant downturn at the sixth and highest level (depicted in the first panel of Fig. 2). In contrast, Nuttbrock et al. observed that TF increased monotonically across three levels of increasing gynephilia, without any downturn (depicted in the third panel of Fig. 2). Nuttbrock et al. emphasized this difference, asserting that Blanchard's "interesting and potentially significant finding could not be replicated." But Nuttbrock et al. misrepresented Blanchard's theory and also ignored a few important details. Their allegation that a downturn in TF at high levels of gynephilia was predicted by Blanchard's theory is a misrepresentation. Nuttbrock et al. wrote:

[According to Blanchard's theory,] MTFs with extremely low (or nonexistent) gynephilia were presumed to be homosexual. As such..., they were predicted to report low transvestic fetishism. MTFs with an intermediate level of gynephilia were predicted to report high transvestic fetishism; those with the highest level of gynephilia were also predicted to report low transvestic fetishism. The predicted down-turn in levels of transvestic fetishism from the second (intermediate) to the third (high) gradation of gynephilia reflects the assumption that transvestic fetishism and gynephilia are competing motives (or orientations or behaviors).

Fig. 2 Prevalence of transvestic fetishism (TF) versus gynephilia as reported by Blanchard (1992) and Nuttbrock et al. (2010)



In actuality, Blanchard's theory predicted that *autogynephilia* should be highest at intermediate levels of gynephilia, but it made *no* such prediction concerning TF, which is merely one component of autogynephilia. Blanchard (1992) explained:

Four additional psychosocial variables—transvestism, fetishism, masochism, and sadism—were also investigated, largely for exploratory purposes. It was expected... that all four would increase over some portion of the heterosexual attraction [i.e., gynephilia] continuum. There was no *empirical or theoretical basis* [emphasis added], however, for predicting whether these curves would reverse direction toward the high end of that continuum. (p. 272)

Moreover, Nuttbrock et al.'s measure of gynephilia employed only three levels, so the authors would not have been able to detect the slight but nonsignificant downturn that Blanchard (1992) observed: If one replots Blanchard's data using only three levels of gynephilia, averaging the values for levels 1 and 2, 3 and 4, and 5 and 6 (depicted in the second panel of Fig. 2), the downturn disappears and the replotted results appear almost identical to those of Nuttbrock et al. Here again, Nuttbrock et al. chose to emphasize a difference that was not only theoretically unimportant but that was essentially nonexistent.

Third and finally, Nuttbrock et al. (2010) highlighted their observation that “age and ethnicity, in addition to sexual orientation, were found to be statistically significant predictors” of TF in their population, whereas Blanchard (1989b, 1991) had not theorized any role for age or ethnicity in explaining autogynephilia. At first glance, Nuttbrock et al.'s finding might suggest the need to reevaluate Blanchard's (1991) hypothesis that autogynephilia is simply a variant form of nonhomosexual orientation, but this concern largely disappears when one notices the substantial intercorrelations of age, ethnicity, and sexual orientation in Nuttbrock et al.'s sample population. Nuttbrock et al. did not provide a variance–covariance or correlation matrix for the major variables included in their multivariate analyses, even though “in the case of multivariable analytic systems such as multivariate analyses, [and] regression analyses... the variance–covariance (or correlation) matrix or matrices are part of a minimally adequate statistics set” (American

Table 1 Bivariate correlations of independent and dependent variables in Nuttbrock et al. (2010)

	Gynephilia	Age	White ethnicity
Lifetime TF	.47	.33	.49
Gynephilia		.33	.63
Age			.41

Notes: Data from L. Nuttbrock (personal communication, January 27, 2010). Lifetime TF and White ethnicity are dichotomous variables (yes/no); Gynephilia is an ordinal variable (low/intermediate/high); Age is a continuous variable (19–59 years)

Psychological Association, 2001, p. 23), but the principal author graciously sent me the relevant data (L. Nuttbrock, personal communication, January 27, 2010), which are summarized in Table 1. The three principal independent variables that Nuttbrock et al. used as predictors of TF—“continuously measured” (actually, ordinal) gynephilia, continuously measured age, and White versus non-White ethnicity—were substantially intercorrelated, although Nuttbrock et al. conceded only “a moderate degree of co-linearity [sic]” among predictor variables. The correlation between gynephilia and White ethnicity (.63) represents a large effect size (Cohen, 1988); the correlations between gynephilia and age (.33) and between White ethnicity and age (.41) represent medium effect sizes (Cohen, 1988).

When the predictor variables used in a multiple regression analysis are highly correlated with each other, there is no straightforward way to know precisely how much of the variance in the criterion variable—TF, in this instance—should be attributed to any particular predictor variable. Licht (1995) summarized these interpretive difficulties:

The larger the correlation between predictors, the more likely it is that they will share the same variance in the criterion (Y). The problem is deciding which predictor should be credited with contributing this shared, or *redundant*, variance in Y . MRC [multiple regression and correlational analyses], or any other statistical procedure, cannot make this decision. In MRC, this redundant variance does not appear as the independent contribution of any of the predictors... even though, in reality, this shared variance may be caused solely by one of the predictors and

is merely correlated with the others. Rather than blind reliance on statistics, the decision of which, if any, of the predictors is ultimately responsible for redundant variance in Y must be based on careful theoretical reasoning and, if possible, experimental investigations. (p. 46)

There are substantial theoretical grounds for attributing most of the variance in TF to gynephilia and for believing that age and White ethnicity are significantly represented in Nuttbrock et al.'s multiple regression equation primarily because they are correlated with gynephilia. In Blanchard's (1991, 1992) theory, TF, like the other manifestations of autogynephilia, is theorized to be correlated with gynephilia because it is understood to be a misdirected form of gynephilia. The correlation between TF and age in MtF transsexualism is plausibly mediated by gynephilia, because nonhomosexual MtF transsexuals are known to transition at a significantly older average age than their homosexual counterparts (Lawrence, 2005; Smith, van Goozen, Kuiper, & Cohen-Kettenis, 2005). The correlation between TF and White ethnicity in MtF transsexualism is also plausibly mediated by gynephilia, although the reasons why White MtF transsexuals in the United States are predominantly nonhomosexual (gynephilic) and their non-White counterparts are predominantly homosexual (nongynephilic) are incompletely understood. Lawrence (2008) demonstrated that the relative prevalence of homosexual versus nonhomosexual MtF transsexualism varied substantially between countries, with homosexual MtF transsexualism predominating in less individualistic countries (e.g., Brazil, Spain, and many Asian countries) and nonhomosexual MtF transsexualism predominating in more individualistic countries (e.g., the United States, Canada, and much of northern Europe); she suggested that differences in the relative prevalence of homosexual versus nonhomosexual MtF transsexualism among ethnic groups within the United States might also be attributable to differences in individualism between ethnic groups. It is also important to remember that Nuttbrock et al.'s (2010) study was not limited to MtF transsexuals but also included participants recruited from social organizations for male cross-dressers. This lends further credence to the idea that, among Nuttbrock et al.'s participants, the correlations of TF with age and ethnicity were mediated by gynephilia, because the heterosexual male cross-dressers who participate in these social organizations are overwhelmingly middle-aged and White (Croughan, Saghir, Cohen, & Robins, 1981; Docter & Fleming, 2001).

The argument that White ethnicity appears as a significant predictor in Nuttbrock et al.'s (2010) multiple regression equation primarily because it is correlated with gynephilia must address the observation that the bivariate correlation between TF and White ethnicity (.49) was actually slightly higher than the correlation between TF and gynephilia (.47). The most likely explanation for this observation is that some White participants—most of whom presumably had some lifetime experience of both

gynephilia and TF—probably admitted to having experienced TF at some time in their lives, but minimized or denied experiencing *current* gynephilia (which is what Nuttbrock et al. asked about), perhaps because they had developed secondary sexual attractions to men (Freund, 1985) as an outgrowth of autogynephilic interpersonal fantasies.

In contrast, there is little, if any, plausible theoretical basis for attributing variance in TF to ethnicity or age, except as these are correlated with gynephilia. Nuttbrock et al. (2010) did propose a theoretical explanation, arguing that Whites and older persons were more likely than non-Whites and younger persons to find cross-dressing “exotic” and thus erotic; their argument, however, was not supported by any cited empirical evidence. Nuttbrock et al.'s explanation also relied on a misinterpretation of Bem's (2000) “exotic becomes erotic” theory: Contrary to Nuttbrock et al.'s account, Bem did *not* propose that “*socially exotic behaviors and experiences* [emphasis added] may become eroticized because they are associated with... emotional and physiological arousal” (Nuttbrock et al., 2010). Rather, Bem (2000) theorized that “individuals can become erotically attracted to *a class of individuals* [emphasis added] from whom they felt different during childhood” (p. 533). In other words, Bem's theory attempted to explain *interpersonal* sexual attraction; it did not attempt to explain paraphilic sexual phenomena, such as TF, that are not interpersonal. Given the absence of any credible direct theoretical link between TF and age or White ethnicity, gynephilia probably accounts for most of the observed variance in TF, and age and White ethnicity appear in Nuttbrock et al.'s (2010) multiple regression equation as statistically significant predictors primarily because they are correlated with gynephilia. Nuttbrock et al. did not describe the change in adjusted R^2 value that occurred when ethnicity and age were added to gynephilia as predictors of TF, but I would predict that any such change probably would be small.

In summary, although Nuttbrock et al. (2010) highlighted a few minor differences between their results and Blanchard's (1985, 1989b, 1992), close examination reveals that these differences are exaggerated and have no theoretical implications. Nuttbrock et al. did not emphasize that their results provided a significant validation of Blanchard's typology, but this is, in fact, their most important finding.

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