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**LOVE OF ONESELF AS A WOMAN:
AN INVESTIGATION INTO THE SEXUALITY
OF
TRASSEXUAL AND OTHER WOMEN**

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ABSTRACT

This study compared the sexuality of male-to-female transsexuals (TS) with other (biological) females. From its beginnings in the early 20th century, there has been a tradition of categorising TS into different *types* based on their sexual orientation. However, among the TS community there is mixed reaction to being categorised. Most especially, there has been debate over a theory proposed by Blanchard (1989b) that categorises TS as either sexually attracted to males or sexually attracted to themselves as women (autogynephilic). To resolve some of this debate, this research measured a number of aspects of sexuality among TS and biological females: sexual orientation, childhood gender identity, autogynephilia, fetishism, masochism, sexual attraction to themes found in erotic transgender fiction, and aspects of sexuality that are relevant to evolutionary theory. These variables were measured on an online or paper questionnaire completed by 209 TS and 127 biological females. The results showed that TS tended to prefer younger sexual partners, and have lower levels of masochism than biological females. For the remainder of the sexuality variables measured, TS and biological females did not differ, with the exception of those TS who acknowledged a history of autogynephilia. These TS scored significantly higher on measures of autogynephilia, Attraction to Femininity in Males, Attraction to Transgender Fiction, Interest in Visual Sexual Stimuli, and Importance of Partner's Physical Attractiveness. Factor analysis of the scale totals revealed four factors, with autogynephilia accounting for about 12% of the questionnaire variance in scores. Autogynephilia was reported by 47% of TS participants; however it manifested in a less predictable way than was proposed by Blanchard (1989b). A further finding was the tendency of participants to report sexual arousal to a diverse range of sexual stimuli that were considered to be not conforming to cultural norms; this accounted for a large amount of the questionnaire variance (56.44%). Implications of these results were put forward in the discussion: clinicians are warned against restricting TS by categorising them; instead they should allow for the diversity and complexity of individual cases. An alternative theory of the development of cross-gender identity in biological males is proposed: this theory is based on the early development of a cross-gender identity and whether defense mechanisms are used to suppress this identity. In concluding, the limitations and suggestions for further research are discussed. A major limitation of this research is the large proportion of highly educated, higher socio-economic participants.

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INTRODUCTION

Studying transsexual (TS) sexuality can give psychologists important insights into the manifestation of transsexualism, and deepen our understandings of sexuality in the wider population. However, one should be warned that the role that sexuality plays in transsexualism is a contentious topic among the male-to-female (MTF) TS community (Lawrence, 2000). There is much discontent among this community with academic literature examining TS sexuality; this stems from the fact that MTF-TS sexuality has often been used to define different *types* of TS when a lot of TS do not believe that discrete types of TS exist. On the other hand, some TS believe that acknowledging different types of transsexuals can assist TSs understandings of themselves, have implications for clinical practice, and for research into transsexuality. There is much disagreement between TS who hold differing beliefs in this area. It is hoped that this research will provide some clarification for this argument. The objective of this research is to examine aspects of sexuality and typology in MTF-TS and to make a comparison to other persons who identify as female but who were born that way (biological females).

Although this research will not consider the sexuality of female-to-male (FTM) transsexuals, it should be pointed out that research on the sexuality of FTM-TS is an important issue that has often been overlooked (Chivers & Bailey, 2000). In this thesis the abbreviation TS will refer only to the MTF variety, unless otherwise stated.

This thesis is divided into nine chapters. Chapter 1 provides an overview of research conducted on transsexual and transvestite sexuality beginning in the early 20th century through to the 1980s. Chapter 2 introduces Blanchard's theory of autogynephilia. His many articles are discussed; this is followed by subsequent research examining autogynephilia, and an overview of the reactions to this theory from the transsexual community. Chapter 3 gives an overview of research and theories that have relevance to the etiology of transsexualism. Chapter 4 reviews three further aspects of sexuality that are examined in this research: sexual attraction to femininity in males, sadomasochism, and evolutionarily based elements of sexual preference. Chapter 5 outlines the research questions, and outcomes of the research are hypothesised. Chapter 6 outlines the methodology. In this chapter the participants, questionnaire, and research procedure are described. Chapter 7 reports the findings of the research. Chapter 8

discusses these findings. Implications of the findings, limitations of the research, and suggestions for further research are also given in this chapter. Chapter 9 provides concluding comments for the thesis.

Terminology

There is a lot of terminology to consider when studying this area. In this thesis the term *transgender* will be used as an umbrella term that covers anyone that in some way breaks or challenges traditional gender roles (Docter, 1988). The term *transsexual* (TS) will refer to a person who has a sustained gender identity that is discrepant with their biological sex along with a desire to alter their bodily appearance towards that of the opposite sex (Buhrich & McConaghy, 1978). The term *transvestite* is used to refer to persons who show “recurrent and persistent cross-dressing that, at least in puberty or adolescence, is accompanied by genital excitement.” (Blanchard, 1989a, p. 316). The term *biological female* (BF) will be used to refer to persons born in the female gender, who do not desire to change this.

When referring to sexuality of TS persons, traditionally the terms heterosexual and homosexual have been used to refer to sexual attraction relative to ones biological sex. For instance an MTF-TS who was sexually attracted to males would be referred to as homosexual, regardless of whether this person was living as a woman or had undergone sexual reassignment surgery (SRS). However this terminology can be confusing and disrespectful to TS persons. Therefore, this research will use alternative terms used by Blanchard (1988): *androphilia* to refer to TS that are exclusively attracted to adult males, or homosexual relative to their biological sex, and *gynephilia* to refer to TS that are exclusively attracted to adult females, or heterosexual relative to their biological sex. The term *bisexual* will still be used to describe TS who are sexually attracted to both males and females. Although in this research, sexual orientation is measured using continuous scales, and these discrete categories are not always applied. The term *fetishism* is also used in this research to refer to the use of non-living objects to receive or increase sexual arousal (American Psychiatric Association, 2000).

1. EARLY TRANSGENDER SEXUALITY RESEARCH

Research on Transsexualism

It was common for early medical professionals to hold the view that a TSs desire to have sex with men is an intrinsic part of a their desire for sex reassignment, and thus sexual interest in women was seen as a contradiction to the desire for surgery (e.g. Benjamin, 1966; Stoller, 1971). This compulsory heterosexuality arose from the negative and pathologising views of homosexuality held by clinicians prior to the 1980s. Doctors did not want to be seen “creating” homosexuals (Tobin, 2003). However, the following literature review shows that almost all empirical research studying TS sexuality has found diversity in this area, with a number of TS reporting sexual attraction to females, sexual attraction to males, and sexual attraction to neither gender. As follows, the first of this research emerged in the early 20th century.

Probably the first person to systematically study cross-gender identity was Hirschfeld (1914/2000). He distinguished between gynephilic, bisexual, androphilic, asexual, and *narcissistic* or *automonosexual* TS groups (Hirschfeld, 1922, as cited in Freund, 1985). Hirschfeld described automonosexuals as sexually aroused by the idea or impression of themselves as females. “They feel attracted not by the women outside them, but by the women inside them” (Hirschfeld, 1948, p. 167, as cited in Blanchard, 1989a)

Ellis (1935, as cited in Benjamin, 1966) used the term *Eonism* to describe cross-gender behaviour in mostly gynephilic biological males. Ellis noted that Eonism has a shared origin with heterosexuality, and the Eonist carries his identification with the woman he loves “too far”. Ellis believed in two types of what he then called “transvestites”: one type that only dresses as a woman, and another that that feels themselves to be a woman (Benjamin, 1966). Benjamin suggests that he would refer to this latter group as TSs.

During the 1950s a greater amount of research into transsexualism began to emerge. Hamburger (1953) examined letters received from 465 persons requesting a sex-change operation. Using Hirschfeld’s groupings, Hamburger estimates that of those MTF respondents who gave information about their sexual orientation, 65% were androphilic, 22% were gynephilic, and the remaining 13% were classified as bisexual,

automonosexual, or asexual. Bürger-Prinz, Albrecht, and Giese (1953, as cited in Hoenig & Kenna, 1974) believed that gynephilic transsexualism as more “typical” of the essence of transsexualism. Lukianowicz (1959) believed that transvestism and transsexualism exist on a continuum, and that these groups differed only in the strength of their desire to alter their anatomy. Randell (1959) rated 20 TS patients requesting psychiatric treatment on a Kinsey scale. He found that 11 of the TS reported a predominantly gynephilic orientation, four reported a bisexual orientation and five reported an exclusively androphilic orientation.

Benjamin’s (1966) book, *The Transsexual Phenomenon* classifies TS into two groups. The first of these, the “nonsurgical” group lies between transvestism and transsexualism. Members of this group are unable to undergo SRS because of outside factors or concerns, and also appear to be more likely to have sexual relations with females. Benjamin’s second group describes a higher intensity of transsexualism, with these persons seeking or having attained SRS; they are also more likely to be androphilic from Benjamin’s descriptions.

Although Benjamin’s (1966) groupings are no longer used, he initiated what was to become a common practice of classifying TS into groups based on their sexual orientation. Since Benjamin (1966), research on TS typology has tended to go together with research on TS sexuality. Researchers have reported clinical differences in TS of different sexualities, and some have used these observations to argue that there are different “types” of TS. As the areas of sexuality and typology are often overlapping, the following sections summarise research from both areas.

Following Benjamin’s (1966) book, further research examining transsexual sexuality began to emerge during the late 1960s. Benjamin (1967) found gender dysphoric persons who had a transvestic history to be “bisexual but generally on a low psycho-social level” (p. 109). Benjamin stated that when in their male role they are sexually attracted to females, and when in their female role they can intermittently show sexual attraction to males. Another study of TS by Wålinder (1967, as cited in Blanchard, 1989a) included 53% androphilic subjects, 20%, gynephilic subjects and 27% reporting no previous sexual experience. Green (1969, as cited in Barr, Raphael, & Hennessey, 1974) described a patient presenting with the desire for sexual reassignment who had sexual interest only in women. Green concluded that transsexualism exists on a spectrum or continuum.

Clinical reports of TS sexuality continued in the early 1970s started to report sexual arousal associated with cross-dressing among TSs. Money and Gaskin (1970) distinguished between transsexualism as related to effeminate androphilia (sexual attraction towards males) or as related to non-androphilic transvestism. Money and Gaskin described idealised cases of each of these types, but caution that these are not always distinct; they see cases as occurring on a continuum, as opposed to a typology. Bancroft (1972) reported that six of 22 patients referred for treatment of fetishistic arousal to women's clothes reported the "persistent" desire to live and be accepted as women. Examining 54 TS, Hoenig and Kenna (1974) found that 16.7% experienced predominantly gynephilic sexual fantasies, and that 77.8% showed a phase of transvestism where cross-dressing was performed for sexual gratification. Hoenig, Kenna, and Youd (1970) reported that 13% of TS seen by them had gone through a stage of sexual arousal towards women's clothing. Barr (1973) reported that 4% of TS he had seen had experienced fetishistic sexual arousal. Barr et al. (1974) describe gynephilic attraction in two TS, with one of these TS reporting fetishistic arousal to cross-dressing.

Bentler (1976) studied 42 MTF postoperative TS using three groupings: androphilic, asexual, and gynephilic. He found that androphilic TS receive SRS on average about 4 years earlier than the asexual TS and about 10 years earlier than the gynephilic TS. Of note in this study is that 50% of gynephilic, 18% of asexual, and 23% of androphilic participants reported that cross-dressing was sexually arousing prior to surgery (Bentler, 1976). Although these figures give moderate support for theories that gynephilic TS are more likely to report sexual arousal to cross-dressing, this is far from comprehensive and identifies diversity within these groups with regard to this. Also of note in this study is that over half of the TS classed as asexual reported having been gynephilic prior to their surgery, and not any of them reported themselves to have been previously androphilic. This gives some support to the later view that the asexual and gynephilic groups are similar.

Further research, which persisted into the 1980s, described subgroups of TS that appeared to have similarities to transvestites. In a report examining aging TS patients, Lothstein (1979) described eight whom he classifies as either gynephilic or asexual, and notes that four of them have reported sexual arousal to cross-dressing. Wise and Meyer (1980) use the term "aging transvestite" to label a group that bridges the gap between transvestites and TSs. They describe this group as having a history of masculine roles,

cross-gender sexual arousal, and enduring desires to live as the opposite sex. In a multi-clinic survey, Roback, Felleman, and Abramowitz (1984) found that mid-life applicants for SRS were more likely to have married, had children, to appear more as transvestites, and less feminine, or to have experienced homosexual contact. Ball (1981) distinguishes a group of TS who tend to be gynephilic, have a lower than usual sex drive, and a higher than average level of intelligence and aspiration. Looking back on 30 years of practice, Ball (1981) reports TS presentations becoming more heterogeneous with more cases reporting sexual arousal with cross-dressing being seen. Brown (1983) sees transvestism as “Bridging the gap between fetishism and transsexualism” (p. 229); he also claims and that sometimes the TS experience develops from transvestism, by way of strong sexual interests, and this accompanies sexual interest in females.

In the final part of this chapter, two transgender classification models emerging in the 1970s are examined. The first of these is Person and Ovesey’s primary and secondary transsexualism model. Buhrich and McConaghy’s four-type classification model follows this.

Primary and Secondary Transsexualism

Person and Ovesey (1974a; 1974b) believed that, along with what everyone considered to be the “classic” effeminate androphilic TS model, there existed another group of biological males seeking sex reassignment who had a tendency to be attracted to females or asexual. Person and Ovesey (1974b) note that of the 10 non-androphilic TS in their study sample, nine showed no evidence of effeminacy in childhood: they participated in rough-and-tumble behaviour as required and did not engage in girls’ activities any more than the other boys in their peer group. Each of these participants admitted to being envious of girls and fantasised of being a girl. Person and Ovesey (1974a) note that these persons appear more like transvestites, as they do not show significant effeminacy in childhood and often make an attempt to live in the male role in adulthood; they labelled this group “secondary transsexuals”. In the second part of the study, Person and Ovesey (1974b) report that the androphilic TS they studied resembled the then-perceived stereotypical TS. These biological males were effeminate from earliest childhood; as children they preferred girls as playmates, and avoided boyish pursuits. Person and Ovesey labelled this group “primary transsexuals”. In a later study, Person and Ovesey (1978) distinguish between (1) the gynephilic transvestite who is sexually aroused by cross-dressings; (2) the androphilic cross-dresser; (3) the TS; and (4)

those “transvestites who use female clothing non-fetishistically in order to relieve anxiety about gender identity and gender role” (p. 318). Person and Ovesey (1978) also note that a few of the transvestites are occasionally involved in sexual relations with males, but only when presenting as females.

Docter (1988) also distinguishes between primary and secondary transsexualism. He considers primary transsexualism as involving lifelong feelings of gender dysphoria, beginning from early childhood. Docter agrees that these individuals are generally androphilic from an early age, do not function in “masculine” roles, and do not report a history of sexual arousal associated with cross-dressing. According to Docter, secondary TS function as either transvestites or homosexual males prior to their decision to live in the opposite gender role. Docter makes a distinction between a transvestite and homosexual subtype, but concedes that little is known about the homosexual subtype. He also claims that secondary TS tend to show a history of sexual arousal associated with cross-dressing, and a later onset of gender dysphoria that appears to grow stronger with age. “The masturbatory sessions of youth are supplanted by efforts to present as a pseudowoman in social situations, and to receive acceptance and praise as this person” (pp. 197-198).

Nuclear Transsexuals, Fetishistic Transsexuals, Marginal Transvestites, and Nuclear Transvestites

Buhrich and McConaghy proposed a further categorisation of TS subtypes. Buhrich and McConaghy (1977c) report data examining the differences between 54 transvestites and TSs. They found that significantly more transvestite subjects were older, married, did not cross-dress fully, reported gynephilic interest, and less feminine gender identity. However, the distinctions between the groups were not always as clear-cut: in the sample 12 subjects described as TS reported that wearing women’s clothing had been sexually arousing to them. Of these 12 subjects, one was asexual, three were bisexual, four were gynephilic, and four reported a sexual inclination towards males but were “feminine rather than effeminate” (Buhrich & McConaghy, 1977c, p. 490). Buhrich and McConaghy (1977b) categorised transvestites into two groups. Group one were satisfied with cross-dressing, and group two desired to feminise their appearance through female hormones and SRS. Group one transvestites reported cross-dressing less often, having a less feminine gender identity, and greater sexual interest in females than group two transvestites; however, all subjects from both groups reported previous

sexual experience with females, and that their sexual attraction to males was much stronger when dressed as a woman. Buhrich and McConaghy (1977b) report that all of their transvestite subjects had gone through a phase of sexual arousal to women's clothing in adolescence, but this arousal weakened or disappeared with increasing age. Buhrich and McConaghy (1977c) conclude that there is no reason to believe a person is not a TS based on a history fetishistic sexual arousal.

In a study of 29 TS, Buhrich (1978) found that those who had experienced fetishistic sexual arousal were significantly more likely to be older, to show increased penile volume charges to pictures of both men and women, to have experienced sexual intercourse with a female, and to be married, than those who had not experienced fetishistic sexual arousal. The two groups reported similar frequencies of cross-dressing, desire for SRS, and levels of female gender identity. Buhrich (1978) also examined motivations for cross-dressing in transvestite and TS subjects, and noted that feeling relaxed, at ease, and alleviation from stress, tension, and masculine demands were the most commonly reported motivational factors; sexual arousal was only reported as a primary sensation of 12% of this sample.

Buhrich and McConaghy (1979) outline a typology of cross-gender identity. They differentiate between (1) *nuclear transsexuals*, who have never experienced sexual arousal with cross-dressing, and are likely to be significantly younger than the other groups; (2) *fetishistic transsexuals*, who have experienced sexual arousal with cross-dressing and who are significantly more likely to be married, and to experience gynephilic attraction; (3) *marginal transvestites*, who as well as experiencing sexual arousal with cross-dressing desire feminisation by way of hormones and surgical intervention; and (4) *nuclear transvestites*, who experience cross-gender sexual arousal but do not desire to feminise their body. Buhrich and McConaghy (1979) found that self-identified fetishistic TS showed significantly more sexual interest in males and felt like women when naked than self-identified marginal transvestites. Buhrich and McConaghy (1985) also found that marginal transvestites described significantly more feminine preadult behaviours than nuclear transvestites, even though these groups did not differ with the amount of early sexual arousal experienced with cross-dressing. Both of the transvestite groups described significantly more feminine behaviours in childhood and adolescence than a male control group.

Given the amount of overlap between transvestism and transsexualism seen in the previous section; it is warranted to devote a section to research examining the sexuality of transvestites.

Research on Transvestism

Benjamin (1966) believed that TS and transvestites could be differentiated in terms of their sexual orientation, with transvestites being attracted to females, and TS attracted to males. Some early studies have found transvestites to be an entirely gynephilic group (Buckner, 1970; Buhrich & McConaghy, 1977a; Docter, 1988). However, more recent studies using larger samples have shown predominance of heterosexuality among transvestites to only be 69-89%, with 28-29% of transvestites reporting previous homosexual experience (Docker & Fleming, 2001; Docker & Prince, 1997; Prince & Bentler, 1972). This is at a similar level to other males in the population (Kinsey, Pomeroy, & Martin, 1948).

From surveying 50 transvestites from cross-dressing clubs, Talamini (1982, as cited in Docker, 1988) outlined four factors that motivate transvestites to cross-dress: relaxation, role-playing, eroticism, and adornment. This departs from the traditional model, which totally relies on erotic motivations and places more value on social and interpersonal aspects. Docker (1988) surveyed a sample of 110 transvestites, and found their initial motivations for cross dressing were sexual and erotic. However, when asked their motivations for cross dressing at the time of the survey, nonerotic pleasure and the expression of a feminine gender identity were the most strong factors reported by the sample, with sexual motivations having diminishing importance.

2. AUTOGYNEPHILIA

Midence and Hargreaves (1997) outline a number of methodological concerns with studies of transvestites and TS before the 1980s. These include the reliance on clinical observation instead of using standardised assessment measures, emphasis on self-report single test measures, small sample sizes, lack of appropriate control groups, and lack of attention paid to recruitment selection criteria. During the 1980s however, research from the Clarke Institute of Psychiatry in Toronto, Canada began to emerge which used larger sample sizes and standardised assessment measures.

Freund, Steiner, and Chan (1982) analysed measures of sexual orientation, childhood gender identity, fetishism, masochism, and sadism in TSs presenting at the Clarke institute. Using factor analysis they observed one relatively strong factor accounting for 47.3% of total variance. The loadings of this factor were erotic attraction to women (.91), childhood feminine gender identity (-.79), fetishism (.79) and erotic attraction to males (-.78). Thus, Freund et al. (1982) conclude there are two distinct “types” of TS: gynephilic and androphilic. Gynephilic TSs reported cross-gender fetishism that was not seen in the androphilic group, and androphilic TSs reported a greater extent of childhood feminine gender identity than the gynephilic group. However Freund et al. (1982) also concede that “fetishistic” TSs are not overwhelmingly sexually attracted to females, and only seem to experience cross-gender identity when they are cross-dressed. Also the association between cross-gender sexual arousal and gynephilic sexual attraction in MTF-TS is paralleled by the lack of sexual attraction to males and cross-gender sexual arousal seen in FTM-TS (Freund et al., 1982).

In later work, Freund discussed further issues regarding this typology. Freund (1985) noted that some gynephilic TS patients shift from having exclusive sexual interaction with females for many years to claiming that they are now exclusively attracted to males and that they have never been attracted towards females. Freund conceded that he is unsure if this is the result of patients trying to mislead the examiner in order to strengthen their chances of getting a recommendation for SRS, or whether this is a result of wanting to take a more “female” role by having a male sexual partner. With regards to reported feminine gender identity in childhood among some gynephilic TS, Freund (1985) highlighted the fact that in follow-up studies of feminine boys, the

majority of these males grew up to become homosexual males without the desire to change their sex, a few cases developed into heterosexual men without signs of cross-gender identity, and heterosexual transvestism had been diagnosed only once Zuger (1978). This suggests that childhood cross-gender behaviour among gynephilic TS is seldom severe enough to reach clinical levels.

Blanchard's Preliminary Research

Another researcher from the Clarke institute, Ray Blanchard builds on the earlier research findings with one of the few coherent and scientifically testable theories that academic literature on transsexualism has seen. His theory has far-reaching implications; it takes into consideration not only transsexuality, but also other forms of transgenderism. This section outlines his early research, prior to his formulation of the concept of autogynephilia.

From assessing standardised self-report questionnaires, Blanchard provides evidence for the two-type model of transsexuality proposed by Freund et al. (1982). Blanchard (1989a) notes that in previous typologies of TS, the androphilic category has been reliably identified more often than any other category. He concludes that most of the variation in TS typologies has come from disagreement in how to differentiate among TS that are not exclusively attracted to males, and hypothesises that this is because there are many common characteristics shared by TS who are attracted to women, bisexual, and those TS without strong sexual attractions to men or women. Blanchard (1985a) found that TS whose gender identity is more dependent on female clothing tended to report sexual attraction towards women, cross-gender fetishism, and a less feminine childhood gender identity. Blanchard (1985b) compared four groups of TSs that were differentiated by their sexual orientation, and found that there were no significant differences between gynephilic, bisexual, and asexual TS in the proportion of cases reporting a history of erotic arousal in association with cross-dressing. This group will be referred to as *non-androphilic* TS from here on in this thesis. Blanchard (1985b) found that this non-androphilic group had a significantly higher proportion reporting a history of erotic arousal to cross-dressing than the androphilic group.

Blanchard, Clemmensen, and Steiner (1987) reported that on average, gynephilic TS reported that they first desired to be the opposite sex at around the same time as their first cross-dressing experience (around 9-10 years old on average). Whereas both MTF and FTM TSs who were primarily sexually attracted to their biological sex reported the

desire to be the opposite sex on average 3-4 years prior to their first cross-dressing experience. Of the 72 FTM-TS in this study, only one of these reported sexual attraction to males. This participant did not report ever being sexually aroused by dressing in men's clothing, and none of the authors report ever having seen a FTM-TS that has described a history of transvestism. Thus, Blanchard et al. (1987) conclude that the reason for the higher prevalence of MTF over FTM-TS is because biological males are susceptible to transvestism, which they see as one of the conditions that predispose a person to transsexualism.

Blanchard and Clemmensen (1988) report that more than half of the 2700 patients assessed at the gender identity clinic of the Clarke Institute between 1980 and 1988 acknowledged that they have been erotically aroused by cross-dressing. They also found that although gender dysphoria and fetishistic arousal are negatively correlated, they are not mutually exclusive, with many persons reporting both experiences. Blanchard (1988) found that non-androphilic TS reported significantly lower childhood femininity, and a significantly higher average age of first presentation for clinical assessment for their transsexuality than the androphilic group.

In a study of regret following SRS, Blanchard, Steiner, Clemmensen, and Dickey (1989) found that gynephilic MTF-TS were significantly more likely to receive the surgery at a later age. Only 4 out of 111 TS showed signs of regret, however these were all gynephilic MTF-TS. Finally, Blanchard (1989b) showed that erotic arousal value associated with putting on women's clothes, perfume and make-up, and of shaving the legs was significantly less for the androphilic group than for the non-androphilic groups which did not differ from each other.

The Concept of Autogynephilia

Blanchard (1989b) introduced the concept of *autogynephilia*, which literally translated, means "love of oneself as a woman" (p. 616). Blanchard used the term to refer to "a male's propensity to be sexually aroused by the thought of himself as a female" (Blanchard, 1989b, p. 616). This concept underlies Blanchard's hypothesis that there are two distinctive manifestations of transsexualism in biological males: "homosexual" and "autogynephilic". According to Blanchard (1989b), non-androphilic gender dysphoria is the result of autogynephilia, and autogynephilic TS are sexually motivated or paraphilic. That is, autogynephilic TS will find anything that causes them to perceive themselves as more feminine to be sexually arousing. Cross-dressing is the

most striking example here; consequently it is not surprising that Blanchard (1989b) believed that there is much commonality between autogynephilic TS and transvestites. However, according to Blanchard, autogynephilia can also encompass erotic ideas of feminine situations in which women's clothing plays little or no role at all, such as going to the hairdresser, or even doing knitting.

Blanchard (1989b) believes that all 3 subgroups of the non-androphilic group comprise of slightly different manifestations of the same disorder, and this disorder interferes with "normal" erotic attraction to other persons. For the heterosexual group, autogynephilia interferes the least with "normal" erotic attraction to females. According to Blanchard (1989b), asexual gender dysphoria occurs when autogynephilia overwhelms any sexual attraction to females. For the bisexual group, Blanchard (1989b) believes that sexual interest in males is fundamentally different from the androphilic group; in bisexual TS, autogynephilia produces a secondary interest in males to go along with the TSs basic erotic interest in females. Blanchard (1990) observes that these individuals tend to be more attracted to females originally but they progressively become more attracted to males, that the interest is not in the male body or physique as it is for the androphilic group, but rather in the perception of themselves as a woman that males are attracted to (Blanchard, 1989b). The inclusion of a male can add to the fantasy of being regarded as a woman for the bisexual group, and the attraction to males is reliant on the mediation of this fantasy. Blanchard claims that the attraction to a male would diminish if the bisexual TS was not being regarded as a woman (Blanchard, 1989b); this phenomenon has been reported by other authors (Benjamin, 1967; Buhrich & McConaghy, 1977b; Daskalos, 1998; Freund, 1985). Blanchard (1989b) finds support for this hypothesis with the finding that the bisexual group were significantly more likely to report erotic fantasies of being admired by another person than all of the other TS groups. A scale measuring attraction to the male physique has been included in this research to further test this hypothesis.

Blanchard's Studies Building on the Concept of Autogynephilia

Blanchard builds on this theory with subsequent findings. Blanchard (1991) reported that 90% of non-androphilic patients seen at the Clarke Institute divulged some history of transvestism. Blanchard (1991) also outlines four areas that autogynephilic fantasies can be concentrated on: *physiological autogynephilia* focuses on female bodily functions such as lactating or menstruating; *behavioural autogynephilia* involves

performing stereotypical feminine activities such as visiting the hairdresser, doing household duties, and engaging in sexual activities as a woman, often with a man; *anatomic autogynephilia* focuses on the idea of having female anatomic structures, such as breasts, a vagina, and even hairless legs; and *transvestic autogynephilia*, commonly known as transvestism refers to sexual excitation with cross-dressing. Blanchard uses the terms transvestic autogynephilia rather than the more commonly used term, transvestism, because he believes the excitement not so much related to the clothing per se, but rather it is a consequence of making oneself more like a woman by dressing in the clothing. Blanchard (1991) also points out that an autogynephilic person does not necessarily become sexually aroused every time they engage in feminine behaviour or picture themselves as a woman; instead autogynephilia refers to the *potential* for erotic arousal to oneself as a woman in the same way that heterosexuality and homosexuality refer to the potential for sexual arousal towards women and men. Finally, Blanchard (1991) states that sexual arousal to autogynephilic fantasy may diminish or even disappear due to age, hormone treatment, and SRS; and yet the desire to live as a woman does not diminish, and often grows stronger. He sees this as a likeness to heterosexual pair bonding: after years of marriage, sexual excitement with a partner tends to decrease, however one continues to be just as attached to that person. Similarly the desire to have a female body can continue in some permanent “love-bond” (Blanchard, 1991).

Blanchard (1992) observed the relationship between autogynephilia and gynephilic attraction. He found that the relationship between these variables was positive to a point, with TS reporting little interest in females also reporting little autogynephilia. Moving along the continuum, the amount of autogynephilia increased with the amount of gynephilic attraction, to a point where, according to Blanchard the two attractions begin to compete with each other, and with high levels of gynephilic attraction autogynephilia begins to diminish. The highest levels of autogynephilia were found among TS with intermediate levels of gynephilic attraction (see Figure 1). Blanchard (1992) also reports that it is not transvestism that competes with autogynephilia, but rather the anatomic autogynephilia that commonly supplements this transvestism. As evidence of this, Blanchard (1993a) reported data suggesting that his subjects who reported sexual arousal with imagining themselves having female genitals reported significantly more gender dysphoria than those who did not.

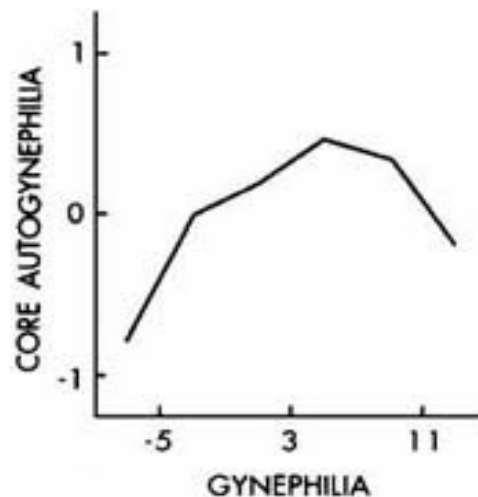


Figure 1 Relationship of sexual attraction to females (gynephilia) to core autogynephilia, (Blanchard, 1992, p. 276).¹

As described above, the concepts of autogynephilia and transvestism are related. Blanchard's autogynephilia concept, however, is much broader: it includes transvestism as well as sexual fantasies in which the wearing of women's apparel is less important or even absent altogether. For example, the preferred fantasy of some autogynephilic TS is simply the mental image of themselves with a nude female body (Blanchard, 1993c). Blanchard (1993c) found that those of his TS patients who reported they were most erotically aroused by imagining themselves as naked women reported significantly more gender dysphoria than those patients who reported they were most aroused by imagining themselves as partially or fully dressed women. According to Blanchard, these findings suggest that those individuals who are more erotically aroused by the thought of having a women's body are more concerned with acquiring a women's body through permanent physical alterations.

Blanchard (1994) also found that the number of times that his TS patients had been married, and the number children they had, correlated positively with the patients age of first presenting for clinical attention. Blanchard suggests that these findings are a result of conflicting incompatible autogynephilic and gynephilic desires, and feelings such as guilt and emotional attachment delay these patients in reporting to his gender clinic.

Finally, in two of his articles, Blanchard makes comparisons between autogynephilia and heterosexuality. Blanchard (1993c) suggests that "An

¹ Note that Blanchard standardised these scales so that the mean scores on the Core Autogynephilia and Gynephilia scales were zero, scores above the mean on these scales were positive, and scores below the mean scores were negative.

autogynephile's desire for a physical union with a female self-image may be functionally equivalent to a heterosexual's desire for marital union with a female partner" (p. 247). Blanchard (1991) gives a similar view:

The desire for sex reassignment surgery of the (autogynephilic) group appears as logical as the desire of heterosexual men to marry wives, the desire of homosexual men to establish permanent relationships with male partners, and perhaps the desire of other paraphilic men to bond with their paraphilic objects in ways no one has thought to observe (p. 248)

Parallels of Autogynephilia with other Sexual Anomalies

Freund and Blanchard (1993) introduce "age identity disorder", and suggest parallels between this and gender identity disorder. They note that those paedophiles that become sexually aroused by the thought of being children themselves correspond to autogynephiles, and those paedophiles that become sexually aroused by wearing children's clothing correspond to transvestites. Freund and Blanchard (1993) hypothesise that gender identity disorder and age identity disorder are both the result of "erotic target identity inversions" (p. 559); this is discussed in more detail in Chapter 3. Freund and Blanchard note that they have not seen a case of age identity disorder that has reached the intensity of many cases of gender identity disorder; they have not seen a case of a person reporting the desire to live as a child. Freund and Blanchard hypothesise that this could be due to some ceiling effect of age identity disorder; that it does not reach the intensity of causing persons to request such a change, or due to restrictions in the social acceptability and availability of procedures to transform an adult into a child.

Blanchard (2003) compares autogynephilia and gender identity disorder to apotemnophilia and body integrity identity disorder (BIID). Blanchard (2003) defines apotemnophilia as "Erotic arousal at the thought or image of oneself as an amputee", and body integrity identity disorder as "Discontent with one's birth phenotype and the desire to possess the body of an amputee". Parallels between these two entities include the fact that many persons with BIID are also sexually attracted to other persons who have had body parts amputated, which has been observed in some persons who would be regarded as autogynephilic (Blanchard & Collins, 1993; Ovesey & Person, 1976; Person & Ovesey, 1978). Also, the usual progression of BIID is that it initially is only experienced in moments of sexual arousal, however the feelings become more

generalized over time (Blanchard, 2003). This is similar to reports of autogynephilia in TS who acknowledge it.

Criticism of Blanchard's Theory

Blanchard's theory and methodology have attracted criticism, especially from the transgender community (Wyndzen, 2003). Blanchard uses terminology that many TS find offensive; he refers to MTF-TS as "males" and classifying them as heterosexual or homosexual relative to their birth gender whether or not this is how they identify. He also uses value-laden terms; for instance, he describes transsexualism as a "mis-directed sex drive" (Blanchard, 1989b), thus assuming that the only legitimate targets for sex drive are heterosexuality and homosexuality (Wyndzen, 2003).

Possible selection biases can also be seen in Blanchard's studies. Firstly, the participants in his research were patients of the Clarke Institute. It could be argued that because all TS are required to be assessed at an institute such as the Clarke if they wish to access medical treatment such as hormones or surgery, this would result in a fair cross-section of the TS population. However, some TS do not seek medical treatment, and some who disagree with the views of Blanchard and the Clarke Institute may therefore choose to look elsewhere for treatment. Thus, it is possible that the views of TS patients attending the Clarke Institute are biased and this distorts Blanchard's evidence. In addition, because Blanchard's studies are based on clinical observations, it is quite possible that the participants in these studies gave exaggerated accounts of their cross-gender history to make it more likely for them to receive medical intervention (Blanchard, Clemmensen, & Steiner, 1985). This research uses a population-based sample instead of a clinical sample to minimise these biases. The way that Blanchard selects patients for his research has also been questioned (Wyndzen, 2003). Participants were included in his study if they report that have ever "felt like a women" (Blanchard, 1989b). Wyndzen (2003) points out that there are many TS that do not actually know what it means to "feel like a woman"; these persons may feel that their transsexuality is more about "gender dysphoria", the feeling of being uncomfortable at being considered a man, than "gender euphoria", the feeling of being happy about being considered a woman (Wyndzen, 2003). To account for this possibility; this research will use Docter and Fleming's (1992) Transgender Identity Scale which measures commitment to living as a woman to identify TS.

Blanchard's (1989b) hypothesis is that non-androphilic TSs sexual orientation is related to having sexual fantasies of being female; he tests this by comparing non-androphilic TS to a control group of androphilic TS. However, Wyndzen (2003) points out that "what this control group fails to distinguish is the role of sexual orientation separate from gender incongruence, in predicting fantasies about being a woman" (Wyndzen, 2003). To ensure that BFs do not have such fantasies, this research includes a control group of BFs. The scales have been modified slightly so that they are appropriate for both groups to answer.

In addition, many of the questionnaire items that Blanchard uses begin with "Have you ever...". Given this format, it is probable that older persons answering the survey will be more likely to answer "yes", simply because they have lived longer and are therefore more likely to have experienced a diversity of feelings, including autogynephilic feelings. This means their results may not be due to sexual orientation, but more an experience that TS who do not transition are more likely to experience as they get older (Wyndzen, 2003). Blanchard does not control for the effects of age in his studies, this is addressed in this study though.

Since the work of Blanchard there has been limited research published by other authors to either directly assess his theory. Other sources and research examining Blanchard's theory are outlined in the next two sections.

Support For Blanchard's Theory From Other Sources

Some qualitative evidence has emerged to support Blanchard's theory of autogynephilia. Dr Anne Lawrence identifies as an autogynephilic TS and first introduced the concept to the transgender community through her web site, publications in transgender magazines, and presentations given to conferences. Lawrence (1999a; 1999b) published on the internet narratives of 59 TS who reported autogynephilic fantasies. Such narratives can give important insight into the subjective experience of autogynephilia. An example follows:

I read your article on autogynephilia and was quite literally stunned! My fantasies have always revolved around being a woman. The very earliest of my masturbation fantasies at around 12 years of age were of being somehow turned into a girl. They have always been the primary theme for me all through my life.
(Lawrence, 1999a)

According to Lawrence, the most frequently stated themes in these narratives are that many individuals believed they were alone in their autogynephilic feelings; many

had doubts as to whether they were true TS as a result of these feelings; many were unwilling to disclose these feelings to others, including doctors and psychologists; autogynephilic cues were often required for sexual excitement or functioning; autogynephilic arousal continued after transition and SRS; gender incongruent feelings were often experienced in childhood, prior to any autogynephilic arousal; and many informants did not necessarily conform with the “standard” autogynephilic model, and many of these nonconforming informants identified as bisexual (Lawrence, 1999a). Ekins and King (2001) also report qualitative data on three TS informants that include autogynephilic components, the authors study these components within the field of the sociology of transgendering and discuss concepts such as autogynephilic identity formation. Qualitative data will also be collected in this research, as participants will be given the opportunity to comment on the theory of autogynephilia. The narrative’s cited by Lawrence, and Ekins and King all generally reported positive attitudes to autogynephilia; it is likely that a more varied range of views of this theory will be uncovered in this research.

Another observation which lends support to Blanchard’s theory is the existence of erotic narratives that have been found in transvestite publications and more recently on the internet that appear to be created for individuals with transvestic, and possibly autogynephilic fantasies. The existence of these narratives in transvestite publications has been identified by a number of authors (Beigel & Feldman, 1963; Blanchard, 1990; Buhrich & McConaghy, 1976; Docter, 1988). Common themes in these narratives include forced cross-dressing, transformation into living as a woman all of the time, being required to become an attractive and seductive young woman, and in engaging in sexual relationships with both women and men. Beigel and Feldman (1963) examined 90 such narratives. They noted the frequent innocence of the main character who usually begins with no intention to dress in the women’s clothing. Beigel and Feldman believe this occurs to free the main character from any guilt. They also note that nearly half of the stories end with the indication that the main character will go on to living as a woman; an indication of TS desires among consumers of such fiction. Blanchard (1990) notes that in these narratives the central character is forced to dress as a woman because of circumstances, or by intimidating female character(s); he also notes that the hero almost always becomes an attractive and appealing on the first trial, and goes on to incorporate the cross-dressing as part of their existence. Buhrich and McConaghy (1976) observe that the experiences in the transvestite fiction differ sharply from what the

transvestite experiences in real life. They believe these stories illustrate wish fulfilment of desires that are deprived of expression in reality. Docter (1988) believes that these themes merely give us an insight into what transvestites find most pleasurable, but they are of little use in distinguishing individual's motives or reasons for cross-dressing.

An abundant supply of narratives similar to this can be found on the FictionMania web site: www.fictionmania.com. Common themes of these narratives include magical transformation, age-regression and retraining, and forced feminisation. There is also an overlap between these transvestic fantasies and other fetishes such as sadomasochism.

Assuming that persons read these narratives to receive sexual arousal from them, then these narratives can be seen as autogynephilic fantasies. The sexual attraction comes from the male being transformed into a female, not just through the change of clothes, but also by being regarded as a female in social situations. Changes via surgical, magical, or science fiction means are also found in some of these stories. The question therefore becomes whether people who are attracted to this fiction are TS as well as transvestites. No empirical studies have yet addressed this question. From the internet the author found one essay where a TS person acknowledged past and current sexual attraction to what she calls "tranny fiction" (Orens, n.d.). This research measures erotic interest in transgender fiction, to see its prevalence among TS and BF persons.

Subsequent Research on Blanchard's Theory

This section describes research that has examined components of Blanchard's theory. In a sample of 25 TS volunteers, Johnson and Hunt (1990) used the scales that Blanchard had employed to find that gynephilia was significantly positively correlated with sexual arousal to cross-gender fantasy, and significantly negatively correlated with feminine gender identity in childhood. However, scores of androphilia did not significantly correlate with these measures. Johnson and Hunt (1990) propose that:

The erotic component of cross-gender fetishism may provide an early outlet for the intensity of the conflict. This outlet of cross-dressing and experiencing release may delay the need for an early gender resolution by providing intermittent relief from gender distress (p. 357).

Docter and Fleming (1992; 2001) created an 178 item questionnaire to measure beliefs that they considered important to transvestism and transsexualism based on clinical experience, writings about and by TS and transvestites, and by allowing transvestites and TS to critique the questions. From assessing 455 transvestites and 61

TS, Docter and Fleming (2001) found much overlap between the groups. For instance, 6% of transvestites experienced an intense female identity, reporting scores higher than the majority of TS. Also, 18% of TS reported sexual arousal connected to transgender behaviour at a greater level than two-thirds of the transvestite group. However, in this sample, 75% of TS reported no sexual arousal connected with cross-dressing.

Levine (1993) reports on patients seen at a gender clinic and notes that 19% present with “relentless femininity stemming from early onset gender identity disorder” (p.132), and over half of the patients present as gynephilic with “masculine-appearing childhood with grade school or pubertal onset of cross-dressing in private” (p. 132). In a study of satisfaction associated with sexual-reassignment surgery, Lawrence (2003) reported that 49% of her sample of 232 post-operative TS reported “frequency of sexual arousal to dressing in woman’s clothing or to the thought or image of themselves as women” to be “hundreds of times or more” (Lawrence, 2003, p. 304). This research studied only post-operative TS who had their surgery done by a single doctor, and had a low response rate (32%). Lawrence points out that because androphilic TS are more likely to blend into the wider community they may have been more difficult to contact and less likely to respond if they were contacted.

A change of sexual orientation of MTF TS has been documented by some authors (Daskalos, 1998; Freund, 1985; Tully, 1992). Before transition these TS reported a sexual orientation towards females, and after transition this changed towards males. However, Daskalos (1998) notes that the sexual attraction to males goes further than the bisexual autogynephilic fantasies described by Blanchard (1991).

Chivers and Bailey (2000) found differences between gynephilic and non-gynephilic subgroups in FTM-TS. Gynephilic FTM-TS reported greater childhood gender non-conformity, more sexual partners, greater interest in visual sexual stimuli, and a tendency to be more prone to sexual as opposed to emotional jealousy. However no differences were found between these groups in adult gender identity, importance of partner physical attractiveness, social status, and preference for younger partners (Chivers & Bailey, 2000).

Using a clinical sample of adolescent and adult TS in the Netherlands, Smith (2002) examined differences between the two TS subtypes. Smith’s research was supportive of Blanchard’s work. It found that androphilic TS reported greater cross-gender identity in childhood, less sexual arousal when cross-dressing, higher levels of psychological functioning, and a younger average age of application for SRS than their

non-androphilic counterparts. Using three independent raters, Smith (2002) found that androphilic TSs appearance was more congruent to their desired gender than non-androphilic TSs at the time of application for SRS.

The above research can all be seen as generally supportive towards Blanchard's theory. On the other hand, using Docter and Fleming's (1992) questionnaire, McGrane (2001) found that androphilic and non-androphilic TS did not significantly differ on questionnaire items measuring cross-gender sexual arousal. Unfortunately however, these questions often pertain to sexual arousal with wearing female clothing and cosmetics (something more commonly experienced by transvestites), as opposed to sexual arousal at obtaining a female body (something more commonly experienced by TS) (Blanchard, 1993b). Also these questions asked about present levels of sexual arousal associated with cross-gender ideation; however, many authors have noted the diminishment of this sexual arousal with age, SRS, and female hormone usage (Bentler, 1976; Blanchard, 1991; Buhrich & McConaghy, 1977b). Nevertheless, the results of this research are unsupportive of Blanchard's theory of autogynephilia.

Blanchard's findings have become accepted by the American Psychiatric Association; "autogynephilia" has appeared in the DSM-IV-TR (American Psychiatric Association, 2000) as diagnostic criteria for both transvestic fetishism and gender identity disorder.

Cordial Reactions from the Transgender Community

There are many TS who disagree (often passionately) with Blanchard's theory and the work that Lawrence has done to mobilise it within the TS community. Indeed the concept of autogynephilia is one of the most controversial and hotly debated topics within the transgender community. Lawrence notes that many of the personal verbal criticisms and assaults that she has received have left her "feeling defensive, perplexed and deeply troubled" (Lawrence, 2000). This discussion will now turn to some of the reasoning of those who argue against this theory.

A review of a transgender forum on a large Internet message board came up with several interesting arguments. One TS made the point that many BFs also "get off" on dressing sexily, and often also desire to undergo cosmetic surgery to make themselves more attractive. Another TS claimed that the assumption that because she was in a relationship with a female then she must be just a male with a fetish for altering her body "sounds like crap". There is no doubt that the terms used by writers like Blanchard

which refer to MTF-TS as “men”, or for instance, “heterosexual” if they are attracted to females, have created a lot of scepticism and mistrust among the transgender community, along with a reluctance to support such a theory. It is also clear that the underlying assumption of Blanchard’s theory that autogynephilic persons are males with a sexual fetish does not sit well with a lot of TS. Another posting alluded to some of the political implications of Blanchard’s theory; claiming that conservative thinkers are using the theory to claim that transsexuality is nothing more than a sex fetish and placing it alongside other paraphilias such as paedophilia. Also, so called “experts” were requiring that TS identify as autogynephilic men in order to be eligible for surgery. It is clear that there are a lot of TS who are strongly opposed to Blanchard’s theory of autogynephilia.

The Bailey Controversy

Another phenomenon adding fuel to the argument was the 2003 release of J. Michael Bailey’s (2003) book, *The man who would be queen: The science of gender-bending and transsexualism*. In this book, Bailey supports Blanchard’s theory, and explains it in laypersons terms in an attempt to popularise the theory among the general public. However, Bailey is dismissive and cynical towards the many that disagree with Blanchard’s theory. He fails to acknowledge any of the methodological flaws in Blanchard’s work, and does not acknowledge reports of TS who do not feel that they fit into the model; he believes that their accounts are nothing more than lies and deception: “There is one more reason why many autogynephiles provide misleading information about themselves that is different from outright lying. It has to do with obsession” (Bailey, 2003, p.160).

Although he does not specifically state it, it is probable that Bailey’s claims of lying TS originate from two studies. Firstly, Blanchard et al. (1985) found that for gynephilic TS scores in the “classic” TS direction of their measures (such as more feminine in childhood and less sexually aroused with cross-gender behaviour) positively correlated with a social desirability scale, whereas this was not the case with androphilic TS. The authors suggest that these TS may report themselves in a more socially desirable manner because this will give them more chance of obtaining hormonal and surgical assistance. In the second study Blanchard, Racansky, and Steiner (1986) report that gynephilic biological males who persistently dress in women’s attire react with penile tumescence to narratives of fantasies of male-to-female cross-dressing; even if

they refute any history of sexual arousal in relation to cross-dressing. The authors claim that these findings could be due to patients consciously trying to mislead the examiner, or more probably due to these patients being consciously unaware of any erotic arousal associated with their cross-dressing.

However, careful examination of the Blanchard et al. (1986) study shows that there is much variation among these “cross-dressers”. Those who actually report sexual arousal with cross-dressing show a much greater penile response to the cross-dressing narratives than those who did not. Also, those cross-dresser participants who denied sexual attraction to cross-dressing showed significantly greater penile response to narratives of having sex as a female with a male partner (even though the authors report these participants to all be gynephilic) than they did to narratives of cross-dressing. A control group of BF participants would be advantageous this study, to test whether similar patterns emerge among BFs.

Although the results of these two studies give evidence there has been deception by some of the patients at the Clarke institute assessed in these studies, this is most probably due to these persons presenting themselves in a way that will make them more likely to receive the hormonal and surgical treatment they desperately desire. These results are not sufficient for Bailey to disregard the beliefs of a large number of TS as lies and denial. It is more likely that instead of all non-androphilic TS fitting into the autogynephilia model, that there is still diversity within this group, with a number who do not.

In summary, Blanchard’s theory of autogynephilia is a comprehensive, empirically derived theory. Modest support for Blanchard’s theory has been found among academic research and the observation of other phenomena. However, there appears to be a large amount of opposition to this theory among the TS community. This research will directly examine Blanchard’s findings using a non-clinical population, and a BF control group; TS participants will also be given the opportunity to comments on Blanchard’s theory.

3. ETIOLOGY OF TRANSSEXUALISM

Because theory and research examining the etiology of transsexualism is influenced by, and has implications for the study of sexuality and typology, a chapter of this thesis has been devoted to etiology. The first section of this chapter examines biological differences found between different types of TS, and between TS and the rest of the population. The second section examines a genetic basis for transsexuality by reporting within-family concordance. The following three sections focus on family influences, temporal lobe abnormalities, and hormonal influences respectively. The final section outlines two theories of TS etiology proposed by Docter and Blanchard.

Biological Correlates with Transsexuality

Although it is not possible to accurately distinguish causality, examining biological correlates can give insights into possible causes of transsexuality.

Benjamin (1966) noted that nearly 40% of the 152 MTF-TS seen by him showed signs of sexual underdevelopment. Blanchard, Dickey, and Jones (1995) found that androphilic MTF-TS patients were significantly shorter, and lighter in proportion to their height than non-androphilic TS and men in the general population.

Many early studies have reported cases of transsexualism, transvestism, and fetishism in persons with temporal lobe damage (Ball, 1981; Davies & Morgenstern, 1960; Hoenig & Kenna, 1979; Kolarsky, Freund, Maschek, & Polak, 1967; Randell, 1970). However, Hoenig (1985) warns that these studies only permit speculative conclusions, with only one of these studies using a control group and none of the EEGs being read blindly; he also points out that estrogens have been known to increase epileptic activity on the cortex. Using a quantitative frequency EEG analysis, Grasser, Keidel, and Kockott (1989, as cited in Ettner, 1999) found no differences between TS and controls, thus questioning the reliability of visual EEG analyses. Thus, the co-occurrences of abnormal EEG activity and transsexualism may only be the result of chance, and even if there is some causal connection between temporal lobe abnormalities and transsexualism, then this could only be the case for a subgroup of TS.

A high portion of non-right-handedness has been found among MTF-TS (Watson & Coren, 1992). Orlebeke, Boomsma, Gooren, and Verschoor (1992) found that both MTF and FTM TS were almost twice as likely to be left-handed than the general

population. Using a large sample, Green and Young (2001) found that both MTF and FTM TS showed a higher proportion of non-right-handedness than controls, regardless of their sexuality; they postulate that this is a reflection of prenatally organised cerebral laterality.

Differences in birth order have also been found among TS. Tsoi, Kok, and Long (1977) examined 43 androphilic MTF-TS from Singapore and found them to have a later than expected birth order. Blanchard & Sheridan (1992) found that androphilic MTF-TS had significantly more siblings than FTM-TS, who also had significantly more siblings than non-androphilic MTF-TS. The androphilic MTF-TS had a sibling sex ratio of 131 brothers per 100 sisters, was significantly higher than the 106 males per 100 females found in the general population. The non-androphilic MTF-TS had a sibling sex ratio of 117 brothers per 100 sisters, which was not significantly different from the population as a whole. The androphilic MTF-TS also had a significantly later birth order than the non-androphilic MTF-TS. These results have also been found in non-TS androphilic (homosexual) males (Blanchard, 1997; Blanchard & Bogaert, 1996), and they have since been replicated among TS (Blanchard, Zucker, Cohen-Kettenis, Gooren, & al, 1996; R. Green, 2000a).

Green and Keverne (2000) found TS to have a significantly greater number of maternal aunts than maternal uncles. No significant differences from the expected equality were found on the paternal side. This finding has also been seen in non-TS homosexual males.

Two studies (Kruijver et al., 2000; Zhou, Hofman, Gooren, & Swaab, 1995) have shown that MTF-TS have a smaller neuron volume of the central subdivision of the bed nucleus of the stria terminalis (BSTc) providing evidence for a neurobiological basis of transsexualism. However these studies have only examined a total of 8 TS, and the results are yet to be replicated elsewhere. In addition, Chung, De Vries, and Swaab (2002) discovered that the male-female difference in BSTc volume does not develop until well into adulthood. Lawrence (2002) points out that the majority of TS report that their TS feelings began before adulthood, frequently from their first memories. If the BSTc differentiation does not occur until after gender identity has been established then it is difficult to see it as a marker of gender identity.

Within-Family Concordance of Cross-Gender Identity

The literature addressing concordance of cross-gender identity in more than one member of a family uncovers evidence for the distinction between different types of TS based on sexuality. Studies of twins are examined first. McKee, Roback, and Hollender (1976) describe two androphilic TS members of a triplet, with the third member being a BF. Also one cousin of this triplet group was reported to be androphilic and TS. Two authors report androphilic TS monozygotic twins (Anchersen, 1956; Hyde & Kenna, 1977). Sadeghi & Fakhrai (2000) report a twin pair of FTM-TS. Benjamin (1971, as cited in Freund, 1985) mentions he has seen two such duos. Also of relevance here is a case reported by Money and Tucker (1975), of a monozygotic twin boy whose penis had been accidentally removed during circumcision at 7 months, and at 17 months it was decided that this child would be raised as a female. In a follow-up study, Diamond (1982) reported that this person was having difficulty adjusting to the female role, and at the age of thirteen this patient was told the truth about what had happened to them and immediately decided to go back to living a male role. He since married and raised 3 children, and the case was most recently brought to media attention when he committed suicide in 2004 (*Dr Money and the boy with no penis*, 2004).

Also, a number of twins have been reported with discordance for transsexuality. Green and Stoller (1971), and Garden and Rothery (1992) report on two monozygotic biologically female twins who are discordant for transsexualism. Hepp, Milos, and Braun-Scharm (2004) report a biologically male twin pairing who both showed cross-gender behaviour in childhood. Only one of the twins developed a TS identity, with the other remaining “effeminate”; both of the twins also developed anorexia nervosa. Martin (1981, as cited in Freund, 1985) reports a case of biologically female monozygotic twins who both reported sexual attraction towards females, one was described by Martin as an FTM TS and the other was not.

Some studies have reported TS concordance among siblings. Ball (1981) reported on three probably androphilic TS siblings, who had an “exclusively homosexual” brother. Hore, Nicolle, and Calnan (1973), and Stoller & Baker (1973) report co-occurrence of two androphilic TS siblings in one family. Sabalis, Frances, Appenzeller, & Moseley (1974) describe three such siblings. Hastings (1974, as cited in Freund, 1985) describes two TS half-brothers; Freund (1985) concludes from the report that the half-siblings were most likely androphilic.

Hoenig and Duggan (1974, as cited in Wällinder & Thuwe, 1977) studied the relatives of a TS, and discovered a large amount of sexual variation, including transsexualism. Wällinder & Thuwe (1977) examined the birth records of 61 MTF and FTM TS and noted that none of these TS were born to marriages between cousins. They conclude that this is evidence counter to the theory that transsexuality may be caused by a recessive gene in some cases.

A number of studies have also examined family concordance of gynephilic cross-gender identity. Edelstein (1960, as cited in Freund, 1985) describes a gynephilic transvestite patient with a transvestic older brother. Buhrich (1977) reported transvestite concordance with a father and a son. Liakos (1967) described two sons sharing their transvestism with their father, and Krueger (1978) reported a father “passing his transvestism” onto three sons. Randell (1971) mentioned that he had seen nine “familial cases” among the 340 transvestic patients he had seen. In a survey of 70 members of cross-dressing clubs, Buhrich (1978) found that three subjects had one first-degree family member who cross-dressed. These family members were a father, a brother, and a sister respectively.

Drawing from a patient pool of around 1500, Green (2000b) notes ten cases of familial co-occurrence: one set of MTF-TS twins; three sets of MTF-TS siblings; a pair of siblings, one being an MTF-TS and the other an FTM-TS; one set of FTM siblings; two MTF parent-child pairs; one transvestite father with a transvestite son showing signs of gender dysphoria; and one transvestite father with an FTM offspring. Green (2000b) also notes an example of a pair of FTM monozygotic twins reported in a popular women’s magazine. Arguing a case for a genetic component for transsexuality, Green estimates that the likelihood of TS twins or siblings in a two-sibling family would be at least 1 in 100,000,000; the number of cases reported suggests that family co-occurrence is much more likely than this. Green also notes that social learning could not have been a factor in the parent-child cases because in all of the cases the child did not know about their parent’s cross-gender behaviour before they were aware of their own cross-gender feelings.

In summarising this research, there is some evidence for a genetic component of transsexuality. One striking feature of the literature is that there has only been one single report of a co-occurrence of both gynephilic and androphilic cross-gender identity in the same family. This case was reported by Green (2000b). The rest of the cases comprise of either co-occurrence of gynephilic or androphilic transsexualism.

This can be seen as evidence to support the distinction between the two types of cross-gender identity.

Parental/Family Factors

Retrospective reports of MTF-TS found that this group described their fathers as less warm, more emotionally distant, controlling and rejecting (Cohen-Kettenis & Arrindell, 1990; Parker & Barr, 1982). From reviewing family and parental factors, Cohen-Kettenis and Gooren (1999) conclude that these factors may be necessary, but not sufficient for the development of transsexualism. From reviewing research regarding family interactions, Docter (1988) concludes that there is not much, if any hard evidence to support the view that interactions with parents are a cause of transvestism.

Hormonal Influences

According to Hoenig (1985), hormonal influences are more likely to have a part to play in gender identity development during fetal development, than at any other time. This has been evidenced from studies with lower animals (see Freund, 1985 for a review).

Testing hormone excretions, Dörner, Rohde, and Krell (1976, as cited in Hoenig, 1985), found that their test behaved the same in male homosexuals as it did in heterosexual females, and the same in female homosexuals as it did in heterosexual males. They found that the test behaved the same way in androphilic TS as it did in homosexual males and heterosexual females, as was expected. However in those TS who reported being asexual, the test behaved in the same way as heterosexual males and homosexual females. These authors believe that at a critical stage in fetal development, hormonal influences effect the gender development of the human brain.

If male sex hormones (androgens) were a significant factor in the formation of gender identity, then it would be expected that BFs exposed to high levels of androgen (such as those with congenital adrenal hyperplasia (CAH)) would develop a male gender identity. A few cases of BFs with CAH developing a male gender identity have been documented (Meyer-Bahlburg, Gruen, New, & Bell, 1996). However in most cases when a CAH person has been assigned and consistently raised as a female, a female gender identity develops (Cohen-Kettenis & Friedemann, 2003). This is also the case with individuals with androgen insensitivity syndrome, who have been raised as

females (Collaer & Hines, 1995). Collaer and Hines (1995) also found that a wish to live as the opposite sex was rarely found in persons exposed to compounds which have feminising or masculinising properties during fetal life. Reviewing the effects of hormone exposure during fetal life, Hoenig (1985) concludes that androgen exposure causes opposite sex-typed behaviour, homosexual attraction, and a stronger sex drive, and exposure to female hormones causes opposite sex-typed behaviour and a weaker sex drive in males. Although direct links with sex-typed behaviour have been made, no direct links between prenatal hormone exposure and human gender identity have yet been established (Cohen-Bendahan, van de Beek, & Berenbaum, 2005; Hoenig, 1985).

Some indirect evidence exists however. Fingerprint asymmetry patterns develop prenatally under the influence of sex hormones; Green and Young (2000) found differences in fingerprint patterns between androphilic MTF-TS and male controls, and between gynephilic FTM-TS and female controls. However, they did not find significant differences between non-androphilic MTF-TS and male controls. Also, an online group investigating the effects of prenatal exposure to the estrogenic chemical, diethylstilbestrol, which was prescribed to prevent miscarriage, had 23 (35%) members identifying as TS (Kerlin, 2004). In sum, research is mixed about the link between prenatal hormones and transsexualism; further research is required.

Theories of Etiology

Early theories of the etiology of transvestism and transsexualism are briefly described in this section. Wilson & Gosselin (1980) reported that sadomasochists, fetishists, and transvestites all scored higher on self-reports of neuroticism and introversion than controls. They put forward a model of the development of sexual variations based on learning theory, which suggests that “deviant stimuli” are inadvertently encountered during times of high arousal in childhood, which create conditioned responses of arousal in more introverted persons. The more confined upbringing of these persons prevents these responses from becoming extinguished. Buckner (1970) provides a developmental theory for transvestism which begins with fetishistic fantasies, followed by the progress of these fantasies into the development of a feminine self, which earns a place in the transvestites identity. Brierley (1979, as cited in Docter, 1988), believes that the fetishistic arousal creates early learning experiences, and this precedes the experiencing of a female gender identity temporarily when cross-dressed, which occurs because of gender dysphoric feelings of living in the male role.

Docter (1988) builds on these two theories with a comprehensive theory of transvestism and secondary transsexualism.

Docter's Theory of Cross-Gender Behaviour

Docter's (1988) theory accounts for gynephilic cross-dressing, and what he calls secondary transsexualism; it does not attempt to explain androphilic primary transsexualism. Docter uses a 5-stage model for his theory, this is outlined in Figure 2.

Stage 1 – Antecedent developmental factors. Docter (1988) notes that young males are usually given strict boundaries in terms of gender-appropriate behaviour and clothing. Barriers are placed in the way of women's clothing, especially underwear. This results in curiosity and fascination with the forbidden, which can result in an erotic component. Docter notes that it is common for transvestites to describe a sense of exhilaration in their early cross dressing experiences, this could in part be due to violation of the gender rule that the clothing of women should not be touched.

Docter (1988) introduces the concept of *gender envy*, which refers to the powerful desire to be like women that he notes many transvestites refer to. Docter hypothesises that this envy might be the result of the stresses of growing up as a boy and seeing girls having things much easier, being beautiful and receiving more love and security. Feelings of envy and identification with females are the result of this, and Docter reports that this is reason that many transvestites give for their first experimentation with wearing women's clothing.

Heterosexual preferences and sexual inhibitions are also seen as precursors to fetishistic cross-dressing. Docter (1988) claims that inhibitions about sexual relationships with girls during adolescence are a predictor of fetishism of any type. All of the above factors are proposed by Docter to be antecedent developmental factors that can predispose a biological male to develop transvestism.

Stage 2 – Fetishistic Cross-Dressing. In the second stage, Docter (1988) notes that this early sexual arousal can be extremely reinforcing, even without orgasm. In addition, the "relaxing" and "calming" effect reported by transvestites when cross-dressed may also be reinforcing. Docter hypothesises that that this calming effect stemming from the cross-dressing gives the individual something to concentrate on, distracting attention from anxiety-laden thoughts. This reinforcement is important for the learning and maintaining the cross-dressing behaviour.

Stage 3 – Complete Cross-Dressing, Cross-Gender Identity, and Cognitive Dissonance. During this stage independence from parental supervision occurs. Partial cross-dressing becomes less common, with complete cross-dressing replacing it. This leads to more opportunities for public presentation and ultimately the development of a cross-gender identity. The clearest example of this is the creation of a feminine name. This cross-gender identity is at variance with the primary male identity; the result of this is considerable cognitive dissonance (guilt, anxiety, depression) related to seeing oneself as a transvestite.

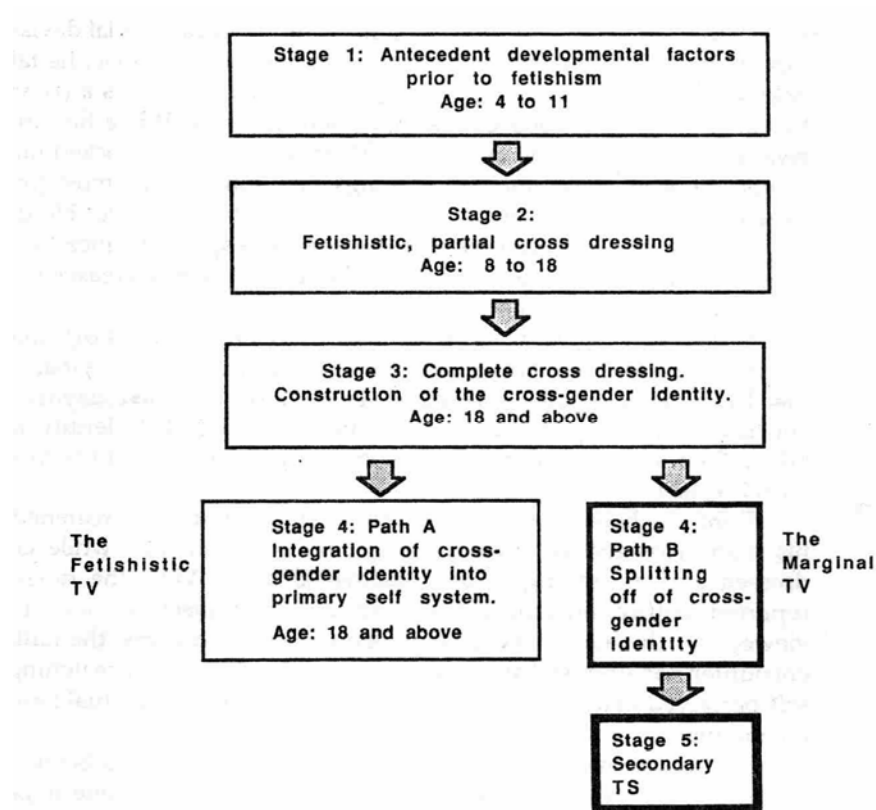


Figure 2 Sequential diagram of Doctor's five stage theory of transvestism and secondary transsexualism (Doctor, 1988, p. 212).

Stage 4 – Resolution of Cognitive Dissonance – Path A and Path B. This stage has two pathways that represent differing ways in which the cognitive dissonance is managed. In path A, the cross-gender identity is integrated into the primary self-system as persons become content with their transvestism. In path B, however the cross-gender identity does not assimilate, and causes an upheaval of the primary self. These transvestites attempt full-time cross-gender living and seek bodily feminisation through hormones and surgery. They become what Doctor calls secondary TS.

Stage 5 – Secondary Transsexualism. This stage is the result of path B, described above. The primary identity has been shifted to that of a female full-time, and sex-reassignment is undertaken. Docter estimates that secondary transsexualism does not occur in more than 5% of the transvestite club members he studied.

Subsequent Research of Docter's Theory

Doorn, Poortinga, and Verschoor (1994) report that many “late-onset TS” (which they see as equivalent to Docter's secondary TS) show a significant amount of feminine gender behaviour in their childhood. They suggest this is the result of female gender identity that has been present since childhood. These authors claim this finding runs counter to Docter's theory, which suggests that a feminine gender identity does not develop until later in life. Doorn et al. (1994) conclude that Docter's theory could still be relevant to a small proportion of late-onset TS though.

Blanchard's Theory of Autogynephilia Etiology

According to Blanchard (1993b), autogynephilia is related to a number of other sexual variations that exist; these variations result from “developmental errors of erotic target localization” (p. 71) in biological males. Autogynephilia is the most common of these variations because women are the most common erotic targets for men. Blanchard (1993c) hypothesises that behaviours with heterosexual intents become directed at other objects rather than the female persons. This, he believes is the result of a failure of some developmental process that keeps “normal” heterosexual learning on-track, possibly by biasing sexual arousal to external instead of internal stimuli. When this development fails, the person may acquire sexual fantasies of themselves having some or all attributes of the desired object. In the case of transvestism, individuals become attracted to particular garments rather than the parts of the female body that the garment is worn over (female underwear and brassieres are the most striking examples here). In the case of anatomic autogynephilia the desired object is the female physique, such as breasts, and the individual in some way locates these on their own body (Blanchard, 1991). Blanchard (1991) argues that this theory explains the development of various “misdirected” but identifiably gynephilic interests and why these sexual attractions tend to co-occur.

Blanchard (1993b) and Freund and Blanchard (1993) support this theory with case-study accounts of paedophiles who visualized themselves as children, dressed as

children and even reporting the desire to attain features of the child's physique. Also with reports suggesting other parallels with autogynephilia and transvestism in homosexual men; although they do not go into much detail about these parallels. Freund and Blanchard (1993) hypothesise that these desires to be female, or a child are both the result of the persons somehow projecting the sexually attractive features of the type of person that they are attracted to onto themselves.

Finally, Freund and Blanchard (1993) believe that persons are not born with a predisposing sexual attraction to males, females or children; rather they believe that people are more likely to be born with sensitivities to certain stimuli, and these are mediated by early experiences to give the end result of erotic preferences.

4. OTHER ASPECTS OF SEXUALITY

Outlined in this chapter are three other aspects of human sexuality that are being examined in this research: sexual attraction to femininity in males, sadomasochism, and aspects of human sexuality that are relevant to evolutionary theory.

Sexual Attraction to Feminised Biological Males

Blanchard and Collins (1993) describe the existence of males who have a sexual interest in transvestites and TS. Although these persons rarely present for clinical attention, Blanchard and Collins (1993) cite the prevalence of pornography showing images of “feminised males”, and advertisements for prostitution, sexual, and romantic partners of this nature as evidence for this type of sexual attraction. It had been suggested previously that users of such pornography and prostitution could at least partly be transvestites and even TS (Person & Ovesey, 1978); Ovesey & Person (1976) state that transvestites tend to avoid sexual encounters with males, with the exception of other transvestites. Blanchard and Collins (1993) reviewed personal advertisements that were placed by or targeted at males with sexual interest in transvestites and TS. They concluded that males with sexual interest in transvestites and TS appeared to be distinct from the TS and transvestite population, and do not desire any feminisation themselves. However they note that 26.1% of advertisements placed for TS and transvestites appeared to be placed by persons described as cross-dressers. Lawrence (1999b) also presents one narrative of a TS women’s sexual attraction to other TS. Interest in feminised biological males has never been systematically assessed among the TS population. Thus a scale to measure sexual attraction to feminine males has been designed for use in this study.

Sadism and Masochism

A number of authors have noted sadistic and masochistic tendencies in TS and transvestites (Wilson & Gosselin, 1980). Firstly, Bolin (1988) noted that of the twelve TS in her study, nine reported fantasies with sadistic or masochistic themes. Eight had previously acted upon these fantasies, and five were actively involved in the S&M subculture. In a study of 64 TS and transvestites, Buhrich and McConaghy (1977c) report that of the 39 subjects in their sample who had experienced sexual arousal with

cross-dressing, eight reported attraction to fantasies of sadomasochism; whereas none of the subjects who did not report sexual arousal with cross-dressing reported such fantasies. Baumeister (1988) examined letters submitted to sex-oriented magazines and found that nearly 40% of letters by masochistic males showed indications of transvestism. The fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* also identifies that there is a common co-occurrence of sexual masochism in males with transvestic fetishism (American Psychiatric Association, 2000). Autoerotic asphyxia (a masochistic sexual act in which the individual hangs, strangles or suffocates themselves when masturbating) has been shown to be strongly linked to transvestism (Blanchard, 1990; Blanchard & Hucker, 1991). From information gathered of prostitution advertisements in print media, Chivers and Blanchard (1996) found that female prostitutes who described themselves as dominant regularly explicitly stated that they welcomed cross-dressing clients whereas prostitutes that did not describe themselves as dominant did not mention cross-dressing clients in their advertisements. Chivers and Blanchard (1996) suggest that these prostitutes recognise the benefits of advertising dominant services to the transvestite community, and this provides evidence of a subgroup of masochistic transvestites.

Blanchard and Hucker (1991) theorise that “the tendency of paraphilias to occur together suggests that the conditions necessary for the development of one type of paraphilia may facilitate the development of others” (p. 375). Blanchard (1992) reported that transvestism, fetishism, masochism and sadism all correlate positively with gynephilia (see Figure 3), however he did not measure the relationship of these constructs with autogynephilia itself. Blanchard (1989a) contends that autogynephilia is a type of paraphilia; if this is true then we would expect to see a positive relationship between autogynephilia and sadomasochism, and other fetishistic fantasies, an issue that will be examined in this research.

Evolutionarily Relevant Aspects of Mating Psychology

The final aspects of human sexuality that this research will look at are evolutionarily relevant aspects of mating psychology. Bailey, Gaulin, Agyei, and Gladue (1994) show that in accordance with sexual selection theory, males are more likely than females to report interest in uncommitted sex, interest in visual sexual stimuli, interest in younger partners, to value partner physical attractiveness, and report experiencing sexual jealousy more strongly than emotional jealousy. On the other hand,

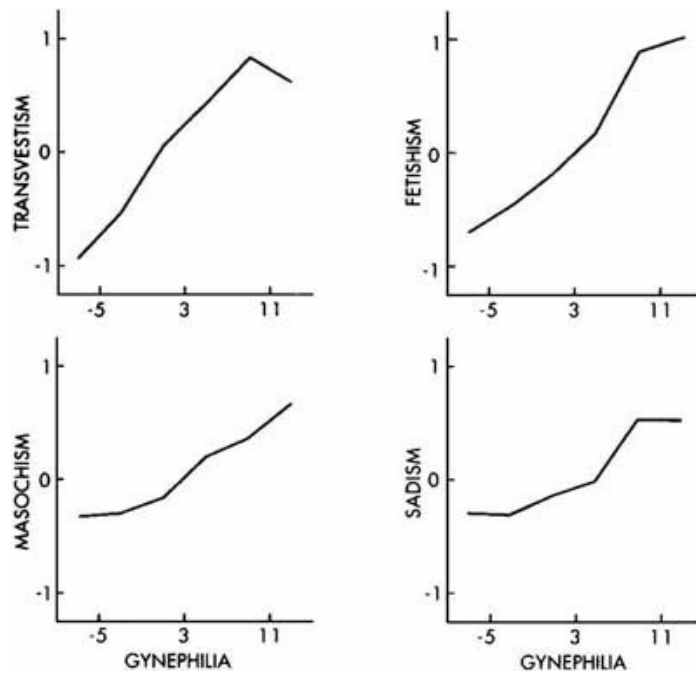


Figure 3 Relationship of sexual attraction to females (gynephilia) to transvestism, fetishism, sadism and masochism (Blanchard, 1992, p. 273).

women are more likely than men to report concern with partner status, and to report experiencing emotional jealousy more strongly than sexual jealousy (Bailey et al., 1994). Bailey et al.'s (1994) findings show that homosexual men and women differ from their heterosexual counterparts: homosexual women reported a greater interest in visual stimuli and a lower regard for partner status than heterosexual women; homosexual men reported less preference for younger partners and relatively less sexual than emotional jealousy compared to heterosexual men. Bailey et al. (1994) conclude that sex had a significantly larger effect on mating psychology than sexual orientation.

To the best of the author's knowledge only one study has assessed sexual selection mating measures in MTF-TS. From clinical observations, Money and Primrose (1968) claim that TS are more responsive to erotic stimuli that is visual or narrative, similar to other biological males (Kinsey et al., 1948). This research assesses these aspects of human mating psychology to see if sexual orientation affects the sexual selection criteria of TS, and if TS differ from biological women in these measures.

5. RESEARCH QUESTIONS AND HYPOTHESES

This research uses scales measuring demographics, sexual orientation, attraction to male physique, attraction to femininity in males, childhood gender identity, autogynephilia, fetishism, masochism, evolutionarily relevant sexual preferences, and attraction to transgender fiction. The research questions that will be addressed are:

1. What are the psychometric properties of the scales designed by the author?
2. What is the factor structure of the variables used in the study?
3. What are the relationships between the variables used in this study, and do the relationships between the variables differ in BF and TS participants?
4. Do TS and BF participant means differ significantly on any of the variables?
5. Do autogynephilic TS participants means differ significantly from non-autogynephilic TS and BF participants?
6. What are the main effects of sexual orientation on the variables? What are the interaction effects of sexual orientation and gender identity?
7. Are there differences between those participants who completed, and did not complete the entire survey?
8. Which themes in transgender fiction are most sexually arousing among TS participants?
9. To what extent do TS participants believe that autogynephilia applies to themselves, and to other TS?
10. What attitudes do TS participants have towards autogynephilia?

To the best of the author's knowledge there has only been one study published comparing MTF-TS with biological women (McGrane, 2001). This makes formulating hypotheses for this research difficult. Given the qualitative differences in responses to Blanchard's theory from gynephilic TS it is hypothesised that this study will find fundamentally different groups of non-androphilic TS, some reporting experience of autogynephilic arousal, and some not. It is hypothesised that those TS who do not experience autogynephilic arousal will score comparably to BFs on the variables measured in this study, and those TS who report experiencing autogynephilic arousal will score lower on levels of attraction to male physique, recalled feminine gender identity in childhood, and higher on levels of attraction to femininity in males, fetishism, masochism, and attraction to transgender fiction. It is also hypothesised that those TS

who report experiencing autogynephilic arousal will score in the more typical “male” direction on the measures of evolutionary aspects of sexuality, as compared to the BFs and those TS who do not report experiencing autogynephilic arousal.

6. METHODOLOGY

Participants

The questionnaire received a total of 407 responses, 370 responses on the Internet, and 37 responses on the paper survey. Ten of these respondents did not identify as TS or BF, so were discarded. Data were used for respondents who completed at least two scales. Of the 370 Internet responses, thirty-seven did not fulfil this criterion and were discarded. Thirty-two paper surveys were handed out to TS participants and 11 were returned completed, giving a response rate of 34%. The corresponding figures for BFs were 39, 26, and 67%. This resulted in a total response rate of 52%.

Following McGrane (2001), female hormones were used as criteria for whether a person was TS, and not still in a stage of questioning this. However, some TS do not take these hormones for medical or health reasons, or because they simply do not need them. The Transgender Identity scale measures cross-gender identification, and continuous commitment to cross-gender behaviour, through the desire to live entirely in the female role. The mean on the Transgender Identity scale for those TS participants taking female hormones ($M = 42.54$, $SD = 4.86$) was significantly higher than those who were not ($M = 38.00$, $SD = 9.97$), $t = -6.23$, $df = 55.82$, $p < .0005$ (two-tailed, equal variances not assumed). Thus it was decided that a combination of either taking female hormones or scoring sufficiently high on the Transgender Identity scale would be criteria for inclusion in the research with TS participants. Data were excluded for those TS participants who were not taking hormones and had a Transgender Identity score lower than one standard deviation below the mean for those TS who *were* taking female hormones. In other words, those TS who were not taking female hormones and had a Transgender Identity score of 37 or lower were excluded to ensure a commitment to living in the female role among TS in the sample. Using these criteria, 21 TS responses were removed.

It should be noted that in the sample, all of the participants who had received SRS reported taking female hormones. A MANOVA test was performed to see if TS who had SRS differed from those who had not, on all of the variables measured in the study. The differences were not significant, with Wilks' Lambda = 0.35, $F(24, 33) = 1.10$, $p = .41$. Another MANOVA test was performed to see if incomplete responses of TS who had not responded to the question asking if they were taking female hormones differed

from the remaining TS participants on all the measures. These differences were also not significant, with Wilks' Lambda = 0.79, $F(24, 33) = .61$, $p = .90$. Because of this, incomplete responses from TS participants were still included; even it was not certain whether they were taking female hormones or had sufficient Transgender Identity score.

Demographic Information

Participants demographics are outlined in Table 1. These are compared to data obtained for females from the 2001 New Zealand census (Statistics New Zealand, 2001). Of the total, 127 responses came from BF's and 210 responses came from TSs. The average age of the participants was 36.42 years (SD = 13.89, median = 36.0). A large number of participants (23.6%) were in the 20 to 24 age group; this proportion was significantly more than expected from census data, $\chi^2(1, N = 335) = 107.81$, $p < .0005$. With the exception of this group the rest of the data seemed to fall into a normal distribution around the 35-39 age group, which included 12.2% of respondents. There were significantly fewer participants than expected in the 30-34 year age group, $\chi^2(1, N = 335) = 7.43$, $p = 0.007$, and in the 65 years and above age group, $\chi^2(1, N = 335) = 48.19$, $p < 0.0005$.

The majority of participants identified as European (89.0%). Ethnic minorities were represented in 15.2% of participants. Compared to census data, Europeans were significantly over represented, and non-Europeans were significantly under represented. The exceptions to this are Asians who adequately represented according to census data, and those participants who identified as an ethnicity other than the four that were given which had significantly more participants than expected, $\chi^2(1, N = 335) = 51.67$, $p < 0.0005$, probably due to this study including overseas participants. These differences in representation of ethnicity from the general population are due to response biases; this is considered further in the Discussion section of this thesis (Chapter 8). Note that participants were given the option of selecting more than one response for their ethnicity.

Participants in highly skilled occupations are well represented in this sample, with 36.4% of participants classified in the three most highly skilled categories on the New Zealand Standard Classification of Occupations (NZSCO; Statistics New Zealand, 1999). In this sample, technicians and associate professionals, and those in elementary occupations (including residuals) are significantly over-represented. A number of respondents in the sample reported they were unemployed, or beneficiaries ($n = 17$).

Table 1 Participant's demographics. (N = 336)

Variable	Freq.	% of total	Expected %	χ^2	df
<u>Gender Identity (N=336)</u>					
MTF Transsexual	209	62.2			
Biological female	127	37.8			
<u>Age (N=331)</u>					
15 to 19 years	23	6.8	8.7	1.41	1
20 to 24 years	79	23.6	8.1	107.81*	1
25 to 29 years	32	9.5	8.6	0.39	1
30 to 34 years	18	5.4	9.8	7.43*	1
35 to 39 years	41	12.2	10.3	1.36	1
40 to 44 years	37	11.0	9.8	0.58	1
45 to 49 years	32	9.5	8.5	0.47	1
50 to 54 years	30	8.9	8.0	0.42	1
55 to 59 years	21	6.3	6.1	0.02	1
60 to 64 years	13	3.9	5.2	1.19	1
65 years and above	9	2.7	16.9	48.19*	1
<u>Ethnicity (N=327)</u>					
European	291	89.0	83.1	8.08*	1
Asian	27	8.3	6.8	1.10	1
Maori	7	2.1	15.0	42.41*	1
Pacific Island	4	1.2	6.4	14.63*	1
Other	12	3.6	0.6	51.67*	1
<u>Occupation classification (N=322)</u>					
Legislators, administrators and managers	35	10.4	10.6	0.02	1
Professionals	57	17.0	16.6	0.11	1
Technicians and associate professionals	62	18.5	12.2	13.37*	1
Clerks	21	6.3	21.0	42.61*	1
Service and sales workers	25	7.4	19.5	29.89*	1
Agriculture and fishery workers	1	0.3	5.4	16.78*	1
Trades workers	2	0.6	1.1	0.74	1
Plant and machine operators and assemblers	10	3.0	3.6	0.31	1
Elementary occupations (including residuals)	27	8.4	4.9	22.60*	1
Student	66	20.5			
Retired	16	5.0			
<u>Level of education (N=327)</u>					
3 years of high school or less	21	6.4	37.6	138.41*	1
4 years of high school	27	8.3	10.3	1.69	1
5 years of high school	64	19.6	11.1	22.50*	1
Diploma, trade certificate or apprenticeship	63	19.3	16.9	1.02	1
Bachelor's degree	92	28.1	6.8	229.06*	1
Masters' degree	51	15.6	2.8	221.17*	1
Doctoral degree	9	2.7			
<u>Marital status (N=334)</u>					
Single (never married)	157	47.0	28.2	56.96*	1
Married, or living in a de facto relationship	110	32.9	40.8	9.04*	1
Widowed, divorced, or separated	67	20.1	20.4	0.04	1
<u>Number of biological children (N=319)</u>					
0	202	63.3			
1	25	7.8			
2	55	17.2			
3	20	6.3			
4	12	3.8			
5	3	0.9			
6	1	0.3			
8	1	0.3			

Note: N's vary due to missing data, * $p < .01$.

These responses were included in the “elementary occupations (including residuals)” category, and formed the majority in this category. According to the NZSCO, persons who are students or retired are also classified in the “elementary occupations (including residuals)” group. However, because of the large number of these individuals, they have been given their own columns in Table 1. Although census data is not available for retired or student groups, it should be noted that a large proportion (20.5%) of respondents were university students.

The current sample is significantly more educated than the general New Zealand population. Respondents were 31.2% less likely to report receiving only 3 years of high school or less than was expected $\chi^2(1, N = 332) = 138.41, p < 0.0005$. Participants having completed five years of high school, a Bachelor’s degree, or a Masters’ degree are also significantly over-represented in the sample. Census data was not available for the proportion of persons holding a Doctoral degree, however it is likely that these participants were also over-represented in this sample. This over-representation of highly educated participants is also due to sampling bias, this is considered further in the Discussion section of this thesis (Chapter 8).

Participants who have never married are also significantly over-represented in the sample, $\chi^2(1, N = 336) = 56.96, p < 0.0005$. This is likely to be due to the large amount of participants aged between 20 and 24. On the other hand, participants who are married, or living in a de facto relationship are significantly under-represented in the sample, $\chi^2(1, N = 332) = 9.04, p = 0.004$; this is also likely to be due to the large amount of young participants, and the possibility that a number of TS do not desire marriage or are unable to find long-term partners. Census data was not available for number of biological children. The majority of participants (63.3%) report having no biological children. The next most common number of biological children is two, with 17.2% of participants reporting this amount. Only 5.3 percent of participants report more than three biological children.

As shown in Table 2, most of the TS participants have not undertaken sexual reassignment surgery (80.7%). 69.8% of participants report they are currently taking female hormones. Large variation can be seen in the number of months that participants have been taking the hormones, with scores ranging from 0 to 560, and age first desired to change sex, with scores ranging from 1 to 64.

Table 2 Transsexual participants' demographics

Variable	Freq.	%	Mean	SD	Median
<u>Had sexual reassignment surgery (N=110)</u>					
Yes	33	19.3			
No	138	80.7			
<u>Taking female hormones (N=109)</u>					
Yes	118	69.8			
No	51	30.2			
<u>Number of months taking hormones (N=106)</u>			34.06	63.94	18.00
<u>Age first desired to change sex (N=109)</u>			14.67	12.41	11.50

Questionnaire

The questionnaire had a total of 20 sections. The BFs answered 17 of these sections and the TS answered all 20. Refer to Appendix A for a copy of the questionnaire.

1. Demographics: The first section asked participant's demographic characteristics: gender identity (whether TS or BF), age, ethnicity, occupation, level of education, marital status, and number of biological children. The respondent's occupations were then classified using the NZSCO (Statistics New Zealand, 1999). Those who entered more than one occupation were scored on the highest-skilled occupation level.

2. Sexual Orientation: This was determined by responses to eight questionnaire items on sexual fantasy, sexual arousal, sexual attraction during adolescence and at the present. These items were drawn from Neil McConaghy's "Sex-Linked Behaviours Questionnaire" (McConaghy, 1998). Instead of the 10-point percentage scale used by McConaghy a 6-point scale ranging from *never* to *all the time* was used to make it easier for participants to understand. Using the items on this scale, the variable androphilia was measured by subtracting the total of items measuring sexual attraction to males from the total of items measuring sexual attraction to females; if this resulted in score less than zero, then the final score was converted to zero. Similarly, gynephilia was measured by subtracting the total of items measuring sexual attraction to males from the total of items measuring sexual attraction to females; if this resulted in score less than zero, then the final score was converted to zero. Bisexuality was calculated by sexual attraction to males plus sexual attraction to females minus the absolute value of the difference between sexual attraction to males and sexual attraction to females. Asexuality was calculated by 40 minus the sexual attraction to males score, the sexual

attraction to females score, and the absolute value of the difference between sexual attraction to males and sexual attraction to females.

Reliability: Internal consistency and test-retest reliability on the same respondents has not been measured. However, second year medical students reported similar levels of sexual preference over a three-year period (McConaghy, 1984, 1987).

Validity: Using the sex-linked behaviours questionnaire, the rate of homosexuality among Australian medical students (McConaghy, 1984, 1987) and Malaysian male medical students (Buhrich, Armstrong, & McConaghy, 1982) was comparable to previous studies using volunteer participants (Davis, 1965; Kinsey et al., 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953). Also, correlations between homosexuality and opposite-sex-typed behaviours found over three years among male medical students were comparable to those found in a number of prospective and retrospective studies of male homosexuals (McConaghy, 1984, 1987). That these correlations were found among males but not females is consistent with previous findings that opposite-sex-typed behaviours in childhood are related to homosexuality in male but not necessarily female children (Kagan & Moss, 1962). In addition, measures of penile volume responses to films naked males and females showed significant correlations with reports of sexual preference using the questionnaire (McConaghy & Blaszczyński, 1991). Significant correlations were also found between reported sexual orientation of male twins (McConaghy, Buhrich, & Silove, 1994).

3. Attraction to Male Physique Scale: This scale contains six items measuring sexual attraction to the male physique, to test Blanchard's (1989b) hypothesis that bisexual TS attraction to males is more to do with the fantasy of being admired as a female than and less to do with being attracted to the male physique. The author designed this scale, so no previous data on reliability or validity are available. This scale includes one 5-point response scale question asking about general attraction to the male body, three questions asking about specific parts of the male body, one item that asks about desire to have a long term committed relationship with males (this is something that Blanchard hypothesises would not be a desire of bisexual TS), and one item asking about a male showing sexual interest in them (this is what Blanchard hypothesises to be the main reason for sexual attraction to males in bisexual TS); these items have 6-point response scales.

4. Attraction to Feminine Males Scale: This scale contains six items measuring sexual attraction to femininity in males on 5-point response scales. The author designed this scale so no previous data on reliability or validity are available. It includes one item directly asking about general attraction feminine features in biological males, and seven questions asking about specific feminine features on males.

5. Recalled Gender Identity Scale (Zucker et al., in press): This scale measures recalled childhood gender identity and gender role on 5-point response scales, with one or two extra response items to allow respondents to indicate that they did not remember or that the behaviour did not apply. Although Zucker et al. (in press) present a 23-item version of the questionnaire, there was not enough space in the present questionnaire to include all 23 items. Only the 15 items that loaded over .65 on the gender identity/gender role factor that emerged from Zucker et al.'s (in press) factor analysis, and one other item asking about gender of closest childhood friend were included.

Reliability: Zucker et al. (in press) noted that corrected item-total correlations of these items ranged from .21 to .75 (median $r = .61$), and Cronbach's alpha for the factor was .92.

Validity: From testing the scale on 1305 adolescents and adults, Zucker et al. (in press) reported 18 items loading greater than .40 on their gender identity/gender role factor, the 15 items used for the present questionnaire were all taken from these 18 questions. Zucker et al. (in press) found that the items in the gender identity/gender role factor were able to discriminate between males versus females, heterosexual versus homosexual adults, women with CAH versus their sisters/female cousins, and adolescents with gender identity disorder versus transvestic fetishism.

6. Core Autogynephilia Scale (Blanchard, 1989b): This 8-item scale was developed by Blanchard to measure sexual attraction to the fantasy of being a woman. This scale was designed only for use with TS persons, so to make it relevant to the BF participants the wording of some of the questions was changed. Blanchard's original scale asks whether participants have ever been sexual aroused when picturing themselves with features of the female body. Because the BFs will already possess these features the wording of these questions was changed to ask participants if they have ever been sexually aroused when picturing themselves with attractive or more attractive female physical features. Also instead of using Blanchard's 2-point, *yes* or *no* scale, a 6-

point scale ranging from *never* to *all the time* was used to make the scale more sensitive to variations in participant's answers.

Reliability: In a sample of 2700 biological male presenting at a gender identity clinic, Blanchard (1989b) found an alpha reliability coefficient of .95. In a sample of 427 patients who reported histories of cross-dressing and/or feeling like a woman, Blanchard (1992) found an alpha reliability coefficient of .94. Blanchard (1992) found interitem correlations ranging from .47 to .86 and item-total correlations ranging from .64 to .87. Test-retest reliabilities have not been computed.

Validity: The Core Autogynephilia scale was created from an emerging factor of a factor analysis using a sample of 2700, with the 8 items loading from .59 to .87 (Blanchard, 1989b). Blanchard (1989b) found a significant correlation between the Core Autogynephilia scale and the Autogynephilic Interpersonal Fantasy scale, and that the Core Autogynephilia scale was able to discriminate between androphilic and non-androphilic gender patients. Blanchard (1992) correlated the items on the Core Autogynephilia scale with the total score on a measure of gynephilia and found correlations ranging from .22 and .45.

7. Autogynephilic Interpersonal Fantasy Scale (Blanchard, 1989b): This 4-item scale measures the sexual arousal of being admired by another person as a female. Instead of using Blanchard's 2-point, *yes* or *no* scale, a 6-point scale ranging from *never* to *all the time* was used to make the scale more sensitive to variations in participant's answers.

Reliability: From a sample of 2700, Blanchard (1989b) found an alpha reliability coefficient of .86, and from a sample of 427, Blanchard (1992) found the coefficient to be .84. Blanchard (1992) found interitem correlations for the Autogynephilic Interpersonal Fantasy scale ranging from .51 to .65 and item-total correlations ranging from .64 to .87. Test-retest reliabilities have not been computed.

Validity: The Autogynephilic Interpersonal Fantasy scale was created from an emerging factor of a factor analysis with the 4 items loading from .62 to .81 (Blanchard, 1989b). Blanchard (1989b) found a significant correlation between the Autogynephilic Interpersonal Fantasy and the Core Autogynephilia scale.

8. Fetishism Scale (Freund & Blanchard, 1998): This scale measures sexual attraction to inanimate (not alive) objects. Instead of using the original 2-point, *yes* or

no scale, a 6-point scale ranging from *never* to *all the time* was used to make the scale more sensitive to variations in participant's answers.

Reliability: Freund et al. (1982) report an alpha reliability coefficient of .91 from a sample of 444 sexology patients and controls. Blanchard (1992) found an alpha reliability coefficient of .97 among a sample of 427 biological males reporting a history of dressing in women's clothing and/or feeling like a woman.

Validity: Freund et al. (1982) and Blanchard (1992) found that the Fetishism Scale was able to differentiate between gynephilic and androphilic cross-gender patients. Freund et al. (1982) found that the strongest factor of a principle component analysis of the fetishism scale accounted for 59.6% of total variance.

9. Masochism Scale (Freund & Blanchard, 1998): This scale measures masochistic tendencies. Instead of using the original 2-point, *yes* or *no* scale, a 6-point scale ranging from *never* to *all the time* was used to make the scale more sensitive to variations in participant's answers.

Reliability: Freund et al. (1982) report an alpha reliability coefficient of .83 from a sample of 491 sexology patients and controls.

Validity: Freund et al. (1982) found that the strongest factor of a principle component analysis of the masochism scale accounted for 33.7% of the variance among a sample of 491, and the masochism scale loaded .50 on a factor differentiating types of cross-gender identity.

10. Sexual Versus Emotional Jealousy (Buss, Larsen, Westen, & Semmelroth, 1992): This 4-item scale was designed to assess sexual and emotional jealousy. Instead of using the forced-choice responses that Buss et al. (1992) employed, this version of the scale followed Cann, Mangum, and Wells (2001) in asking participants to respond with how distressing they found each of the four alternatives. The scale used had 5 points ranging from *not at all distressing* to *extremely distressing*.

Reliability: To the best of the author's knowledge reliability data has not been gathered using the continuous rating scale. However, using the forced-choice responses Bailey et al. (1994) reported alpha reliability coefficients ranging from .51 in homosexual women to .72 in heterosexual men from a sample of 277. However, this forced-choice scale only contained two items.

Validity: Although the forced-choice response scale has often been able to differentiate between the sexes (see Harris, 2003 for a review), these findings have not been replicated using a continuous rating scale.

11. Preference for Younger Partners (Bailey et al., 1994): Scales 11 to 15 were designed to assess evolutionary predictions about sexual selection. These scales focused on sexual preferences rather than behaviours, because behaviours are influenced by differing sexual opportunities. The Preference for Younger Partners scale is an 11-item measure of age preference of sexual partners. Nine of the items are scored on a 7-point Likert-scale format from *strongly agree* to *strongly disagree*. Two of the items ask participants to specify an age of desired partner. This was then subtracted from the participant's age to give a difference score. The difference score was converted into a positive score and the square root of this score was taken to give the final score that was used for these two questions. This resulted in a scale of approximately zero to seven that matched the other items on the Preference for Younger Partners scale.

Reliability: Bailey et al. (1994) reported alpha reliability coefficients ranging from .63 in heterosexual men to .80 in heterosexual women from a sample of 277.

Validity: The Preference for Younger Partners scale has been able to discriminate between males versus females, and heterosexual versus homosexual men (Bailey et al., 1994). The scale had low correlations with Interest in Uncommitted Sex, Interest in Visual Sexual Stimuli, and Sexual Jealousy, and a moderate correlation with Importance of Partner's Physical Attractiveness, all in the expected direction (Bailey et al., 1994). From performing a factor analysis on their results, Bailey et al. (1994) located one general factor which accounted for 25% of the total variance of all their scales; they found Preference for Younger Partners loaded .40 on the factor.

12. Interest in Uncommitted Sex (Bailey et al., 1994): The Interest in Uncommitted Sex scale is a 10-item measure of attraction to casual sexual relationships. The items are scored on a 7-point Likert-scale format from *strongly agree* to *strongly disagree*.

Reliability: Bailey et al. (1994) reported an alpha reliability coefficient of .90 from their sample.

Validity: The Interest in Uncommitted Sex scale has been able to discriminate between males versus females (Bailey et al., 1994). The scale had a low correlation with

Preference for Younger Partners; moderate correlations with Interest in Visual Sexual Stimuli and Importance of Partner's Physical Attractiveness; and a high correlation with a Sociosexuality scale, which also measured interest in uncommitted sex, but has more focus on behaviours rather than psychological preferences; all of the correlations were in the expected directions (Bailey et al., 1994). From their factor analysis, Bailey et al. (1994) found the Interest in Uncommitted Sex scale loaded .44 on the general factor.

13. Interest in Visual Sexual Stimuli (Bailey et al., 1994): The Interest in Visual Sexual Stimuli scale is a 12-item measure of sexual interest in visual stimuli. The items are scored on a 7-point Likert-scale format from *strongly agree* to *strongly disagree*.

Reliability: Bailey et al. (1994) reported alpha reliability coefficients ranging from .83 in heterosexual men to .86 in homosexual women.

Validity: The Interest in Visual Sexual Stimuli scale has been able to discriminate between males versus females and heterosexual women versus homosexual women (Bailey et al., 1994). The scale had low correlations with Importance of Partner Status and Preference for Younger Partners, and moderate correlations with Interest in Uncommitted Sex, Importance of Partner's Physical Attractiveness, and Sociosexuality, all in the expected directions (Bailey et al., 1994). From their factor analysis, Bailey et al. (1994) found the Interest in Visual Sexual Stimuli scale loaded .50 on the general factor.

14. Importance of Partner Status (Bailey et al., 1994): The Importance of Partner Status scale is a 12-item measure of concern with the amount of resources held by a partner or potential partner. The items are scored on a 7-point Likert-scale format from *strongly agree* to *strongly disagree*.

Reliability: Bailey et al. (1994) reported alpha reliability coefficients ranging from .65 in homosexual men to .82 in heterosexual women.

Validity: The Importance of Partner Status scale has been able to discriminate between males versus females, and heterosexual women versus homosexual women (Bailey et al., 1994). The scale had low correlations with Interest in Visual Sexual Stimuli, and Emotional Jealousy; and a moderate correlation with Importance of Partner's Physical Attractiveness (Bailey et al., 1994). All of the significant correlations were negative, because this is the only scale that measured in the feminine direction

according to evolutionary theory. From their factor analysis, Bailey et al. (1994) found the Importance of Partner Status scale loaded -.36 on the general factor.

15. Importance of Partner Physical Attractiveness (Bailey et al., 1994): The Importance of Partner Physical Attractiveness scale is a 10-item measure of concern with the physical attractiveness of partners. The items are scored on a 7-point Likert-scale format from *strongly agree* to *strongly disagree*.

Reliability: Bailey et al. (1994) reported alpha reliability coefficients ranging from .70 in homosexual men to .77 in all women.

Validity: The Importance of Partner Physical Attractiveness scale has been able to discriminate between males versus females (Bailey et al., 1994). The scale had low correlations with Sociosexuality and Sexual Jealousy, and moderate correlations with Interest in Uncommitted Sex, Interest in Visual Sexual Stimuli, Importance of Partner Status, and Preference for Younger Partners (Bailey et al., 1994). From their factor analysis, Bailey et al. (1994) found the Importance of Partner Physical Attractiveness scale loaded .86 on the general factor.

16. Attraction to Transgender Fiction Scale: This scale contains 12 items measuring sexual attraction to erotic narratives containing transgender themes. Responses were made on 5-point response scales from *not at all sexually arousing* to *extremely sexually arousing*. The author designed this scale so no previous data on reliability or validity are available. A number of theme categories are outlined on a web site containing transgender fiction (www.fictionmania.com); the popularity of these themes was assessed by the number of stories appearing on the web site containing each theme. The scale was made up of those themes that appeared to be most popular.

17. Transsexual Information: Scales 17 to 19 were only given to the TS participants. Information specific to TS was requested regarding the age they first desired to change their sex, how long they had been taking female hormones, and whether they had undertaken SRS.

18. Transgender Identity Scale (Docter & Fleming, 1992): This 9-item scale measures cross-gender identification, and continuous commitment to cross-gender behaviour, through the desire to live entirely in the female role. Instead of using Docter

and Fleming (2001) 2-point, *yes* or *no* scale, a 7-point scale ranging from *strongly agree* to *strongly disagree* was used.

Reliability: From a sample of 682 transvestites and TS, Docter and Fleming (1992) reported internal consistency of .88.

Validity: The Transgender Identity scale emerged as a factor accounting for 29.9% of variance from a factor analysis. Although 26 items emerged from this factor analysis (Docker & Fleming, 2001), only 9 items loading greater than .72 were included in this questionnaire. The Transgender Identity scale was moderately positively correlated with a scale measuring desire to feminise the body, and the scale discriminated between transvestites and TS (Docker & Fleming, 1992, 2001).

19. Attitudes Towards Autogynephilia Scale: This scale was designed by the author to assess TS participant's feelings about Blanchard's theory of autogynephilia. The first question asked about familiarity with the theory on a 4-point Likert-scale. An overview of the theory of autogynephilia, taken from Lawrence (2000), was then given for those participants who are unfamiliar with the theory. Participants were asked to rate how much they think the theory applies to their own and other people's experiences of transsexualism. Finally, participants were invited to make any comments they have about the theory of autogynephilia.

20. Comments: Finally, participants were asked to give any comments they have about the survey. All of the participants (TS and BF) were given this opportunity.

Procedure

Approval for this research was obtained from the Massey University Human Ethics Committee (Albany).

Participants either completed the questionnaire on a paper version, or through the Internet. Participants taking the paper version of the questionnaire were given a pack containing the following:

1. An information sheet (see Appendix A) which gave a clear description of research, and what was involved for the participant. The information sheet also reminded potential participants that their participation was voluntary, that they had the right to refuse to answer any of the questions, and that individual results would be anonymous, thus ensuring confidentiality. The sheet also outlined a number of

groups and organisations where participants could go to for support if this was needed. Participants were advised that they could email the author if they wished to be sent out a summary of the results at the conclusion of the study.

2. A copy of the questionnaire (see Appendix A).
3. A pre-paid envelope addressed to the author via Massey University for participants to return the questionnaire.

Participants opting to take the Internet version of the questionnaire were given a web site URL to go to. When participants entered the URL into their browser they were first shown an online version of the information sheet (see Appendix A, or above for a summary). When the participant clicked an “I accept” button they were taken to the questionnaire. After completing the questionnaire participants were provided with a link for them to click on if they wished to email the author to request a summary of the results at the conclusion of the study.

TS participants were recruited from three transgender social/support groups in New Zealand: Genderbridge (Auckland), Agender (Christchurch), and through the New Zealand Prostitutes Collective (Auckland). BF participants were recruited through undergraduate psychology classes at Massey University: before the start of a lecture, the author presented the aim of the research and gave copies of the questionnaire to those who were interested. Also, TS and BF participants were recruited through the author’s personal contacts. All of these participants were given the option of either completing the questionnaire on the Internet or completing the paper version. The link to the survey was also posted on 28 transgender, women’s, and psychological interest online groups and email lists (see Appendix B for a full listing of these groups, and an example of what was posted). These participants were only given the option of completing the survey over the Internet.

The survey was not recorded with any Internet search engines in an attempt to preserve the integrity of the sample; because TS are a stigmatised group in society, there was fear that discriminatory individuals may try to interfere with the research. By recruiting only from groups that the author believed would be supportive, it was hoped that only sympathetic individuals would know the project. This approach appears to have been successful because no malicious responses or e-mails were received.

Collected data was entered, processed, and analysed using the Statistical Package for Social Scientists, version 12.0. When a participant did not complete more than 20% of a scale then it was counted as missing, and a scale total score was not computed and

counted as missing. Missing questionnaire items that did not exceed 20% of a scale were assigned the average of the other values in the scale as their value (Bryman & Cramer, 2001).

7. RESULTS

Descriptive Statistics

Table 3 outlines descriptive statistics for all of the scales used in this study. The number of participants decreases from the sexual orientation scales ($N = 333$) to the Attraction to Transgender Fiction scale ($N = 274$) because the sexual orientation scale is the first scale measured in the survey, and the Attraction to Transgender Fiction scale is the second to last. Because of the large nature of the questionnaire, a number of participants dropped out of the web survey before completing all the scales, meaning a lower number of participants responding to the latter scales. The recalled gender identity scale had a lower number of responses than the other scales ($N = 259$) because it allowed participants to respond that the question did not apply to them, or that they did not remember. These responses were counted as missing, and this resulted in a number of participant's responses not meeting the 80% completion criteria for inclusion of their data. The Transgender Identity scale has a lower number of responses because only TS participants completed it.

Table 3 Descriptive statistics for scales

Scale	<i>N</i>	Mean	<i>SD</i>	α	Skew
Sexual orientation					
Items measuring attraction to males	333	9.21	5.83	.913	.05
Items measuring attraction to females	333	9.61	5.80	.926	-.06
Bisexual	332	10.56	8.42		.59 ^b
Asexual	332	12.95	7.99		.39 ^b
Attraction to male physique	327	17.62	10.11	.824	1.01 ^{ab}
Attraction to feminine males	310	9.17	9.13	.942	.86 ^{ab}
Recalled childhood gender identity	259	39.38	10.65	.895	-.72 ^a
Core autogynephilia	294	17.47	13.38	.964	.35 ^b
Autogynephilic interpersonal fantasy	281	8.34	5.20	.848	-.01
Fetishism	283	6.05	6.47	.918	.75 ^a
Masochism	295	5.47	7.67	.906	2.73 ^{ab}
Sexual and emotional jealousy	292	11.44	2.24	.902	-1.35 ^{ab}
Preference for younger partners	290	29.84	17.22	.740	.83 ^{ac}
Interest in uncommitted sex	287	23.75	13.92	.908	.30
Interest in visual sexual stimuli	283	39.77	12.24	.845	-.33 ^b
Importance of partner status	279	38.34	9.30	.724	.31
Importance of partner's physical attractiveness	274	29.94	8.38	.755	.05
Attraction to transgender fiction	274	9.18	11.92	.964	1.63 ^{ab}
Transgender identity	170	42.24	4.93	.622	-1.28 ^a

Note: ^a significantly skewed for transsexual participants

^b significantly skewed for biological female participants

One notable result shown in Table 3 is the similarity of the mean scores on items measuring sexual attraction to males (9.21), and sexual attraction to females (9.61). A

number of the scales were not normally distributed. The Attraction to Male Physique, Attraction to Feminine Males, Masochism, Sexual and Emotional Jealousy, and Attraction to Transgender Fiction scales were all significantly skewed for both the TS and BF respondents. Core Autogynephilia, Interest in Visual Sexual Stimuli, and the Asexuality and Bisexuality measures were significantly skewed for the BF participants. The Fetishism, Recalled Gender Identity, and Preference for Younger Partners scales were significantly skewed for the TS participants. Finally, the Transgender Identity scale was significantly skewed, and only TS completed this scale. Other variables used in this study that are not outlined in Table 3 were also not normally distributed: age, number of children, age that TS participants first desired to change their sex, and number of months TS participants had been taking female hormone, were significantly skewed for the sample as a whole. Non-parametric tests have are used for calculations involving these variables with skewed distributions wherever possible.

Scale Psychometric Properties

From conducting the reliability analysis, one item in the Transgender Identity scale that asked about the amount of permanent facial hair removal that had been undertaken was removed, resulting in an improved Cronbach's alpha score from .53 to .62. Internal consistency co-efficient (Cronbach's alpha) scores ranged from .62 to .96, greater than Nunally's (1978) .6 level of acceptability. The alpha coefficients for all of the scales, with the exception of the Transgender Identity scale had moderately high, to high levels of reliability, greater than .72.

To answer research question one: what are the psychometric properties of the scales designed by the author? Factorial validity was assessed on the three scales that were created by the author by using Principle Components Analysis. For Attraction to Feminine Males, one factor emerged with an eigenvalue greater than 1. This factor accounted for 71.69% of the variance, and all of the eight items loaded on the factor from .70 to .92. For Attraction to Transgender Fiction, one factor was extracted with an eigenvalue greater than 1. This factor accounted for 72.49% of the variance, and all of the 12 items loaded on the factor from .61 to .91. For the Attraction to Male Physique scale, two factors were extracted with eigenvalues greater than 1. The first factor accounted for 62.45% of the variance; the first five items on the scale loaded on this factor from .73 to .93. The second factor accounted for 16.81% of the variance; the sixth,

and final item, which assessed desires to have a long-term committed relationship with a male, was the only item to load on this factor (.99).

Differences Between Completers and Non-Completers

Research question seven asks whether there are differences between participants who completed, and did not complete the entire survey. As shown in Table 4, participants who did not complete the entire questionnaire were significantly less likely to be European, and significantly more likely to be Asian. Completers and non-completers did not differ in terms of gender identity, occupation classification, marital status, or on any of the remaining ethnicity variables.

Table 4 Comparison between completers and non-completers on nominal variables.

Variable	N	χ^2	df	P ¹
Identity (MTF transsexual or biological female)	335	0.451	1	.502
European	326	28.180	1	.000
Asian	326	35.032	1	.000
Maori	326	0.362	1	.547
Pacific Island	326	0.989	1	.320
Other ethnicity	326	0.228	1	.633
Occupation classification	321	8.303	8	.404
Marital status	335	0.115	2	.735

Note: ¹ two tailed tests

T-tests and Mann-Whitney tests were performed to compare the mean scores of completers and non-completers on participant age, level of education, number of biological children, sexual attraction to females, and sexual attraction to males. None of these tests reached a significance level of $p < .05$.

Correlational Analyses

Research question three asks what the relationships are between the variables used in this study. All of the variables measured in this research were correlated with one another; this is presented in Table 5. The results of the correlation matrix are summarised below. Significant correlations between .2 and .4 are described as *low* or *weak*. However, most correlations between .2 and .4 are not reported in the text. Correlations between .4 and .7 are described as *moderate*, and correlations greater than .7 are described as *high* or *strong* (Coolican, 2004).

Participants age was moderately correlated with occupation classification for the BF participants, but not the TS participants; older BF participants tended to have more

highly skilled occupations. Number of biological children was moderately positively correlated with age for all participants.

Variables measuring sexual orientation (Sexual attraction to males, sexual attraction to females, androphilia (exclusive), gynephilia (exclusive), bisexuality, asexuality, and attraction to male physique) all correlated with each other in the expected direction. Androphilia was moderately positively correlated with Importance of Partner's Status and moderately negatively correlated with Attraction to Transgender Fiction for TS participants. Sexual attraction to females was moderately negatively correlated with Recalled Gender Identity, moderately positively correlated with Attraction to Transgender Fiction for BF participants, and moderately positively correlated with Core Autogynephilia for TS participants. Fetishism, Masochism, Interest in Visual Sexual Stimuli and Attraction to Transgender Fiction moderately positively correlated with Bisexuality in BF participants. Asexuality was moderately negatively correlated with Autogynephilic Interpersonal Fantasy and Interest in Visual Sexual Stimuli in TS participants.

Attraction to male physique was moderately positively correlated with Importance of Partner's Status for TS participants, and weakly positively correlated for BF participants. Attraction to Feminine Males was moderately positively correlated with the measures of autogynephilia in TS participants; Fetishism and Attraction to Transgender Fiction in all participants; and Masochism in BF participants.

Core autogynephilia was strongly positively correlated with Autogynephilic Interpersonal Fantasy among TS participants, moderately among BF participants. Core autogynephilia was moderately positively correlated with Fetishism, Interest in Visual Sexual Stimuli, Attraction to Transgender Fiction, and applicability of autogynephilia to own experience among TS participants. Autogynephilic Interpersonal Fantasy was moderately positively correlated with fetishism, Interest in Uncommitted Sex, Interest in Visual Sexual Stimuli, and Attraction to Transgender Fiction among TS participants. Fetishism was moderately positively correlated with Masochism and Attraction to Transgender Fiction among both participant groups, with Interest in Uncommitted Sex among BF participants, and with Interest in Visual Sexual Stimuli among TS participants. Masochism was moderately positively correlated with Interest in Uncommitted Sex and Interest in Visual Sexual Stimuli among BF participants, and Attraction to Transgender Fiction among all participants. Sexual and emotional jealousy correlated together strongly among TS participants and moderately among BF

Table 5 Correlation matrix for all variables

Variable	Population	Age ²	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Occupation classification	Transsexual Bio Female	-.10 -.49**	-																							
2. Level of education	Transsexual Bio Female	-.03 .37**	-.24** -.11	-																						
3. Number of biological children	Transsexual ¹ Bio Female ¹	.55** .58**	-.09 -.31**	-.01 .07	-																					
4. Sexual attraction to males.	Transsexual Bio Female	-.24** -.26**	-.03 .16	-.10 -.24**	-.23** .08	-																				
5. Sexual attract. to females	Transsexual Bio Female	-.06 .00	-.05 -.19*	.13 .11	.05 -.24**	-.47** -.51**	-																			
6. Androphilia (exclusive)	Transsexual ¹ Bio Female	-.12 -.10	-.01 .17	-.11 -.15	-.21** .13	.74** .70**	-.74** -.84**	-																		
7. Gynephilia (exclusive)	Transsexual ¹ Bio Female ¹	.05 .14	-.02 -.19*	.13 .22*	.12 -.22*	-.76** -.82**	.81** .75**	-.75** -.77**	-																	
8. Bisexuality	Transsexual Bio Female ¹	-.13 -.23*	-.02 .00	.04 -.06	-.02 -.06	.38** .30**	.33** .38**	-.20** -.34**	-.22** -.18*	-																
9. Asexuality	Transsexual Bio Female	.27** .15	.08 .03	-.02 .11	.22** .21*	-.36** -.32**	-.40** -.32**	-.20 -.16	-.27** -.17	-.01 10	-															
10. Attraction to Male Physique	Transsexual ¹ Bio Female ¹	-.25** -.30**	-.03 .20*	-.02 -.30	-.21** .07	.80** .73**	-.39** -.58**	.67** .65**	-.65** -.77**	.27** .16	-.25** .01	-														
11. Attraction to Feminine Males	Transsexual ¹ Bio Female ¹	-.24** .11	.02 -.12	.14 -.01	-.10 .20*	.03 .18	.37** .20*	-.26** -.21*	.15* -.17	.41** .58**	-.17* .11	-.01 .08	-													
12. Recalled Gender Identity	Transsexual Bio Female	-.11 -.11	.07 .05	-.03 -.13	-.15 .16	.36** .32**	-.28** -.41**	.34** .34**	-.30** -.26**	-.06 -.10	-.13 .10	.31** .16	-.07 -.10	-												
13. Core Autogynephilia	Transsexual Bio Female ¹	-.10 -.14	-.02 -.11	.19** -.02	-.08 -.01	.03 .24*	.42** .10	-.22** -.03	.18* -.14	.37** .34**	-.25** -.09	-.05 .03	.52** .32**	-.06 .06	-											
14. Autogynephil. Interpersonal Fant.	Transsexual Bio Female	-.23** -.18	-.06 -.08	.02 -.14	-.20** .08	.28** .33**	.30** .03	.02 .08	.04 -.26*	.36** .26**	-.42** -.17	.15* .15	.42** .37**	.08 .05	.74** .67**	-										
15. Fetishism	Transsexual ¹ Bio Female	-.15* -.17	.04 .08	.15* -.13	-.11 .04	-.05 .08	.33** .35**	-.23** -.31**	.17* .02	.26** .43**	-.16* -.05	-.05 -.05	.47** .48**	-.06 -.12	.62** .31**	.54** .32**	-									

Table 5 continued

Variable	Population	Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
16. Masochism	Transsexual ¹	-.16*	.04	-.04	-.10	-.04	.33**	-.21**	.19**	.22**	-.21**	-.03	.35**	-.11	.39**	.38**	.49**	-								
	Bio Female ¹	-.30**	.09	-.09	-.09	.19	.26**	-.20*	-.08	.50**	-.08	.08	.42**	-.15	.29**	.36**	.65**	-								
17. Sexual Jealousy	Transsexual ¹	.06	-.12	.00	-.01	.11	.00	.12	-.01	-.05	-.15*	.16*	-.12	.19*	.04	-.01	-.06	-.11	-							
	Bio Female ¹	-.02	.04	-.07	-.04	.01	-.09	.17	.06	-.30**	.21*	.11	-.30**	-.07	.26**	-.21*	-.08	-.11	-							
18. Emotional Jealousy	Transsexual ¹	.07	-.13	.02	-.04	.12	.02	.13	.01	-.07	-.20**	.11	-.10	.20*	.04	-.01	-.02	-.07	.71**	-						
	Bio Female ¹	.01	.03	-.12	-.10	-.01	.03	.04	.07	-.16	-.14	.05	-.15	.05	-.24*	-.17	-.03	-.06	.53**	-						
19. Preference for Younger Partners	Transsexual ¹	.30**	-.04	.09	.08	-.05	.10	-.04	.12	-.01	-.06	-.02	.14	.07	.26**	.19*	.10	.10	.17*	.08	-					
	Bio Female	.07	-.17	-.05	-.06	-.01	.02	-.01	-.05	.06	.03	.06	.19	-.01	.05	.00	-.07	-.08	.03	.01	-					
20. Interest in Uncommitted sex	Transsexual	-.13	.08	-.01	-.13	.23**	.14	.02	-.07	.29**	-.23**	.13	.38**	-.04	.35**	.44**	.38**	.39**	-.08	-.20**	.15*	-				
	Bio Female	-.14	-.12	-.05	-.04	.12	.30**	-.18	.08	.34**	-.21*	-.09	.31**	-.13	.24*	.36	.46**	.58**	-.13	-.21*	.10	-				
21. Interest in Visual Sex. Stim.	Transsexual	-.27**	.00	.10	-.26**	.28**	.22**	.12	.04	.20**	-.47**	.23**	.38**	.06	.50**	.61**	.44**	.30**	.13	.08	.18*	.55**	-			
	Bio Female	-.30**	.00	-.02	-.15	.14	.33**	-.23*	.04	.43**	-.21*	.08	.29**	-.09	.13	.28**	.25*	.40**	-.08	-.03	.07	.42**	-			
22. Importance of Partners Status	Transsexual	-.16*	-.19*	.08	-.17*	.35**	-.16*	.43**	-.34**	.07	-.20**	.44**	-.05	.14	.12	.19*	.09	.15	.04	.11	.10	.21**	.25**	-		
	Bio Female	-.30**	.04	-.12	.13	.30**	-.13	.11	-.26**	.23*	.10	.28**	.05	.25*	.14	.34	.20	.25*	-.03	-.06	-.04	.19	.23*	-		
23. Importance of Part. Phys. Attract.	Transsexual	.08	-.16*	.26**	-.14	.12	.06	.21**	-.05	-.04	-.27**	.21**	.19*	-.06	.21**	.27**	.20*	.08	.10	.12	.26**	.29**	.32**	.45**	-	
	Bio Female	-.15	.02	-.18	-.02	.22*	-.12	.15	-.17	.03	.01	.30**	.14	.07	.09	.25	.11	.19	.00	-.02	.41**	.22	.21*	.28**	-	
24. Attraction to Transgend. Fiction	Transsexual ¹	-.06	.14	.09	-.05	-.09	.34**	-.27**	.19*	.27**	-.06	-.22**	.55**	-.22*	.67**	.52**	.59**	.48**	-.06	-.06	.13	.42**	.39**	-.01	.21**	-
	Bio Female ¹	-.05	-.03	.02	-.04	-.04	.42**	-.41**	.11	.47**	-.02	-.20	.62**	-.29**	.23*	.30**	.52**	.52**	-.28	-.11	.02	.38**	.37**	.07	.01	-
Age first desired to change sex	Transsexual ¹	.20*	.07	-.13	.13	-.10	.03	-.05	.07	-.07	.01	-.14	.12	-.30**	.07	.05	.12	.12	-.02	.00	.17	.24**	.13	-.11	.08	.25**
	Months on hormones	.24**	.05	-.05	-.05	-.06	-.03	.05	.00	-.11	.02	.08	-.27**	.00	-.19*	-.26**	-.07	-.16*	.02	.05	-.02	-.27**	-.13	.10	-.07	-.26**
Transgender Identity	Transsexual ¹	.02	-.01	-.06	-.07	.02	-.06	.11	-.01	-.15	-.06	.03	-.16	.34**	.04	.05	.03	-.10	.16*	.18*	.07	-.18*	-.01	.10	-.15	-.16*
	Familiarity with autogynephilia	.12	-.02	.24**	.04	-.01	.09	-.01	.06	.05	-.06	.04	.09	-.18*	-.09	-.11	-.14	-.01	.00	.08	.01	-.15*	.08	.01	.09	-.09
Applicability of autogyn. to self	Transsexual	.13	.02	-.02	.18*	.09	.09	-.03	.04	.09	-.15	-.05	.26**	-.10	.48**	.38**	.35**	.15	-.02	.00	.14	.26**	.35**	.00	.24**	.48**
	Applicability of autogyn. to others	-.01	-.05	.01	.08	.05	.01	.09	.01	-.05	-.11	.06	.19*	-.09	.23**	.33**	.31**	-.01	-.01	.03	.16*	.26**	.39**	.12	.35**	.12

Note: ¹ Correlation coefficients using this population and variable are Spearman's rho scores.

² Spearman's Rho scores used for BFs, but not TS using age

* $p < .05$ (two-tailed), ** $p < .01$ (two-tailed)

participants. Interest in Uncommitted Sex was moderately positively correlated with Interest in Visual Sexual Stimuli among all participants, and Attraction to Transgender Fiction among TS participants. Among TS participants, Importance of Partner's Physical Attractiveness was moderately positively correlated with Preference for Younger Partners, and Importance of Partner's Status. Finally, Attraction to Transgender Fiction was moderately positively correlated with applicability of autogynephilia to own experience among TS participants.

The relationship between Core Autogynephilia and sexual attraction to females is illustrated in Figure 4. The local linear regression line does not show a curvilinear relationship that has been previously proposed (see Chapter 4).

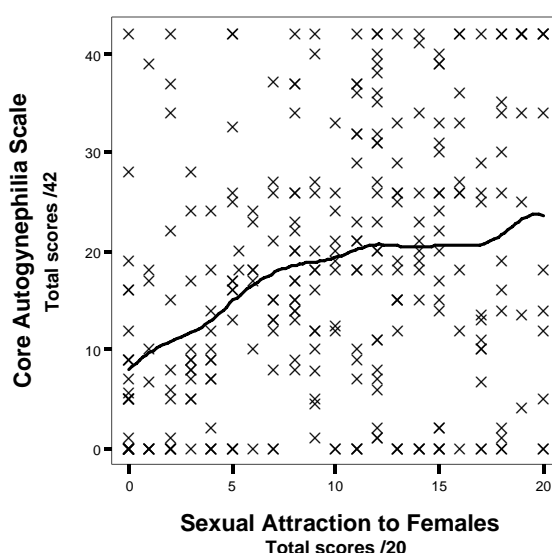


Figure 4 The relationship between sexual attraction to females and Core Autogynephilia.

Table 6 outlines correlations between variables that were only measured for TS participants. Of these correlations, applicability of autogynephilia to own experiences moderately positively correlated with applicability of autogynephilia to others experiences.

Factor Analysis

Research question two asked what the factor structure of the variables used in this study were. There were an insufficient number of participants to perform a factor analysis using the individual items in the questionnaire. However, to empirically derive

scale groupings, exploratory factor analysis procedures were applied to scales totals that were completed by all participants.

Table 6 Correlation matrix for variables only measured in transsexual participants.

Variable	1	2	3	4	5	6
1. Age first desired to change sex ¹						
2. Number of months taking hormones ¹	-.03					
3. Transgender Identity ¹	-.14	.08				
4. Familiarity with autogynephilia	-.04	.12	-.05			
5. Applicability of autogynephilia to self	.24**	-.23**	-.16*	-.20*		
6. Applicability of autogyneph. to others	.09	-.05	-.03	-.14	.42**	

Note: ¹ Correlation coefficients using this population and variable are Spearman's rho scores.

* $p < .05$, ** $p < .01$

Principle components analysis procedures were used to analyse the variables; these were rotated using the VARIMAX procedure. Factors were selected according to two criteria: eigenvalues greater than one, and the scree plot (Thompson, 2004). From the analysis, four factors were retained which accounted for 56.44% of total variance. All of the factors had eigenvalues greater than one, and were shown to be adequate on the scree plot. Table 7 outlines the four resultant factors, and the variables within them.

The first factor was labelled *Nonconforming Arousability*. The term *arousability* is used because the variables in this factor relate to amount of sexual arousal to a large variety of stimuli. *Nonconforming* is used because the variables are in areas that do not conform to social norms for persons identifying as female to show sexual arousal to. Nonconforming Arousability explained 22.36% of the questionnaire variance.

The second factor was labelled *Conforming Sexuality* because it loaded on variables that are in areas that conform to social norms for females to show sexual arousal to. This factor also included Recalled Gender Identity, loading towards the more conforming, feminine way. Conforming Sexuality accounted for 13.56% of the questionnaire variance.

The third factor was labelled *Autogynephilia* because it loaded towards TS participants, and included variables that measured autogynephilia, that were relevant to

autogynephilia, or had not been previously compared with autogynephilia but have likely relevance. Autogynephilia accounted for 11.88% of the questionnaire variance.

Table 7 The four factors identified among all research variables through PCA and VARIMAX rotation procedures.

Variable	Nonconforming Arousability	Conforming Sexuality	Autogynephilia	Age
Masochism	.785			
Bisexual	.772			
Fetishism	.747			
Attraction to feminine males	.744		.308	
Attraction to transgender fiction	.673		.504	
Interest in uncommitted sex	.588			
Interest in visual sexual stimuli	.483		.458	
Core Autogynephilia	.422		.760	
Autogynephilic interpersonal	.309		.765	
Exclusive Androphilia	-.461	.604		
Attraction to male physique		.844		
Importance of partner's status		.663		
Recalled gender identity		.541		
Exclusive Gynephilia		-.908		
Imp. of partner physical attract.			.515	
Preference for younger partners			.450	.597
Gender identity ¹			-.452	
Age				.864
Number of biological children				.806
Asexual				.334

Note: ¹ For this variable, TS participants were coded as '1' and BF participants were coded as '2'. The negative factor loading indicates a tendency towards more TS participants.

The final factor was labelled *Age* because it included variables relevant to age. Age accounted for 8.64% of the questionnaire variance.

Comparisons Between Biological Female and Transsexual Means

Research question four asked which variables TS and BF means differed on. TSs ($N = 204$, M -Rank = 191.63) were on average significantly older than BFs ($N = 127$, M -Rank = 124.83), $U = 7725.0$, $p < .0005$. To allow for this difference, age is covaried in a number of the parametric tests reported in this results chapter. Significantly more BFs had never married, $\chi^2 (1, N = 336) = 9.49$, $p = .002$, and significantly more transsexuals were separated, divorced or widowed, $\chi^2 (1, N = 336) = 10.17$, $df = 1$, $p = .001$. However, transsexuals and biological females did not differ significantly in ethnicity.

Table 8 outlines ANCOVAs comparing mean scores of BF and TS participants, using age as a covariate. On average, TS participants placed significantly greater importance on partner's physical attractiveness and social status. TS and BF female

participants did not differ significantly in occupation classification, levels of education, Autogynephilic Interpersonal Fantasy, or Interest in Uncommitted Sex.

Table 8 ANCOVA comparisons of means for transsexual and biological female participants.

Variable	Adj. M_{TS}	Adj. M_{BF}	F	df	P^1	η^2	Power ²
Occupation classification	4.98	5.39	2.44	1	.119	.008	.344
Level of education	4.20	4.00	1.25	1	.264	.004	.200
Autogynephilic interpersonal fant.	8.94	7.29	5.72	1	.017	.020	.664
Interest in uncommitted sex	23.61	24.11	0.08	1	.784	.000	.059
Importance of partner status	39.99	35.73	12.72	1	.000	.045	.944
Importance of partner's phys. attr.	31.42	27.60	12.16	1	.001	.043	.935

Note: ¹ two tailed tests

² computed using $\alpha = .05$

Mann-Whitney, as well as ANCOVA tests were performed on variables that violated the assumption of normality of distribution; these are outlined in Table 9. Because of the number of tests employed, a more conservative alpha level of $p = .01$ was used for significance. After adjusting for age differences, TS scored significantly higher on Recalled Gender Identity, Core Autogynephilia, Preference for Younger Partners, and Attraction to Transgender Fiction. On the other hand, BF participants scored significantly higher on Emotional Jealousy.

Comparison Between Autogynephilic Transsexuals, Non-Autogynephilic Transsexuals and Biological Females

Significant differences between TS and BF means were found in the previous section on a number of the variables measured, however it was hypothesised that these differences would be due to a subgroup of autogynephilic TS. Research question five asked whether the autogynephilic TS subgroup differs from other participants in the sample. TS were classified as not autogynephilic if they answered the question: “How much do you think the theory of autogynephilia applies to *your own* experiences of transsexualism?” with the response “definitely not at all” or “probably not at all”. Eighty-nine participants fell into this category. TS were classified autogynephilic if they responded “a little bit”, “quite a lot”, or “completely” to the above question. Eighty participants fell into this category.

ANCOVA and Kruskal-Wallis tests were performed to compare autogynephilic TS, non-autogynephilic TS, and BF participants on all of the variables measured in the study. The results of the ANCOVAs for normally distributed variables are shown in Table 10. Because six tests were used, a more conservative alpha level of $p = .01$ was used for significance. Three of the variables in the ANOVA gave a significant

Table 9 Mann-Whitney tests of mean ranks for TS and BF participants, and ANCOVA tests of means for TS and BF participants using age a covariate.

	Mann-Whitney tests						ANCOVA tests							
Variable	<i>M-Rank</i> _{TS}	<i>M-Rank</i> _{BF}	<i>N</i> _{TS}	<i>N</i> _{BF}	<i>U</i>	<i>p</i> ^b		TS	BF	<i>F</i>	<i>df</i>	<i>p</i> ^b	η ²	Power ^a
Number of children ^c	173.45	138.33	197	122	9413.0	.000	Adj. Mean	0.90	0.80	0.55	1	.460	.002	.11
							Std Dev.	1.46	1.04					
Androphilia ^c	154.61	185.93	206	126	10529.5	.001	Adj. Mean	3.41	4.79	4.07	1	.045	.012	.52
							Std Dev.	5.49	6.04					
Gyneophilia	175.20	152.58	206	126	11223.5	.028	Adj. Mean	4.50	4.05	0.42	1	.513	.001	.10
							Std Dev.	5.63	5.98					
Bisexuality	164.56	170.36	206	126	12492.0	.565	Adj. Mean	10.63	10.60	0.00	1	.980	.001	.05
							Std Dev.	7.83	9.36					
Asexuality	182.42	140.48	206	126	9699.0	.000	Adj. Mean	13.54	11.72	4.07	1	.045	.012	.52
							Std Dev.	8.26	6.95					
Attraction to Male Physique	150.25	186.80	204	126	9742.0	.001	Adj. Mean	17.35	18.14	0.43	1	.511	.001	.31
							Std Dev.	10.90	8.67					
Attraction to Feminine Males	161.58	145.47	193	117	10117.5	.123	Adj. Mean	10.21	7.37	6.49	1	.011	.021	.72
							Std Dev.	9.55	8.33					
Recalled Gender Identity	148.28	103.19	154	105	5270.0	.000	Adj. Mean	42.34	35.00	27.88	1	.000	.099	1.00
							Std Dev.	9.10	11.54					
Core Autogynephilia ^c	170.43	106.23	189	105	5589.5	.000	Adj. Mean	21.43	10.44	45.29	1	.000	.136	1.00
							Std Dev.	13.51	10.65					
Fetishism	140.38	145.11	186	97	8719.0	.631	Adj. Mean	6.22	5.75	0.30	1	.587	.001	.08
							Std Dev.	6.64	6.25					
Masochism ^c	135.78	169.78	189	106	7708.0	.001	Adj. Mean	4.65	6.82	5.18	1	.024	.018	.62
							Std Dev.	5.87	9.82					
Sexual Jealousy	138.46	160.82	187	105	8314.0	.023	Adj. Mean	5.72	6.22	2.29	1	.132	.008	.33
							Std Dev.	2.51	2.60					
Emotional Jealousy	134.20	168.41	187	105	7517.0	.000	Adj. Mean	6.31	7.00	7.69	1	.006	.026	.79
							Std Dev.	2.00	1.78					
Preference for Younger Part.	170.55	101.37	185	105	5078.5	.000	Adj. Mean	33.40	23.80	23.36	1	.000	.076	1.00
							Std Dev.	16.78	14.88					
Interest in Visual Sexual Stim.	132.10	159.57	181	102	7439.0	.007	Adj. Mean	39.75	39.98	0.02	1	.877	.000	.05
							Std Dev.	12.27	12.13					
Attraction to Trans. Fiction	150.35	113.04	171	101	6266.5	.000	Adj. Mean	11.45	4.95	18.21	1	.000	.064	.99
							Std Dev.	12.79	8.69					

Note: ^a computed using $\alpha = .05$, estimated at 95.5% of the value produced by the parametric analysis. ^b two-tailed tests. ^c violates assumption of equality of error variances.

difference between the three groups. For Autogynephilic Interpersonal Fantasy and Importance of Partner Physical Attractiveness, post hoc Bonferroni tests showed that means for BF and non-autogynephilic TS participants formed a homogenous subset, and the means for autogynephilic TS participants formed a separate subset with higher means. The mean for autogynephilic TS was significantly higher than the means for BF and non-autogynephilic TS on both of these variables. For Importance of Partner's Status, the mean for autogynephilic TS participants was significantly higher than the mean for BF. Differences between non-autogynephilic TS and BF, and the two TS subgroups means were not significant.

Table 10 One way ANCOVA comparisons between autogynephilic TS, non-autogynephilic TS, and BF participants, using age as a covariate.

Variable		TS _{NonAGP}	TS _{AGP}	BF	F	p ^b	η ²	Power ^a
Occupation classification	Adj. Mean	4.80	5.11	5.36	0.77	.465	.005	.180
	St. Dev.	3.25	3.10	3.15				
Level of education	Adj. Mean	4.06	4.20	4.03	0.32	.726	.002	.101
	St. Dev.	1.49	1.49	1.48				
Autogynephilic interpersonal fantasy	Adj. Mean	6.75	10.89	7.21	15.85	.000	.112	.999
	St. Dev.	4.65	5.72	4.72				
Interest in uncommitted sex	Adj. Mean	20.77	25.82	24.11	2.99	.052	.022	.577
	St. Dev.	12.45	12.70	15.47				
Importance of partner's status	Adj. Mean	38.88	40.27	35.74	5.43	.005	.039	.843
	St. Dev.	8.32	9.96	9.05				
Importance of partner phys. attract.	Adj. Mean	29.17	33.23	27.61	10.44	.000	.074	.988
	St. Dev.	7.35	7.87	8.49				

Note: ^a computed using $\alpha = .05$, ^b two-tailed tests

TS_{NonAGP} = Non-autogynephilic TS

TS_{AGP} = Autogynephilic TS

Kruskal-Wallis tests found significant differences between the three subgroups for number of biological children, asexuality, Attraction to Male Physique, Recalled Gender Identity, Core Autogynephilia, Fetishism, Masochism, Emotional Jealousy, Preference for Younger Partners, Interest in Visual Sexual Stimuli, and Attraction to Transgender Fiction (see Table 11). Because 16 of these tests were performed, a more conservative alpha level of $p = .01$ was used for significance. However, when age was included in the calculation as a covariate, significant differences were not found for number of biological children, asexuality, Attraction to Male Physique, and emotional jealousy; and significant differences were found for Attraction to Feminine Males.

Using Recalled Gender Identity and Preference for Younger Partners as the dependent variables, post hoc Bonferroni tests showed that, with alpha at .01, means for TS subgroups formed homogenous subsets, and means for BF formed their own subsets with significantly lower means on both of the variables.

Table 11 Kruskal-Wallis tests of mean ranks for TS and BF participants, and ANCOVA tests of means for TS and BF participants using age a covariate.

Variable	Kruskal-Wallis tests					ANCOVA tests							
	M-Rank _{Non-AGP-TS}	M-Rank _{AGP-TS}	M-Rank _{BF}	<i>H</i>	<i>p</i> ^b		NonAGP-TS	AGP-TS	BF	<i>F</i>	<i>p</i> ^b	η^2	Power ^a
Number of children ^c	148.7	165.94	124.51	17.05	.000	Adj. Mean	0.73	1.03	0.79	1.35	.260	.010	.290
Androphilia	136.61	137.26	161.61	7.35	.025	Std Dev.	1.29	1.66	1.01				
						Adj. Mean	3.46	3.91	4.76	1.26	.285	.009	.273
						Std Dev.	5.07	6.04	6.04				
Gynephilia	153.33	155.57	138.30	2.99	.224	Adj. Mean	4.06	4.05	4.18	0.02	.985	.000	.052
						Std Dev.	5.53	5.58	5.98				
Bisexuality	141.07	147.93	151.72	0.82	.663	Adj. Mean	10.24	11.05	10.46	0.20	.818	.001	.081
						Std Dev.	8.02	7.72	9.36				
Asexuality	171.85	158.55	123.48	18.75	.000	Adj. Mean	14.72	13.03	11.66	3.81	.023	.026	.690
						Std Dev.	8.69	8.13	6.95				
Attraction to Male Physique	134.63	127.79	165.98	12.35	.002	Adj. Mean	17.05	16.82	18.20	0.64	.528	.004	.157
						Std Dev.	9.35	9.17	8.67				
Attraction to Femin. Males ^c	128.38	160.27	135.10	7.15	.028	Adj. Mean	7.02	11.43	7.58	6.29	.002	.044	.895
						Std Dev.	7.33	9.82	8.33				
Recalled Gender Identity	141.85	129.01	95.78	20.78	.000	Adj. Mean	42.83	41.44	35.09	11.36	.000	.091	.993
						Std Dev.	9.60	9.07	11.54				
Core Autogynephilia	125.95	188.72	102.51	57.03	.000	Adj. Mean	14.75	26.09	10.59	37.44	.000	.222	1.000
						Std Dev.	11.82	12.38	10.65				
Fetishism ^c	106.24	150.27	137.01	16.24	.000	Adj. Mean	3.65	7.66	5.85	9.23	.000	.068	.976
						Std Dev.	4.93	6.65	6.25				
Masochism ^c	116.14	132.25	159.34	15.35	.000	Adj. Mean	3.51	4.85	6.92	5.07	.007	.037	.816
						Std Dev.	4.57	5.32	9.82				
Sexual Jealousy	132.02	128.25	149.20	4.21	.122	Adj. Mean	5.86	5.73	6.20	0.77	.464	.006	.180
						Std Dev.	2.48	2.52	2.60				
Emotional Jealousy	126.21	127.00	155.07	9.50	.009	Adj. Mean	6.38	6.50	6.98	2.51	.083	.018	.500
						Std Dev.	1.98	1.79	1.78				
Preference for Younger Part.	152.48	170.97	99.30	41.87	.000	Adj. Mean	31.00	34.26	24.00	9.70	.000	.068	.981
						Std Dev.	16.48	17.67	14.88				
Interest in Visual S. Stim.	103.76	148.33	154.46	22.71	.000	Adj. Mean	35.90	43.17	39.87	8.95	.000	.063	.972
						Std Dev.	10.55	12.66	12.13				
Attraction to Trans. Fiction ^c	116.40	185.99	111.50	49.22	.000	Adj. Mean	6.13	17.66	4.78	35.92	.000	.215	1.000
						Std Dev.	8.68	14.04	8.69				

Note: ^a computed using $\alpha = .05$, estimated at 95.5% of the value produced by the parametric analysis. ^b two-tailed tests. ^c violates assumption of equality of error variances.

For Masochism, post hoc Bonferroni tests showed that, with alpha at .01, means for TS subgroups formed homogenous subsets, and means for BF formed their own subsets with significantly higher means.

For Fetishism and Interest in Visual Sexual Stimuli, post hoc Bonferroni tests showed that means for BF and autogynephilic TS formed a homogenous subset and the means for BF and non-autogynephilic TS formed a separate homogenous subset with a lower mean. The mean for non-autogynephilic TS were significantly lower than the mean for autogynephilic TS participants on both of these variables.

For Attraction to Feminine Males, Core Autogynephilia, and Attraction to Transgender Fiction, post hoc Bonferroni tests showed that means for BF and non-autogynephilic TS formed a homogenous subset, and the means for autogynephilic TS formed separate homogenous subsets with higher means. The means for autogynephilic TS were significantly higher than the means for the other two groups. Differences between the three subgroups are summarised in Table 12.

Table 12 Summary of similar scores between autogynephilic TS, non-autogynephilic TS and BFs.

All three subgroups the same.	BF and autogynephilic TS the same	BF and non-autogyneph. TS the same	Two TS subgroups the same
Occupation classific.	Autogynephilic Interper.	Attr. to Feminine Males	Recall. Gender Id.
Level of education	Fetishism	Core Autogynephilia	Masochism
No. of Children	Imp. of Partner Physic.	Fetishism	Pref. Young Partn.
Androphilia	Interest in Visual Sexual	Autogynephilic Interpers.	Imp. Partner Status
Gynephilia		Interest in Visual Sexual	
Bisexuality		Imp. of Partner Phys. Att.	
Asexuality		Imp. of Partner Status	
Attr. to Male Physque		Attr. Transgender Fict.	
Intre. in Uncomm. Sex			

Comparisons were made between autogynephilic and non-autogynephilic TS participants on the measures that were only completed by TS. Autogynephilic TS (M -Rank = 68.18, $n = 76$) were found to have significantly fewer months taking female hormones than non-autogynephilic TS (M -Rank = 94.86, $n = 88$), $U = 2256.0$, $p < .0005$. On average autogynephilic TS ($M = 2.28$, $n = 78$) also rated autogynephilia as significantly more applicable to others experiences than non-autogynephilic TS ($M = 1.73$, $n = 89$), $t = -4.59$, $df = 165$, $p = .010$.

Differences Between Sexual Orientations

Formation of Sexual Orientation Categories

A two-step cluster analysis was performed on the variables measuring sexual attraction to males and females to give a nominal value of sexual orientation. The

cluster analysis returned four clusters, which were labelled androphilic, gynephilic, asexual, and bisexual. These clusters are consistent with previous research (Blanchard, 1989b). Cluster sizes, means, and standard deviation scores are given in Table 13; 95% confidence intervals for the clusters are illustrated in Figures 5 and 6.

Table 13 Descriptive statistics for clusters.

Cluster	N	%	Sexual attraction to males		Sexual attraction to females	
			Mean	Std. Deviation	Mean	Std. Deviation
Asexual	62	18.5	5.75	3.40	5.49	3.08
Gynephilic	88	26.2	2.85	2.52	15.60	2.80
Bisexual	95	28.3	11.42	3.06	12.61	2.81
Androphilic	87	25.9	15.61	2.97	3.23	2.55

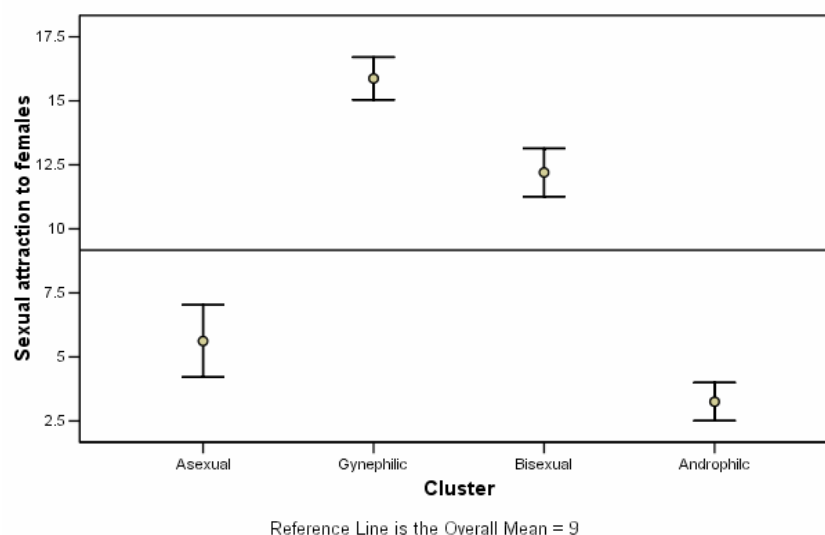


Figure 5 Simultaneous 95% confidence intervals for sexual attraction to female means.

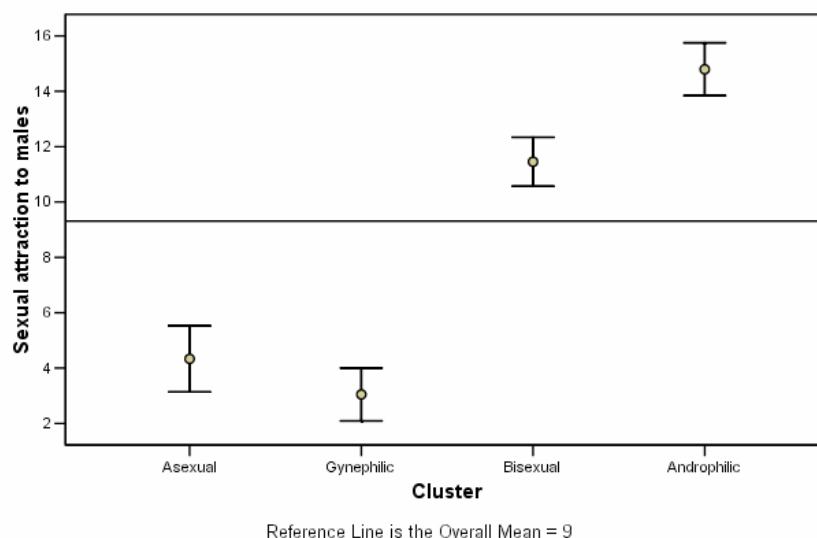


Figure 6 Simultaneous 95% confidence intervals for sexual attraction to male means.

The frequencies of TS and BF participants in each of the sexual orientation categories are outlined Table 14. TS and BF participants differed significantly in sexual orientation classification, Pearson χ^2 (3, $N = 336$) = 17.94, $p < .0005$. BFs were over-represented in the androphilic category and under-represented in the asexual category.

Table 14 Gender identity and sexual orientation classification frequencies

	Asexual	Gynephilic	Bisexual	Androphilic	Total
Transsexual	51	53	60	42	206
Biological female	11	35	35	45	126
Total	62	88	95	87	238

Research question six asks what the main effects of sexual orientation, and the interaction effects between sexual orientation and gender identity are on the variables measured in this study. Table 15 outlines two-way ANCOVAs comparing the means of TS and BF participants of the four sexual orientations. Because of age differences between the gender identity and sexual orientation subcategories, age was used as a covariate for these tests. Main effects were only given for sexual orientation, as the main effects of gender identity have been reported previously. Because of the large number of tests conducted, a more stringent alpha level of $p = .01$ was employed for findings reported as statistically significant. Occupation, number of biological children, Sexual Jealousy, Emotional Jealousy, Preference for Younger Partners, and Importance of Partner's Physical Attractiveness did not give significant main or interaction effects.

Variables With Significant Main Effects, but not Interaction Effects

Significant main effects for sexual orientation, but not interaction effects were found in nine of the variables measured: age, Recalled Gender Identity, Core Autogynephilia, Autogynephilic Interpersonal Fantasy, Fetishism, Interest in Uncommitted Sex, Interest in Visual Sexual Stimuli, Importance of Partner Status, and Attraction to Transgender Fiction.

Using age as the dependent variable, a post hoc Bonferroni test showed that means for androphilic, gynephilic, and bisexual participants formed a homogenous subset; and the mean for asexual participants formed a separate subset with a higher mean. The mean for asexual participants was significantly higher than the means of all the other three sexual orientation subgroups.

Using Recalled Gender Identity, a post hoc Bonferroni test showed that adjusted means for gynephilic and bisexual participants formed a homogenous subset; adjusted means for bisexual and asexual participants formed a second homogenous subset with

Table 15 Two-way ANCOVAs reporting sexual orientation, and gender identity X sexual orientation effects, using age as covariate.

Variable		Transsexual Participants				Biological Female Participants				Partial				Partial			
		Asexual	Gynephilic	Bisexual	Androphilic	Asexual	Gynephilic	Bisexual	Androphilic	F_{sexori}	p	η^2	Power ^a	$F_{\text{gender \% sexori}}$	p	η^2	Power ^a
Age ^b	Mean	44.16	40.98	37.52	37.22	42.36	31.51	28.96	28.53	6.50	.000	.058	.970	0.82	.485	.008	.231
	Std. Dev.	15.27	13.21	12.76	13.87	16.10	10.21	10.54	11.73								
Occupation classification	Adj. Mean	6.22	4.80	4.55	4.41	7.19	4.45	4.92	6.19	3.35	.020	.019	.374	1.42	.237	.019	.374
	Std. Dev.	3.21	3.40	2.95	3.00	2.55	2.88	2.92	3.00								
Level of education	Adj. Mean	3.82	3.98	4.35	3.83	3.39	4.44	4.07	3.82	1.77	.154	.023	.457	0.82	.487	.011	.225
	Std. Dev.	1.62	1.40	1.50	1.55	1.41	1.40	1.31	1.48								
Number of biological children	Adj. Mean	1.09	1.14	0.93	0.61	0.55	0.34	1.01	0.91	0.57	.634	.008	.167	2.98	.033	.040	.698
	Std. Dev.	1.55	1.44	1.37	1.78	0.93	0.52	1.12	0.94								
Attraction to male physique ^c	Adj. Mean	9.72	9.17	18.91	23.13	21.73	7.17	22.04	24.24	76.13	.000	.514	1.000	8.79	.000	.109	.995
	Std. Dev.	9.57	7.56	4.65	2.43	4.10	7.17	4.09	2.58								
Attraction to feminine males ^c	Adj. Mean	4.98	11.53	12.41	3.96	4.76	3.20	15.61	4.00	22.98	.000	.243	1.00	6.19	.000	.079	.961
	Std. Dev.	5.76	10.65	9.29	6.34	11.21	3.92	7.78	4.78								
Recalled gender identity ^c	Adj. Mean	41.71	39.34	42.06	45.88	47.10	26.77	33.91	38.48	9.54	.000	.141	.997	3.05	.030	.050	.708
	Std. Dev.	6.86	6.50	10.02	8.90	4.23	13.56	9.62	8.31								
Core Autogynephilia ^c	Adj. Mean	13.32	25.52	26.97	16.54	5.85	7.79	16.74	8.93	8.32	.000	.112	.992	1.96	.121	.029	.501
	Std. Dev.	11.10	11.34	12.08	15.91	7.00	10.09	13.56	7.34								
Autogynephilic interpersonal	Adj. Mean	4.26	9.39	10.86	8.00	5.53	5.74	9.44	7.92	5.63	.001	.082	.942	1.56	.201	.024	.406
	Std. Dev.	4.23	5.78	4.59	6.25	3.78	4.96	5.49	3.68								
Fetishism ^c	Adj. Mean	4.64	7.12	7.22	1.77	2.92	5.58	10.24	3.87	11.90	.000	.157	1.000	1.99	.117	.030	.507
	Std. Dev.	5.12	6.66	6.12	3.66	3.83	5.12	7.08	4.75								
Masochism ^c	Adj. Mean	2.27	6.14	5.17	1.40	1.85	4.31	12.98	4.29	12.56	.000	.157	1.000	6.04	.001	.082	.957
	Std. Dev.	2.16	7.29	5.58	1.77	2.73	4.91	12.48	4.85								
Sexual Jealousy	Adj. Mean	5.21	6.03	5.98	5.99	6.18	6.98	5.12	6.58	1.59	.193	.023	.415	1.48	.221	.022	.388
	Std. Dev.	2.56	2.47	2.38	2.60	2.71	1.79	3.12	2.49								
Emotional Jealousy ^c	Adj. Mean	5.55	6.75	6.49	6.59	6.35	7.41	6.29	7.24	2.71	.047	.039	.652	0.80	.496	.012	.221
	Std. Dev.	2.21	1.39	1.84	1.77	3.14	1.03	2.29	1.45								
Preference for younger partners	Adj. Mean	31.48	41.54	31.52	28.29	24.36	22.73	22.04	23.75	1.45	.229	.021	.381	1.83	.143	.027	.471
	Std. Dev.	18.88	24.86	17.42	18.34	8.16	17.44	18.15	10.95								
Interest in uncommitted sex	Adj. Mean	14.82	20.62	27.78	19.36	12.20	23.31	31.05	22.20	8.10	.000	.109	.991	0.26	.856	.004	.098
	Std. Dev.	11.54	11.94	12.32	13.09	8.01	13.68	16.32	15.03								
Interest in visual sexual stimuli	Adj. Mean	28.84	43.34	41.98	40.53	30.95	39.32	47.09	37.65	8.18	.000	.111	.991	1.82	.144	.027	.469
	Std. Dev.	11.28	12.30	10.93	13.39	19.41	12.90	8.42	10.87								
Importance of partner's status	Adj. Mean	34.20	36.60	40.46	46.53	36.18	31.01	38.02	37.75	9.88	.000	.133	.998	2.70	.047	.040	.652
	Std. Dev.	6.58	8.09	9.14	9.02	11.20	8.15	6.41	9.35								
Importance of partner physic. attr.	Adj. Mean	27.46	30.15	28.05	30.00	25.71	23.99	27.19	29.26	1.36	.257	.021	.358	1.30	.277	.020	.343
	Std. Dev.	7.65	7.06	6.38	8.18	10.11	7.78	7.49	8.46								
Attraction to transgender fiction ^c	Adj. Mean	8.48	14.55	12.80	4.89	4.01	3.31	10.33	1.77	7.24	.000	.103	.982	1.99	.116	.031	.507
	Std. Dev.	9.38	14.40	14.28	7.44	4.95	3.48	11.86	3.50								

Note: ^a computed using $\alpha = .05$. ^b An ANOVA test; age is not used as the covariate because it is the dependent variable. ^c violates assumption of equality of error variances.

higher means; and adjusted means for asexual and androphilic participants formed a third homogenous subset with a higher means. The adjusted mean for gynephilic participants was significantly lower than the adjusted means for the asexual and androphilic subgroups, and the adjusted mean for bisexual participants was also significantly lower than the mean for androphilic participants.

Using Core Autogynephilia and Fetishism, post hoc Bonferroni tests showed that adjusted means for androphilic and asexual participants formed a homogenous subset; and adjusted means for bisexual and gynephilic participants formed a separate subset with higher means. The adjusted means for bisexual and gynephilic participants were significantly higher than the adjusted means for the androphilic and asexual participants.

Using Autogynephilic Interpersonal Fantasy, a post hoc Bonferroni test showed that the adjusted mean for asexual participants formed its own subset; the adjusted means for androphilic and gynephilic participants formed a homogenous subset with higher means; and the adjusted means for androphilic and bisexual participants formed a third homogenous subset with a higher mean. The adjusted mean for asexual participants was significantly lower than the adjusted means for the other three sexual orientation subgroups. The adjusted mean for gynephilic participants was significantly lower than the adjusted mean for bisexual participants.

Using Interest in Uncommitted Sex, and Interest in Visual Sexual Stimuli, post hoc Bonferroni tests showed that adjusted means for asexual participants formed homogenous subsets, and adjusted means for the other three sexual orientation subgroups formed second homogenous subsets with higher means. The adjusted means for asexual participants were significantly lower than the adjusted means for the other three sexual orientation subgroups.

Using Importance of Partner Status, a post hoc Bonferroni test showed that the adjusted means for asexual, gynephilic and bisexual participants formed a homogenous subset, and the adjusted means for androphilic and bisexual participants formed a second homogenous subset with higher means. The adjusted mean for gynephilic participants was significantly lower than the adjusted means for androphilic and bisexual participants. The adjusted mean for asexual participants was significantly lower than the adjusted mean for androphilic participants.

Using Attraction to Transgender Fiction, a post hoc Bonferroni test showed that adjusted means for asexual and androphilic participants formed a homogenous subset, and the adjusted means for gynephilic, asexual and bisexual participants formed a

second homogenous subset with higher means. The adjusted means for bisexual and gynephilic participants were significantly higher than the adjusted mean for androphilic participants.

Variables With Significant Main Effects as well as Interaction Effects

Significant main effects for sexual orientation as well as interaction effects between sexual orientation and gender identity were found on three of the scales: Attraction to Male Physique, Attraction to Feminine Males, and Masochism.

Using Attraction to Male Physique as the dependent variable, a post hoc Bonferroni test showed that, with alpha at .05, all four of the sexual orientation categories formed different subsets. The interaction effect for Attraction to Male Physique was arrived at because asexual TS participants ($M = 12.66$) scored significantly lower than asexual BF participants ($M = 20.18$), $t = -3.12$, $df = 18.79$, $p = .006$ (two-tailed, equal variances not assumed). The means for other three sexual orientation subgroups fell in similar patterns for TS and BF participants.

For attraction to feminine males, a post hoc Bonferroni test showed that, adjusted means for androphilic, gynephilic, and asexual participants formed a homogenous subset, and the adjusted mean for bisexual participants formed a separate subset. The adjusted mean for bisexual participants was significantly higher than the adjusted means of all the other three sexual orientation subgroups. The adjusted mean for gynephilic participants was also significantly higher than the adjusted mean for androphilic participants. The interaction effect for Attraction to Feminine Males was arrived at because gynephilic BF participants ($M = 3.40$) scored significantly lower than gynephilic TS participants ($M = 10.88$), $t = 4.74$, $df = 67.82$, $p < .0005$ (two-tailed, equal variances not assumed). The means for other three sexual orientation subgroups fell in similar patterns for TS and BF participants.

Finally, for Masochism, a post hoc Bonferroni test showed that adjusted means for androphilic and asexual participants formed a homogenous subset; adjusted means for androphilic and gynephilic participants formed a second homogenous subset with higher means; and the adjusted mean for bisexual participants formed a third homogenous subset with a higher mean. The adjusted mean for bisexual participants differed significantly from the means of all the other three sexual orientation subgroups. The interaction effect for Masochism was arrived at because bisexual BF participants ($M = 14.55$) scored significantly higher than bisexual TS participants ($M = 5.62$), $t =$

3.39, $df = 35.36$, $p = .002$ (two-tailed, equal variances not assumed). The means for other three sexual orientation subgroups fell in similar patterns for TS and BF participants.

Comparisons were also made between the sexual orientation categories on the measures that were only completed by TS. None of these reached a 5% level of significance.

In the next two sections, two of the scales that were designed by the author are looked at in more detail: the Attraction to Transgender Fiction scale, and Attitudes to Autogynephilia.

Attraction to Transgender Fiction

Research question eight asks which themes in transgender fiction are most sexually arousing among TS participants. Table 16 shows that for the TS participants, the most sexually arousing transgender fiction themes were magical gender transformations, deals, bets or dares, and body swap. For BF participants the most sexually arousing themes were female dominating a male, and body swap. It should be noted that the highest possible scores for each of the items was 4, but none of the means for the items was higher than 1.2; this is because a large number of participants reported that the themes were not at all sexually arousing, which scored 0.

On average, TS participants scored significantly higher than BF participants for all of the items except for high heels which did not differ between participant gender identities, and female dominating a male which had a significantly higher mean for BF participants.

Table 16 Means, standard deviations, and Mann-Whitney comparisons of Attraction to Transgender Fiction items.

Item	Mean TS	SD TS	Mean BF	SD BF	U	p
Punishment	.93	1.22	.32	.85	5736.0	.000
Body swap	1.12	1.29	.67	.98	6721.5	.007
Caught with consequences	.92	1.28	.31	.82	5812.5	.000
Deals, bets or dares	1.18	1.37	.41	.84	5520.0	.000
MTF cross-dressing	.91	1.22	.48	.94	6369.5	.001
Female dominating a male	.81	1.12	1.19	1.17	6422.5	.001
Magical transformation	1.20	1.38	.50	.96	5779.0	.000
Mind altered hypnosis brainwash	.82	1.19	.33	.81	6284.5	.000
Physically forced or blackmailed	.95	1.31	.26	.78	5531.0	.000
Hair or hair salon	.55	1.02	.20	.79	6498.0	.000
Female hormones	.96	1.31	.30	.82	5739.0	.000
High Heels	.53	1.10	.42	.93	7927.5	.499

Attitudes Towards Autogynephilia

Of the 107 TS participants who answered the question asking about how familiar participants were with the theory of autogynephilia, 38 (23.9%) reported no familiarity, 45 (28.3%) reported slight familiarity, 44 (27.7%) reported they were *fairly familiar*, and 31 (19.5%) reported they were *very familiar*.

Research question nine asks to what extent do TS participants believe that autogynephilia applies to themselves, and to other TS. Tables 17 and 18 describe the frequencies of TS participants' beliefs of the applicability of autogynephilia to themselves or others, broken down into sexual orientation categories. There do not appear to be any clear differences between the sexual orientations. The majority of participants (57.9%) did not think that autogynephilia applied to them. Tables 17 and 18 also show that participants tended to rate autogynephilia as more applicable to others than to themselves. Almost half of participants (49.5%) believed that autogynephilia applies to other people's experiences "a little bit".

Table 17 Frequency and percentage table of applicability of autogynephilia to own experiences.

Sexual Orientation		0 ^a	1 ^a	2 ^a	3 ^a	4 ^a	Total
Asexual	N	11	6	9	4	1	31
	%	35.5	19.4	29.0	12.9	3.2	100.0
Gynephilic	N	3	6	4	4	2	19
	%	15.8	31.6	21.1	21.1	10.5	100.0
Bisexual	N	7	13	3	4	4	31
	%	22.6	41.9	9.7	12.9	12.9	100.0
Androphilic	N	8	8	4	4	2	26
	%	30.8	30.8	15.4	15.4	7.7	100.0
Total	N	29	33	20	16	9	107
	%	27.1	30.8	18.7	15.0	8.4	100.0

Note: ^a 0 = definitely not at all, 1 = probably not at all, 2 = a little bit, 3 = quite a lot, 4 = completely.

Table 18 Frequency and percentage table of applicability of autogynephilia to others experiences.

Sexual Orientation		0 ^a	1 ^a	2 ^a	3 ^a	4 ^a	Total
Asexual	N	2	10	10	8	0	30
	%	6.7	33.3	33.3	26.7	0	100.0
Gynephilic	N	1	0	10	8	0	19
	%	5.3	0	56.6	42.1	0	100.0
Bisexual	N	2	5	16	8	1	32
	%	6.3	15.6	50.0	25.0	3.1	100.0
Androphilic	N	3	2	17	3	1	26
	%	11.5	7.7	65.4	11.5	3.8	100.0
Total	N	8	17	53	27	2	107
	%	7.5	15.9	49.5	25.2	1.9	100.0

Note: ^a 0 = definitely not at all, 1 = probably not at all, 2 = a little bit, 3 = quite a lot, 4 = completely.

Research question ten asks what attitudes TS have towards autogynephilia. TS participants were given a short explanation of the theory of autogynephilia, and invited to give any thoughts, comments or feelings they had about the theory. Of the 170 TS

participants who completed the entire questionnaire, 106 responded to this question.

The most common theme from the participant's responses was that the theory of autogynephilia is too narrow. Thirty-three responses included this theme. Examples of such a response follow:

I fall in both categories.

It holds up this idea that there are only two types of transsexuals, and that they have to fit in either category. Well first off, being a very active member in the Trans community, I can say this isn't so. There is such a huge spectrum of gender and/or sexual variants in the Trans community.

It is society trying to put TS people in a box. Some like me are a mix.

Far too simplistic a reduction of human sexuality. Denies the existence of feminine lesbian M2Fs, when I've met a few so know they exist.

I think that there may be some cases of transsexuals who are really gynephilic, or partly so, but I do not accept the theory as encompassing ALL transsexuals. I am androphilic in Blanchard's terms in that I am attracted to males, but autogynephilic in terms of having had (IN THE PAST) sexual arousal at the thought of forced feminisation, and most commonly the fantasies centred round being forcibly raised as a girl from a young age (5 or 6).

There are not two separate groups of MTF's, rather a broad spectrum between two poles.

I believe there are probably people who suffer from Autogynephilia but I do not believe it is as prevalent as Blanchard makes it appear to be.

I don't doubt there may be MTF autogynephilics, or that Anne Lawrence is one since she says she is, but I resent people trying to generalise their own personal predilections, fantasies, or misogynistic theories onto every other MTF.

Well to begin with, i think trying to fit us into groups is total bullshit...sure, many of us exhibit shared commonalities, but we are all individuals, coming from a wide spectrum of variables...childhood years, family relationships.

The next most common theme was that the theory of autogynephilia is simply wrong. Nineteen responses included this theme, for instance:

Pseudoscientific rubbish.

Autogynephilia is a load of crap. Blanchard's theories are junk

Transitioning is a horribly painful thing. I've lost friends, good friends, family, have been thrown on the street by my family. Why would someone go through that for a sexual thrill?

Practically, I wonder how much brainwashing Blanchard's subjects underwent, because none of the transsexuals I have known recognize their experience in his theory.

All of (Blanchard's) deductions are flawed due to the lack of any actual scientific research.

Tries to pass off all versions of transsexuality as some sort of paraphilia rather than an expression of one's inner self.

Fifteen participants responses indicated that the theory of autogynephilia did not apply to them, for instance:

It doesn't apply to me.

It never really sexually aroused me to be (a woman) (neither were men the aspect to transition).

My reasons for being an MTF are as far from that as one could imagine, and so too for those I trust and respect most.

Discarded the thought - it has no relevance for me!

I am not sure I agree with this theory. I never really thought of myself being sexually aroused by the two areas he suggests.

I also feel that this classification ignores me: I never had a history of dressing as female before my transition

Fifteen participants responses showed acceptance for the theory, for instance:

When I first read it I recognised quite a lot of my own situation in it.

It's perfectly sound and probably affects many male to female transsexuals.

I only admitted to myself I am transsexual at the age of 45 after a life of marriage and children, I was not feminine in appearance or action. So it seems to fit my case well.

Nine participants responses indicated that the theory was not of any importance to them, for instance:

It is not important to me.

Really do not have a thought on it or understand it.

Far too much theorising but that's what academics do! :)

Seven participants responded that they used to be autogynephilic, for instance:

Since I have started on the hormones all thoughts and feelings have gone. I am what I should have been and now I don't have to fantasise about it.

I would have to confess to some AGP aspects in my past.

Personally, I have always felt sexually aroused as a child when dressed as a girl (secretly), and felt a very strong attraction to guys when dressed... And how this applies to me: I have always had the fantasy of being a woman, which I found very sexually attractive. But looking back on it, actually being a woman and having vaginal intercourse with my husband is far more sexually stimulating to me than any of my childhood fantasies ever were.

Seven participants reported that they used to have autogynephilic sexual feelings, but they no longer had these. For instance:

I used to be aroused, probably 40 years ago.

Since I have started on the hormones all thoughts and feelings have gone. I am what I should have been and now I don't have to fantasise about it.

Whilst the thought of being female may be sexually arousing in earlier life, does not mean it will stay that way as we progress through life.

Six participants responses indicated the belief that autogynephilia was something that applied to transvestites or cross-dressers, but not to TS, for instance:

I believe that people that identify as cross-dressers are more in the group of autogynephilia I am not a cross-dresser I am TS.

I believe that as society to some extent has becoming more accepting of TS people is has become a lot easier for transvestite's to take their hobby, sexual fantasies a little too far.

I think it relates more to the experience of some fetish cross-dressers.

Five participants questioned the motives of the theory of autogynephilia, for instance:

What purpose does such a definition/explanation serve other than to encourage "elitist divisionism" within the transgender community and to give the "old testament fundamentalist faux Christian bigots" a hook on which to hang their own transphobic "sexual perversion" theories?

Sounds to be an unsupported method used by conservatives to make transsexuals look like sexual deviants.

Five participants reported changes in their sexual orientation, for instance:

I felt no sexual attraction towards men at all until after I had started HRT & living as a social female, and could allow my true feelings/emotions/ mannerisms/sexuality to emerge

My sexuality is changing as I transition. Some of the questions were unclear as to whether to answer them as I feel today or if I have ever felt that way. (Like the ones about stories of males changing, in some way, to females) Earlier in my life, stories like these were erotically charged. Today, after fully transitioning, they hold no interest for me.

Five participants did some theorising of their own in their response, for instance:

I feel that the “autogynephilic qualifiers”... are possibly (certainly in my case at least) a misinterpretation/ misrepresentation of not being able to feel sexually aroused, or not being comfortable with one's true (feminine?) sexuality while having a male body and/or presenting as a male ... one tends to suppress one's true sexuality and it is necessary to either imagine oneself as a female or to feminise one's physical appearance & make-up in order to “allow” one's natural mannerisms and sexuality to emerge.

I am androphilic in Blanchard's terms in that I am attracted to males, but autogynophilic in terms of having had (IN THE PAST) sexual arousal at the thought of forced feminisation, and most commonly the fantasies centred round being forcibly raised as a girl from a young age (5 or 6). Through self-analysis I realised two things about these fantasies. (a) That by being forced I could blame someone else for doing to me what I really desired, i.e. transition, and (b) that fantasising myself being forcibly feminised from a very young age I was really compensating for the fact that I dearly wished I had been raised as a girl. These fantasies ceased once I accepted my transsexuality and starting the process of transition. The only fantasies that remain are those common to genetic females, which I have also had since puberty.

It is the expression of the type of transgender person who is deep-seatedly unsatisfied with the persona and gender they grew up portraying, but cannot let go of the idea that they have roots in that persona and gender. Therefore they remain conflicted, even if or when they commence transition from their birth sex, due to these unresolved issues. In some cases it might even be concluded that the individual who is autogynephilic is not actually transgender, which is why transition for them may not yield a happier person, but in fact, an even unhappier person.

Comments

Some of the comments made by participants are also worth reporting because some had implications for this research, and some had implications for persons undertaking similar research in the future. Of the 335 participants completing the survey, 161 made a comment in the space that was provided.

A lot of the comments that were provided fitted into themes of general pleasantries: well done/good survey ($n = 25$), hope the input helped/happy to help ($n = 8$), and appreciate the opportunity ($n = 4$). Other themes included the belief that this was

a valuable research area ($n = 9$), enjoyment from filling out the survey ($n = 8$), that the survey helped participants with their own lives ($n = 6$), and the survey was interesting ($n = 14$).

Not all of the feedback was positive though, seven participants commented that the survey was very long, and nine participants reported having difficulties with answering the questions, for instance:

Some of the questions are hard to understand.

It made me think pretty hard on some questions before I could answer properly.

The section about attraction to inanimate objects was somewhat unclear, and I wasn't really sure how to answer it.

Four participants believed the questions did not seem to relate enough to participants attracted to women, for instance: *"Without knowing the true aim of the research, there seems to be a shortage of questions relating to transsexuals that are attracted to females, (either TS or genetic)"*.

Ten participants commented that the survey questions were too restrictive, for instance:

Some questions were left unanswered because I didn't feel comfortable picking an answer without explaining why I would choose that particular answer.

I think there should have been options to be able to answer "not applicable" or "don't know" for a number of the questions.

Survey doesn't cover interior inconsistencies e.g. I am a biological female - but my most erotic fantasies involve two men having sex - in effect I become a male and have a male partner.

Twelve participants reported feeling like the questions did not apply to them. Ten of these were from BF participants who felt the questions (mostly from the autogynephilia scales) were not applicable to them. For instance:

A lot of the questions were not applicable to me - eg have you ever become sexually aroused when imagining yourself with an attractive female body? There is no option for women who are happy and have an attractive female body to say n/a.

A couple of the questions were hard to follow as they seemed more directed at a male to female transsexual than at the average biological female.... I think it was the ones about imagining yourself as a woman in certain clothing.

Some of the questions about do I fantasize about seeing myself as a female don't make sense since I am female.

I'm getting confused whether I should answer some of the questions. I am a female so I got confused at some of the questions, as they seemed more directed at transsexuals.

Of importance to future researchers considering using the same or similar questionnaire measures is that three participants reported that they took offence to some of the questions:

If you were to ask a genetic female these questions I'm sure most would find them offensive as I have.

Found some questions such as I regard my femme name as my real name rather offensive. It is my real name in law and has been for many years and it is on my birth certificate.

I'm left with the nagging feeling that I should be insulted by this line of questioning.²

Finally, five participants gave suggestions for the research. These included:

I would mix the questions a little bit, so that it's not too easy to see through the pattern.

There should also have been a set of questions to evaluate the respondents level of sex drive and ability to orgasm... I think it important to know what hormones are being taken since pre-ops taking anti-androgens might not be experiencing sexual arousal at all. I lost that ability long before I had my SRS and have only a very low sex drive post-SRS.

² Fortunately this participant left an email address, so the researcher was able to contact her and apologise for any offence, describe in more detail the aims of the research, and why the questionnaire items were used.

8. DISCUSSION

Discussion of Results

As was hypothesized, those TS who do not experience autogynephilic arousal scored comparably to BFs on the variables measured in this study, with the exception of Masochism, in which TS scored significantly lower than BF, and Preference for Younger Partner's which TS participants scored significantly higher. Those TS who reported experiencing autogynephilic arousal scored significantly higher on Attraction to Feminine in Males, Core Autogynephilia, Autogynephilic Interpersonal Fantasy, Fetishism, Importance of Partner Physical Attractiveness, and Attraction to Transgender Fiction. Contrary to hypothesis, and those TS who reported experiencing autogynephilic arousal did not score differently on of Attraction to Male Physique, Recalled Feminine Gender Identity, Interest in Uncommitted Sex, and Importance of Partner's Status. The results are discussed in more detail by examining the findings of the ten research questions below.

1. What are the psychometric properties of the scales designed by the author?

In general, good psychometric properties were found for the three scales that were designed by the author. The scales had internal consistency coefficients ranging from .83 to .96. Factorial validity was established for the Attraction to Feminine Males and Attraction to Transgender Fiction scales. For the Attraction to Male Physique scale, one factor accounted for the first five items, which measured attraction to aspects of the male physique. The sixth item, which measured interest in having a long term committed relationship with a male loaded on its own factor. Although this sixth item differed from the others, it was included because the scale still had sufficient internal consistency ($\alpha = .83$). Also, it would be advantageous to keep the final item to test Blanchard's (1989b) hypothesis that bisexual TS would not be interested in male physique *or* having a long term committed relationship with a male.

2. What is the factor structure of the variables used in the study?

The factor analysis was not performed to validate scales or to form scales to use in subsequent analyses; rather it was conducted to clarify the nature of the variables used

in this research. Given the reasonably clear factors that emerged, this factor analysis assists in developing theory in this area. Four factors emerged from the exploratory factor analysis using the scale totals.

The first factor was labelled Nonconforming Arousability. This factor included the variables Masochism, Bisexuality, Fetishism, Attraction to Feminine Males, Attraction to Transgender Fiction, Interest in Uncommitted Sex, Interest in Visual Sexual Stimuli, Core Autogynephilia, and Autogynephilic Interpersonal Fantasy loading positively, and Androphilia loading negatively. Scales loading under Nonconforming Arousability included a large variety of sexual stimuli, which do not conform to social norms for females to be sexually aroused by. It is clear from the factor analysis that a number of both TS and BF participants were likely to report sexual arousal to all of these variables. Although sexual arousability has long been studied in humans (Hoon, Hoon, & Wincze, 1976), previous research has tended to focus on commonly perceived sources of sexual arousal: activity with a partner, or pornography. To the best of the author's knowledge, arousability among the variables used in this study has not previously been reported. For the purposes of this research, Nonconforming Arousability has been defined as: *the tendency of participants to rate themselves as sexually aroused by a diverse range of nonconforming sexual stimuli.*

There are two possible explanations for the emergence of Nonconforming Arousability factor. The first possibility is that this factor measured attitudes towards sexuality: participants who scored highly on these variables had more liberal views towards sexuality, and were thus more likely to report that they are sexually aroused to a variety of stimuli. Those with more conservative views towards sexuality would not be likely to report these diverse stimuli as sexually arousing. Another possibility is that BF and TS participants, who are not exclusively sexually attracted to males, tend to be more sexually aroused to these diverse stimuli.

This factor helped to answer the question of whether autogynephilia is something only experienced in TS. Certainly a large number of BF respondents scored greater than 0 on the scales measuring autogynephilia. The factor analysis leads us to believe that these scores may be the result of Nonconforming Arousability in these BF (and some TS) participants, as opposed autogynephilic experiences in the way that Blanchard conceptualised them.

The second factor is a lot more self-explanatory. The Conforming Sexuality factor measured areas that are traditionally considered normative for females to report.

This factor included Androphilia, Attraction to Male Physique, Importance of Partner Status, and Recalled Gender Identity, loading positively, and Gynephilia loading negatively. This factor only accounted for 13.56% of the questionnaire scale variance, whereas Nonconforming Arousability accounted for 22.36%. This is probably because scales measuring areas of sexual arousal that are nonconforming were more abundant than scales measuring areas that are considered normative in the questionnaire.

The third factor appeared to measure autogynephilia: it loaded towards TS participants, and the scales measuring autogynephilia loaded most strongly on this factor. Importance of Partners Physical Attractiveness, Attraction to Transgender Fiction, Interest in Visual Sexual Stimuli, Preference for Younger Partners, and Attraction to Feminine Males also loaded greater than .3 on this factor. This finding supports the speculation in Chapter 2 that autogynephilia is related to attraction to transgender fiction, and in Chapter 4 that autogynephilia is related to attraction to femininity in males. This also supports the hypothesis that autogynephilic participants would respond in the more typical “male” direction on the measures evolutionary aspects of sexuality.

The fourth factor appeared to measure variables relevant to age. Age itself loaded most strongly on this factor, followed by number of biological children, Preference for Younger Partners, and asexuality. Although number of children and less sexual desire intuitively go along with age, Preference for Younger Partners does not. This positive relationship between age and Preference for Younger Partners appears to only occur in TS participants (see correlational analysis). No previous studies have examined the relationship between Preference for Younger Partners and age. Because, according to evolutionary theory males are most likely to be attracted to persons in the age range of 18 to 30, regardless of their age then it could be expected that a similar positive correlation between age and Preference for Younger Partners would occur among non-TS males. However data measuring the relationship between Preference for Younger Partners and age in males is needed before valid conclusions can be made here.

3. What are the relationships between the variables used in this study, and do the relationships between the variables differ in BF and TS participants?

Among TS participants, scales measuring autogynephilia were positively correlated with bisexuality, and not correlated with androphilia; in line with Blanchard’s

research (Blanchard, 1989b). However, going against Blanchard's hypotheses, scales measuring autogynephilia were negatively correlated with asexuality, and not correlated with gynephilia. Attraction to Male Physique was weakly positively correlated with Bisexuality in TS participants; this is also counter to Blanchard's (1989b) hypothesis that the sexual attraction to males in bisexual TS persons was only to include them as props in the fantasy of being regarded as a woman, as opposed to sexual interest in the male body.

Among TS participants, Recalled Gender Identity positively correlated with sexual attraction to males, and negatively correlated with sexual attraction to females. This is in line with Blanchard's, and other's findings (Blanchard, 1989b, 1994; Blanchard & Clemmensen, 1988; Doorn et al., 1994; Freund et al., 1982; Smith, 2002). It should also be noted that this relationship was seen more strongly among BF participants, so this is by no means a phenomenon that is not distinct to TS. Also, the Recalled Gender Identity scale did not correlate with Bisexuality, Asexuality, or either of the autogynephilia measures as would be expected from Blanchard's theory.

Among TS participants, Core Autogynephilia and Autogynephilic Interpersonal Fantasy were positively correlated with Fetishism, Masochism, Interest in Visual Sexual Stimuli, Interest in Uncommitted Sex, Importance of Partner's Physical Attractiveness, Attraction to Transgender Fiction, and applicability of autogynephilia to self and others. Previous research has found positive relationships between masochism, fetishism, and autogynephilia (Blanchard, 1992; Freund et al., 1982); however the relationship between autogynephilia and the remainder of these variables has not been previously researched. The relationship between the autogynephilia scales and applicability of autogynephilia to own experiences gives support for the criterion-related validity of the two scales.

It seems logical that participants who rated autogynephilia as applicable to themselves, would also tend to rate it as applicable to others, hence the relationship between the autogynephilia scales and applicability of autogynephilia to others experiences. The relationship between autogynephilia and Attraction to Transgender Fiction was expected given the overlap between transvestism and autogynephilia reported previously (Blanchard, 1993c). The relationship between the autogynephilia scales and the evolutionarily relevant variables among TS participants meant that participants reporting autogynephilia also reported more "male-typical" partner preferences according to evolutionary theory (Bailey et al., 1994). It should also be

noted that weaker positive correlations between Core Autogynephilia, Fetishism and Masochism were also found among BF participants. Assuming that BF participants do not actually experience autogynephilia, then the relationships between autogynephilia and fetishism and masochism in TS participants must be interpreted with caution.

Importance of Partner Status positively correlated with sexual attraction to males for all participants, although more strongly for TS participants. This is in line with Bailey et al.'s (1994) finding that partner status is more highly valued by females seeking male partners than those seeking female partners.

4. Do TS and BF participant means differ significantly on any of the variables?

TS participants scored significantly higher on Recalled Feminine Gender Identity and Preference for Younger Partners, and significantly lower on Masochism and Emotional Jealousy. It was unexpected that TS participants scored on average higher on childhood feminine gender identity, because TS persons would be given less opportunity to express their femininity, and would be discouraged from doing so in their childhood. One possible explanation for this finding is that a large number of non-androphilic BF participants were included in this research; such persons have been shown to recall less femininity in childhood (Zucker et al., in press).

TS who were attracted to females tended to prefer them to be younger, whereas this was not the case for BFs attracted to females; this could account for the greater Preference for Younger Partners in TS participants. The reason for this phenomenon is unclear; it is possible that BFs who are attracted to females are attracted to more masculine cues in their partners and are more likely to be attracted to older partners, whereas TSs who are attracted to females are attracted to more feminine cues and are more likely to be attracted to younger partners.

The finding that BFs scored significantly higher on Masochism was unexpected given previous reports of the prevalence of masochism among TS (see Chapter 4). BF and TS participants did not differ on levels of Interest in Visual Sexual Stimuli. This is in spite of Money and Primrose's claim that MTF-TS are more responsive to visual erotic stimuli, similar to other biological males. BF participants scored on average significantly higher on Emotional Jealousy. Although it is not clear why BF participants would report greater emotional jealousy on average, it is possible that BF participants could have more experience with relationships that are highly emotional.

5. Do autogynephilic TS participants means differ significantly from non-autogynephilic TS and BF participants?

The differences in means of the two participant groupings (TS and BF) became explained further when the TS participants were broken up into those who identified as autogynephilic and those who did not.

Differences were found between the autogynephilic TS, and the other two groups on the variables measuring Attraction to Feminine Males, Core Autogynephilia, and Attraction to Transgender Fiction. Autogynephilic TS scored significantly greater on these variables than non-autogynephilic TS and BFs, which did not differ significantly from each other. This provides validity to the finding of a factor measuring autogynephilia, which had similar items loading onto it. Autogynephilic-identifying TS participants also scored significantly higher on Fetishism, Autogynephilic Interpersonal Fantasy, Importance of Partner Physical Attractiveness, and Interest in Visual Sexual Stimuli than TS participants that did not identify as autogynephilic.

Once again sexual orientation did not appear to have much effect on whether TS participants identified as autogynephilic. Autogynephilic-identifying TS participants tended to report greater amounts of androphilia and lower amounts of asexuality than was expected considering Blanchard's (1989b) findings. One possible explanation for this finding is more liberal attitudes towards homosexuality and bisexuality prevailing in today's culture.

6. What are the main effects of sexual orientation on the variables? What are the interaction effects of sexual orientation and gender identity?

Classifying the participants into sexual orientation subgroups and comparing mean differences gave results that verified those discussed above.

Wyndzen (2003) indicates that non-androphilic TS in Blanchard's sample may be more likely to report autogynephilia because they were older and thus had a wider range of experiences. In this study, age was used as a covariate to control for age differences in sexual orientation categories; so this could not be a contributing factor to findings of differences between sexuality groups.

Attraction to femininity in males appeared to be common in bisexual and gynephilic TS participants, and bisexual, but not gynephilic BF participants. This could

be due to gynephilic TS participants having less regard for gender boundaries. In line with previous research Recalled Gender Identity was higher among participants reporting sexual attraction to males (Blanchard, 1989b; Zucker et al., in press). Scales measuring autogynephilia and Attraction to Transgender Fiction appeared to be most commonly reported by gynephilic and bisexual TS participants.

7. Are there differences between those participants who completed, and did not complete the entire survey?

The questionnaire of up to 162-items was completed by 72.73% of participants who began it on the Internet. This is higher than the 57% completion rate found by Ross, Daneback, Månsson, Tikkanen, and Cooper (2003), using an 175-item sexuality questionnaire.

Participants who completed the questionnaire did not differ on gender identity, age, occupation classification, level of education, marital status, number of biological children, or sexual orientation. This result is similar to findings by Ross et al. (2003). Asian participants were less likely to complete the questionnaire than was expected. This could be possibly due to cultural or language barriers for these participants.

8. Which themes in transgender fiction are most sexually arousing among TS participants?

In Chapter 2, the question of whether TS were aroused by transgender fiction was proposed. From the results, TS participants, especially those acknowledging a history of autogynephilia, reported a significantly greater amount of sexual attraction to transgender themes than BFs.

To take this further, by analysing the different transgender fiction themes it was hoped that some conclusion could be made about which themes are rated more sexually arousing by TS. It would then be assumed that the remaining themes exist for transvestite persons (although research using a group of transvestite participants would be required for definitive findings). This could have implications for potential TS persons questioning whether their sexual fantasies are more common with other TS or transvestites. Results showed that TS participants most commonly endorsed themes of magical transformation into a female, having to be transformed into a female as part of a deal, bet or dare, and gender body swaps. TS participants least commonly endorsed themes of wearing high heels or having their hair done. However, all of the themes

appeared to be endorsed by some TS, and no clear pattern of themes appeared among them. It is concluded that sexual attraction to these themes is varied among TS, and sexual fantasy to certain transgender fiction themes does not appear to be predictive of transsexuality or transvestism. This finding supports Docter's (1988) belief that these themes are of little use in distinguishing individual's motives.

9. To what extent do TS participants believe that autogynephilia applies to them, and what are their opinions about it?

The majority of participants did not think that the theory of autogynephilia applied to them, although 42.1% believed it did at least "a little bit". Gynephilic TS were the most likely subgroup to report applicability of autogynephilia to own experiences, although it was reported in participants in all of the sexuality subgroups. This finding challenges Blanchard's (1989b) hypothesis that androphilic TS are not autogynephilic. It is possible however that some TS who were categorised as androphilic were not "truly" androphilic in Blanchard's terms. For instance, change of sexual orientation from gynephilic before transition to androphilic after transition has been noted by a number of authors (Daskalos, 1998; Freund, 1985; Tully, 1992). Such participants would have probably been classed as androphilic in this study, but would be classed as non-androphilic using Blanchard's conceptualisation.

A large number of TS participants reported discontent with Blanchard's theory, although some still believed that it applied to them. The most common comment made about autogynephilia was that the theory is too narrow. A lot of participants did not believe that MTF transsexualism could be completely explained using two groupings, and many did not feel that they fitted clearly into either of Blanchard's two groupings. This finding has implications for re-examining Blanchard's theory, this done in the next section which highlights the implications of the present research findings.

Implications of Findings

Implications of these results on theory of MTF-TS typology and etiology, and for the treatment of TS persons by clinicians are examined in this section.

Theoretical Implications

The findings of this research have implications for Blanchard's theory of autogynephilia. This research found that autogynephilia does appear to exist among a

number of TS, however it did not exist in a pattern that was as simple as Blanchard proposed. Autogynephilia was reported by TS from across the spectrum of sexual orientation, although more so in those categorised as gynephilic and bisexual. Although the finding of autogynephilia in androphilic TS is counter to Blanchard's theory, a number of previous research studies have also shown a significant percentage of androphilic TS reporting a history of sexual arousal to cross-dressing: from 10% (Blanchard et al., 1987), 15% (Blanchard, 1985b), 23% (Bentler, 1976), to 31% (Freund et al., 1982). Using the Core Autogynephilia Scale, Blanchard (1989b) found that androphilic TS scored on average 2.2 out of a possible 8. Also, Contrary to Blanchard's theory, recalled gender identity was not related to autogynephilic arousal, although it was related to sexual orientation. TS participants identifying that the theory of autogynephilia applied to them scored higher on measures of Attraction to Transgender Fiction, Attraction to Feminine Males, and Importance of Partner Physical Attractiveness. Subject to further research verifications, these variables could be added to the phenomena that occur with autogynephilic arousal.

It should be noted that the research findings do not permit the conclusion that there are not differences between transsexuals of different sexual orientations. It has long been noted that that androphilic TS present differently from non-androphilic TS; they have been seen as presenting as more "effeminately" (Buhrich & McConaghy, 1977c; Person & Ovesey, 1974a), a phenomenon most commonly associated with homosexual males. This effeminacy may occur in androphilic TS because these persons usually go through a phase of identifying as a homosexual male (Parkinson, 2004). Alternatively the effeminacy may be something that is inbuilt into the condition of androphilic transsexualism. More research is required to find answers this question.

Blanchard (1985a) reports that the group that he would later label *autogynephilic* may report themselves as more feminine, and may underreport the extent of their cross-gender sexual arousal. It is beyond the scope of this research to assess whether participants were distorting their answers. From clinical and research observations, previous researchers have claimed that non-androphilic TS may consciously or unconsciously distort their responses to appear less autogynephilic (Bailey, 2003; Blanchard et al., 1985). Participants would be less likely to consciously distort their responses in this study because their answers have no implications for whether they will receive treatment in a clinical setting. Also because participant's

responses were anonymous, no participants would feel pressure to report in a way differently to what they feel, because no implications would result from this.

As well as Blanchard's use of clinical populations, there are a number of other reasons why these research findings could differ from Blanchard's. Blanchard's research was conducted 11 to 20 years before this research. Presently, more liberal views of sexuality prevail than when Blanchard was writing. The result of this should be a tendency of participants to report a greater amount sexual attraction to the diverse sexuality variables measured in this research. Also, Blanchard's research took place in Canada. There may be societal and cultural differences between Blanchard's Canadian samples and the largely New Zealand sample used in this research. Finally, in this research, alterations were made to Blanchard's Core Autogynephilia scale. This is discussed further in the limitations section of this discussion.

A final point of note is that a number of participants expressed concern about the theory of autogynephilia being used by groups unsympathetic to TS to consider transsexualism as a sexual perversion that persons should not be treated for. It appears that sexual attraction to oneself as a woman (autogynephilia) does occur among some transsexuals, and like all sexual attraction it does not appear to be something that people have any control over. Also, unlike some sexual attractions, behaviour motivated by autogynephilia does not directly harm others. Therefore, as with other diverse sexual attractions like homosexuality, and sadism and masochism that do not harm others, autogynephilia should not be viewed as an unhealthy phenomenon.

The Identity-Defense Theory of Cross-Gender Development

Using these research findings, an alternative to the theories of etiology proposed by Freund and Blanchard (1993), and Docter (1988) is outlined below (see Chapter 4 for a description of previous theories of etiology). Instead of seeing primary and secondary transsexualism as two discrete entities, the proposed theory sees it, as well as autogynephilia occurring on a continuum. This alternative is proposed because of the large number of participants in this research commenting that Blanchard's view was too narrow.

This alternative theory is called the *Identity-Defense Theory of Cross-Gender Development*. This title is used because the theory proposes that two factors influence cross-gender outcome: the degree of cross-gender identity developed, and whether defense mechanisms are used to suppress this cross-gender identity. A number of

predisposing factors determine whether a cross-gender identity develops, and whether defense mechanisms are used. The model is illustrated in Figure 7 below, and the six components of the model are discussed in the following sections.

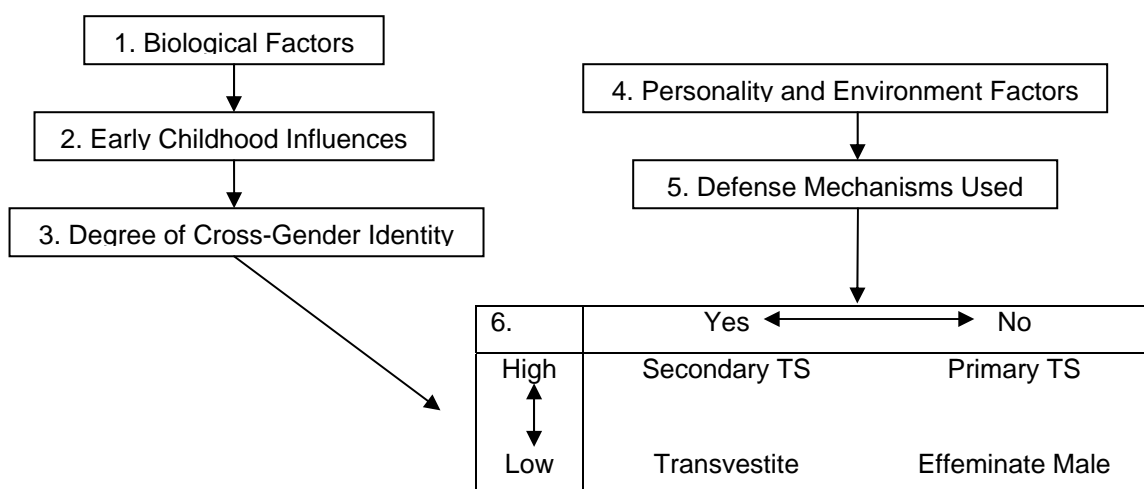


Figure 7 Model of the identity-defense theory of cross-gender development, showing factors influencing cross-gender outcomes in biological males.

1. Biological Factors. These include genetics and hormonal influences during fetal development. These factors are outlined in more detail in Chapter 4 using studies of TS. In addition, a link between genes and childhood gender non-conformity has been shown on retrospective and non-retrospective studies using twins (Bailey, Dunne, & Martin, 2000; Bailey & Pillard, 1991; Bem, 2000; Coolidge, Thede, & Young, 2002) and gay male brothers (Hamer, Hu, Magnuson, & Hu, 1993).

2. Early Childhood Influences. Non-right-handedness, a later birth order, and a greater number of male than female siblings have all been shown to correlate with the development of a cross gender identity; these are also outlined in more detail in Chapter 4. It is possible that these factors have a role in the development of a cross-gender identity as biological or environmental influences. Other influences on the young child could include a less warm, more emotionally distant, controlling or rejecting father (also see Chapter 4). Sexual abuse in childhood have also been shown to have a long-term effect on the development of a male gender identity (A. Green, 1994; Ray, 2001; Rosen & Martin, 1998).

3. Degree of Cross-Gender Identity. These biological and environmental influences determine the degree of cross-gender identity that is formed in the young child. If a high degree of cross-gender identity is formed then transsexualism is the likely outcome in

adulthood. If a lower degree of cross-gender identity is formed then less extreme cross-gender outcomes of transvestism and effeminacy are the outcome. More commonly, if a cross-gender identity is not formed then the child will develop into a male without any concern for gender identity. This cross-gender identity development will usually take place very early in the child's life, between 18 and 30 months when gender identity is believed to be formed (Campbell, Shirley, & Caygill, 2002). It is possible, however, that environmental influences such as childhood trauma occurring after 30 months may also have an impact on cross-gender identity development (A. Green, 1994).

4. *Personality and Environment Factors.* These are factors that influence whether a young child is likely to employ defense mechanisms, most likely repression, to protect them from the guilt or anxiety they would feel about their cross-gender identity. One influence would be the environment the child is in. If early expressions of gender non-conforming behaviour are met with scorn and punishment, and if perceptions of cross-gender behaviour are that it is strictly wrong then the young child's cross-gender identity can become ego-dystonic, and defense mechanisms are employed to repress these feelings (Seil, 1996). If these behaviours are not always met with scorn and punishment, and if they are not perceived as strictly wrong, then the young child's cross-gender identity becomes ego-syntonic. This means that they do not form defense mechanisms to repress or make it easier for them to avoid their cross-gender identity (Seil, 1996).

Personality factors may also play a part as to whether defense mechanisms are used to repress cross-gender identity. An extroverted person would be more likely to openly express their impulses, and less likely to repress them. On the other hand, an introvert would be more concerned with their own feelings and thoughts, and more likely to use defense mechanisms to repress these. Some previous studies have reported a greater degree of introversion among transvestites. Using a personality questionnaire, Bentler and Prince (1969) found that transvestites tended to be more inhibited in social interactions and emotional expression. Morgenstern, Pearce, and Reese (1965) found a group of 19 transvestites to have high levels of introversion. This was also found by Gosselin and Wilson (1980) on a group of 269 members of a transvestite club using the Eysenck Personality Questionnaire. Steiner, Sanders and Langevin (1985, as cited in Docter, 1988) compared 18 gynephilic transvestites with 31 androphilic TS, and showed that the transvestites reported greater levels of introversion than the TS. However,

Docter (1988) notes that the transvestites used in Langevin's sample were all seen in clinical setting, so they may differ from the general transvestite population. Docter (1988) also reports that 66% of his transvestite sample described themselves as sexually shy during adolescence, however a control group is required to draw any conclusions from this finding. No studies have yet assessed personality characteristics of autogynephilic TS.

Another personality characteristic that may influence whether a child is likely to use defense mechanisms is agreeableness. Agreeableness is characterised by a docile compliance. Persons developing a cross-gender identity, as well as an agreeable personality would be more likely to resort to defense mechanisms to suppress the cross-gender identity and comply with gendered expectations. This possibility is merely speculation however. To the best of the author's knowledge agreeableness has never been measured among cross-gendered persons.

5. Defense Mechanisms Used. These personality and environment factors determine whether defense mechanisms are used to suppress the cross-gender identity. Previous authors have noted the use of defense mechanisms to suppress a cross-gender identity (Lawrence, 2000; Seil, 1996). This outcome is believed to be more discrete than the degree of cross-gender identity: defense mechanisms are either used or they are not. However, room for variation between the extremes is allowed for in the model. It is believed that if defense mechanisms are employed then these would start to be used soon after a cross-gender identity proposed to be developed in this model, at around 3 years of age.

6. Cross-Gender Identity Outcomes. The sixth part of the model is a two-dimensional matrix of possible cross-gender identity outcomes. If defense mechanisms are used then transvestism or secondary transsexualism are the outcomes, depending on the level of cross-gender identity. If defense mechanisms are not used then primary transsexualism or effeminacy are the outcomes, depending on the level of cross-gender identity.

Sexuality is strongly correlated with these outcomes. Those participants not employing defense mechanisms (primary TS and effeminate males) are more likely to develop a sexual attraction towards males. Those participants employing defense mechanisms (secondary TS and transvestites) are more likely to develop a sexual attraction towards females, and to themselves as a female. Although sexuality is

correlated with these outcomes it was not included as a variable in the model to allow for those whose sexuality does not fit in with the majority (a number of these people were uncovered in the findings of this research). However, this correlation between sexual orientation and cross-gender identity outcome can still be accounted for by using Bem's (1996) *Exotic Becomes Erotic* developmental theory of sexual orientation. This theory suggests that instead of coding for sexual orientation, biological variables code for childhood temperaments, which determine whether a child will favour the activities and company of peers of the same or opposite sex. This results in children feeling different from children of the sex they do not associate with, and perceiving them as exotic. This in turn generates autonomic arousal to the unfamiliar/exotic peers, which later results in erotic arousal to persons of that sex. See Nicolosi and Byrd (2002), and Peplau, Garnets, Spalding, Conley, and Veniegas (1998) for critiques of Exotic Becomes Erotic theory, and Bem (1998; 2000) for articles building on his theory. Returning to the Identity-Defense model, those biological males who do not use defense mechanisms to suppress their cross-gender identity would be more feminine in their childhood and thus more likely to prefer female activities and to associate with females. Because of this, these biological males are more likely to view males as exotic, and later develop a sexual orientation towards them. In contrast, those biological males who develop defense mechanisms are more likely to conform to expectations to participate in boy's activities, and associate with other boys. Depending on whether these boys also desire to participate in female activities and associate with females as well, a gynephilic or bisexual sexual orientation will be the result. A weak relationship between sexual orientation and recalled childhood feminine gender identity was found in this research, and such a relationship has also been found previously in studies using MTF (Blanchard, 1988, 1989b; Johnson & Hunt, 1990; Smith, 2002) and FTM-TS (Chivers & Bailey, 2000).

Another sexual attraction that is correlated with the cross-gender identity outcomes of the Identity-Defense model is sexual attraction to oneself as a woman. According to the proposed model, this attraction is most commonly found among those who employ defense mechanisms to suppress their gender identity in childhood: transvestites and secondary TS. Two theories could be drawn on to account for this phenomenon. Firstly, psychoanalytic theory proposes that fetishism develops as the result of using defense mechanisms to guard the ego against guilt and anxiety at early stages of development (Seil, 1996). According to Seil (1996), the repressed cross-

gender identity usually reappears at puberty under the guise of erotic arousal. Bem's (1996) Exotic Becomes Erotic theory can also be applied again to give more detail about the possible development of this sexual attraction. Using retrospective reports from transvestites, Docter (1988) notes the strict boundaries given to these young males in terms of gender-appropriate behaviour and clothing; barriers are placed in the way of using women's clothing and participating in female-typical activities. This results in an exotic perception of the forbidden, which, using Bem's (1996) theory can result in an erotic component. Docter (1988) notes that it is common for transvestites to describe high levels of autonomic arousal in their early cross dressing experiences (see also Wilson & Gosselin, 1980). This is an experience that Bem (1996) believes is an antecedent to sexual arousal.

There are limitations to the Identity-Defense model that should be kept in mind. Firstly, it makes the assumption that the four cross-gender identity outcomes all lie on a continuum. Theories that transvestism and secondary transsexualism (Blanchard, 1991; Docter, 1988), and homosexual males and androphilic transsexuals (Bailey, 2003) occur on a continuum have been previously presented. However, no previous research has found all four of the cross-gender identity outcomes lying on a single continuum, and this is the first theory to propose such an occurrence. A further limitation of the model is its heavy reliance on Bem's exotic becomes erotic theory. Bem's theory is far from proven, and has been seriously questioned (Nicolosi & Byrd, 2002; Peplau et al., 1998).

One remaining question is whether this model could also be applied to biological females. The present research has only focused on the cross-gender outcomes of biological males, so caution is required in generalising the findings to biological females; however, it is plausible that this theory could also be applied to biological females. Transvestism, and secondary transsexualism are less commonly seen among biological females (Blanchard et al., 1987; Chivers & Bailey, 2000; but see Kaldera, n.d.; Stoller, 1982). This could be because biological females who develop a cross-gender identity do not receive the same amount of scorn and punishment for their gender non-conforming behaviour. Because of this they are less likely to repress their cross-gender identity, which this model proposes is the antecedent to transvestism and secondary transsexualism.

In summary, the Identity-Defense theory is an alternative to present theories that includes a larger range of factors influencing a larger range of cross-gender identity outcomes. The theory allows for outcomes along a continuum to account for the

diversity of cross-gender outcomes. It should be noted that the theory does not intend to explain a universal path to cross-gender outcomes, rather the modal path followed by the majority of biological males.

Clinical Implications

The findings of this research have implications for clinicians working with TS. They show that there is a great diversity in the experiences of TS and that a simple categorisation of either autogynephilic or androphilic transsexualism do not sufficiently represent this diversity. The finding that many TS believed the theory of autogynephilia was too narrow implies that clinicians who subscribe to Blanchard's theory of autogynephilia should be wary of applying it too scrupulously. As with any group, categorisation without appreciation for the diversity and complexity in individual cases can result marginalizing these persons. Theories such as Docter's theory of cross-gender behaviour, Blanchard's theory of autogynephilia, and the Identity-Defense theory proposed above can assist clinicians to understand the development and experience of transsexualism; however, they may not be applicable to every case that is seen. If they are meticulously applied then mistrust and other negative outcomes can result. Even with the assistance of developmental and typological theories, the phenomenon of transsexualism is still far from being completely understood, so clinicians should be cautious of applying such theories.

Limitations of this Research

These findings should be interpreted considering a number of limitations of the research. These include limitations in the questions used, methodology, and sample biases.

Limitations in the Questions Used

In the questionnaire, changes were made to the questions in the Core Autogynephilia scale so that participants were asked if they have ever been sexually aroused when picturing themselves with attractive or more attractive female physical features. The "attractive or more attractive" part was added to Blanchard's (1989b) original version of the scale to make the questions more applicable to BF participants, whilst still remaining applicable to TS. Some success was achieved in doing this, as no BF participants left out this section of the questionnaire. However, the alteration of the

scale made these research findings less comparable to Blanchard's research. Some of the results using the Core Autogynephilia scale differed from Blanchard's results; unfortunately, it is possible that these differences were merely the result of different questions being asked.

In the questionnaire, participants were given an outline of the theory of autogynephilia and asked to rate "*How much do you believe the theory of autogynephilia applies to your own experiences of transsexualism?*" Participants were then categorised as either autogynephilic or non-autogynephilic based on this rating. However, the theory of autogynephilia allows for two categories, autogynephilic and androphilic. A TS participant who falls into the second category of androphilic may still rate that the overall theory applies to them, and therefore in this research would be categorized as autogynephilic even though they are not. This is the result of insufficient planning when designing this question. A more appropriate question to ask would be, for example, "*How much do you think you experience autogynephilia?*"

A ceiling effect was encountered using the sexual and emotional jealousy scales. Most participants rated that they would find sexual or emotional infidelity *extremely distressing*, the highest score on the scale. This produced highly skewed results, with a low variance that had little predictive effect when statistical procedures were applied to them. A more appropriate alternative would have been to use a forced choice method instead. This method would ask participants to rate whether they find either sexual or emotional jealousy to be more distressing (e.g. Buss et al., 1992). This have been shown to give responses more expected by evolutionary theory, than using continuous scales (see Harris, 2003 for a review).

Sample Bias

A number of previous studies have shown that females volunteering for sexuality research are different to the general population. Volunteers have been found to be less inhibited (Griffith & Walker, 1976; Morokoff, 1986); display less sexual guilt (Farkas, Sine, & Evans, 1978; Griffith & Walker, 1976; Strassberg & Lowe, 1995); more at ease with personal disclosure (Catania, McDermott, & Pollack, 1986); have more extensive sexual experience (Catania, Binson, Van Der Straten, & Stone, 1995; Catania et al., 1986; Kaats & Davis, 1971; Morokoff, 1986; Saunders, Fisher, Hewitt, & Clayton, 1985; Strassberg & Lowe, 1995; Wolchik, Braver, & Jensen, 1985); have more positive attitudes towards their sexuality (Strassberg & Lowe, 1995; Wolchik et al., 1985); be

more sexually liberal (Kaats & Davis, 1971); have more sexual curiosity, value sex research more, report greater frequency of masturbation, experience unusual sexual practices, greater inclinations towards self-monitoring and interpersonal exploitation, greater sexual esteem and sexual sensation seeking, and less traditional sexual values (Wiederman, 1999). However, these findings have not always been consistently found in all of these studies. Nevertheless, there is no reason to believe that the present sample was not biased towards these factors.

In addition to the above factors, the recruitment methods used in this research contributed to a more biased sample. The BF participants were either recruited through first-year psychology classes at Massey University, the author's personal contacts, or through Internet mailing lists and message boards for persons with interests in psychology or sex research or transsexualism (for example, support groups for family and friends of transsexuals). The significant amount of university students in the BF sample resulted in a large number of participants in the 18 to 22 year age bracket (see Wiederman, 1999 for a discussion of sexuality research using university student participants). These younger BF participants, as well as the participants recruited from the other sources are likely to have more liberal views of sexuality than the general population. There were also biases arising from the recruitment method of the TS participants. A further limitation of this study is the lack of TS from the lowest SES class, most especially prostitutes. Only two TS participants identified prostitution as their occupation; this is likely to be a much lower proportion than the general TS community. TS girls who work the street are likely to have noteworthy views of their sexuality, which have not been accounted for in this research. Those TS who no longer have contact with the TS community were also generally not able to be reached, so are underrepresented in the sample. Likewise, those TS who use a computer to access online TS support groups and mailing lists are likely to be over-represented in the sample.

The sample as a whole (BF and TS participants) was compared to 2001 New Zealand census data for females (see Chapter 7). In the sample, the 20-24 age group was over-represented; the 30-34 and the 65 and above age groups were significantly under-represented. Europeans were significantly over represented, and non-Europeans were significantly under represented. Also the participants were significantly more educated than the general population of females. This is due to a number of participants being

recruited through a university setting, and above average levels of intelligence among TS that has been previously reported (Ball, 1981).

On the other hand, Cooper, Scherer, Boies, and Gordon (1999) found respondents to online sexuality surveys to have a greater interest in the subject matter. Judging by the questionnaire comments, the participants in the study showed a definite interest in the subject. Many expressed satisfaction about the fact that their population was being given serious study. This is something that has been shown to reduce participation bias (Mustanski, 2001).

A further possible limitation of this research is the length of the questionnaire, and the large number of participants who did not complete it all. Ross et al. (2003) noted that females who did not complete an online sexuality questionnaire were less likely to be in a relationship, and more likely to be living with others (parents, spouse, friends) rather than alone. In this study, 27.3% of participants did not complete the entire questionnaire; this resulted in the scales placed at the end of the questionnaire suffering from a lower response rate. These participants were found to be proportionately more likely to be Asian than any other ethnicity. However, differences between participants completion were not found for any of the other demographic or sexual orientations variables measured.

In summary, the sample used in this research was more highly educated, European, and probably more sexually liberal than the general population. The generalisability of the research findings should be interpreted in light of this limitation. However it is unlikely that the sample used was any more biased than samples used for other sexuality research (see Strassberg & Lowe, 1995).

Other Limitations

The methodology used also has its limitations. Participants from a wide range of ethnic backgrounds, ages, and socio-economic status were assessed in this research. For instance, a 50-year-old, unemployed, European, TS; and a 20-year-old, university student, Indian, BF would be influenced by their different social classes, and cultures, along with their different gendered upbringings in different time periods. In spite of this, direct comparisons were only made between average scores of these diverse groups. Alternative, possibly qualitative methodology would have been more effective for eliciting the diverse nature of the participants with their diverse aspects of sexuality.

Further limitations can be uncovered from examining some of the participant's comments about the questionnaire. Ten participants commented that the responses they were given to select were too restrictive. They did not feel they could adequately answer the question by ticking a box. Open-ended responses may have been more appropriate to get participants full responses to the questions.

Suggestions for Further Research

The present findings bring up further questions in need of research. The concept of sexual attraction to oneself as a woman has never been assessed on BF participants previously. Although a number of BF participants endorsed items on the Core Autogynephilia and Autogynephilic Interpersonal Fantasy scales, no previous studies have reported BFs with such sexual attraction. Because of this it is unlikely that the BF participants do actually experience sexual attraction to oneself as a woman in the way that Blanchard conceptualised it; however, further research is needed to confirm this. The scales used in this research do not appear to be sufficient for examining this; possibly a qualitative research investigation would be the best method for examining participants interpretations to questions asking about sexual attraction to oneself as a woman. It is most likely is that BF participants who had a tendency to rate themselves as sexually aroused by a diverse range of nonconforming sexual stimuli interpreted the question differently than the way Blanchard intended it to be interpreted. For a question such as "Have you ever been sexually aroused by the thought of being a woman?" these participants could interpret this as the thought of being a woman doing something sexually arousing (for instance, in bed with a partner). If interpretations such as this were made then further researcher's intending to using the Core Autogynephilia scale should be aware of this. It is suggested that alterations be made to the autogynephilia scales to make them less ambiguous, leaving only one possible interpretation of the question.

Further research investigating the phenomenon labelled Nonconforming Arousability that emerged from the factor analysis is also required. Those participants who were not exclusively sexually attracted to males, tended to be more sexually aroused to these diverse stimuli including inanimate objects, masochism, thought of oneself as an attractive women, feminine males, and transgender fiction. It is possible that this reflects genuine sexual arousal among these participants, or this finding may

simply be the result of these participants having more liberal views towards sexuality making them more likely to report diverse stimuli as arousing.

Research investigating the validity of the relationships between the components of the Identity-Defense model proposed in this thesis would also be advantageous for learning the etiology of the varying experiences of transsexualism. Specifically, further investigation could compare the relationship that the four groups of cross-gender identity outcome have with the biological variables, early childhood experiences, and personality characteristics.

A number of previous studies have assessed the relationships between TS typology and post-SRS regret. In general these studies have found no differences between the groups, or minor differences in favour of androphilic TS (see Lawrence, 2003 for a review). However this research found that not all non-androphilic TS identified as autogynephilic, and some androphilic TS did; therefore, further research could investigate whether autogynephilic identifying TS fare any differently post-operatively than those who do not identify as autogynephilic. Such research would have significant implications for clinicians working with autogynephilic-identifying TS, and for potentially TS persons experiencing autogynephilia deciding whether to transition into a female.

Stoller (1982) reported three cases of transvestism in BF's. At least one of these cases reported desires to live full-time as a male. This is the only evidence of a parallel to autogynephilia in BF's in the academic literature; however, reports of such a phenomenon are available on the Internet (Kaldera, n.d.). A systematic investigation of the phenomenon of *autoandrophilia*, or sexual attraction to oneself as a male is required to gain an understanding of it.

Finally, there is also room in the literature to systematically study changes in sexual orientation, usually from gynephilic to androphilic, reported by TS. At a guess, this appears to be an occurrence more common among autogynephilic-identifying TS. Also, a number of participants commented that they used to experience autogynephilia, but they did not any more; further research could investigate the development of autogynephilic sexual arousal, and how it changes during the course of a TS's transition to a female. There is also a challenge for current theories of sexual orientation development, such as Bem's (1996) Erotic Become Exotic theory, to account for this occurrence.

9. CONCLUSIONS

Despite the previously discussed limitations, this study is believed to be the most comprehensive study of sexuality of MTF-TS to date. This is the first study to assess evolutionarily relevant aspects of sexuality amongst MTF-TS, and to the best of the author's knowledge the first time that attraction to femininity in males, and attraction to transgender fiction have been assessed among any population. This is also one of the first studies to assess sexuality variables of TS using a non-clinical population, and the first to compare these to a control group of BFs.

The major finding of the study was that in general TS and BF participants did not differ on the aspects of sexuality measured, with the exception of those TS who acknowledge a history of autogynephilia. As well as scoring high on measures of autogynephilia, autogynephilic-identifying TS reported greater attraction to transgender fiction, importance of visual sexual stimuli and importance of partner's physical attractiveness than BFs and non-autogynephilic-identifying TS. Autogynephilia appeared to occur in over one third of TS participants; however, it appeared to occur in a different manner to what was proposed by Blanchard (1989b). Although autogynephilia was most commonly reported by gynephilic and bisexual TS, it was seldom reported by asexual TS, and reported by a significant number of androphilic TS. In addition, autogynephilia was not related to a less feminine gender identity in childhood. The number of participants commenting that the theory of autogynephilia is too narrow verifies these findings.

An unexpected finding of the research is the tendency of more sexually open and liberal participants to report themselves as sexually aroused by a diverse range of sexual stimuli that are considered to be not conforming to cultural norms. This phenomenon has not been previously reported, however in this research it accounted for a large amount of the questionnaire variance.

Implications of these results have been put forward in the discussion. The findings have implications for Blanchard's theory of autogynephilia. An alternative theory of the development of cross-gender identity in biological males was proposed. This theory outlines a number of developmental factors that influence the degree of cross-gender identity in childhood, and whether defense mechanisms are used to suppress this identity. According to the model, the degree of cross-gender identity that develops, and

the degree to which defense mechanisms are used predicts the resulting cross-gender outcome. There are also implications of the research findings for clinicians working with TS. The research found that the theory of autogynephilia could not account for all TSs experiences; clinicians are warned against categorising TS without an appreciation for the diversity and complexity in individual cases. This can result in restricting and marginalizing these persons.

A number of limitations should be considered when interpreting these findings. These include limitations in the questions used, response biases, and methodology. Probably the biggest limitation of the research is the over-representation of relatively higher SES, European, computer literate TS, and the under-representation of lower SES TS such as prostitutes.

Overall, the findings of this research differ from existing literature using clinical samples and an adequate control group. The findings provide a number of avenues for further exploration that were highlighted in the discussion. As the most comprehensive piece of research examining the sexuality of MTF-TS persons the results have a number of theoretical and practical applications.

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APPENDIX A: INFORMATION SHEET AND QUESTIONNAIRE



An investigation into the sexuality of male-to-female transsexuals. INFORMATION SHEET

My name is Jamie Veale, I am currently undertaking this research for the completion of a Master's thesis in psychology at Massey University. With this research I hope to explore the similarities and differences in the sexuality of male-to-female transsexuals and biological females. Thank you very much for your interest in this research

This research is open to any biological females over the age of sixteen, and open to all people born as biological males over the age of sixteen that report the desire to change their sex. Biological females will be recruited through undergraduate psychology classes at Massey University and Auckland University of Technology.

This survey will be conducted via the post, or by means of a web survey. Because you won't be giving any information that will identify you and all the other participants in this project will be completely anonymous.

You will be required to fill out a 146 item multiple-choice survey. At the end of the survey there will be a space for your comments. It is estimated that this will take 20-25 minutes for you to complete.

Most of the questions in the survey are sexual in nature and may thus produce discomfort for some participants. There is no requirement to continue with the survey if you feel at all uncomfortable. It is also possible that some of the material in this survey may bring up some things that are concerning for you, if this occurs then the following places may be contacted for support, information, or counselling:

Genderbridge Incorporated
New Zealand Transgender Support
P.O. Box 70060
Auckland 1230
0800 TG HELP (0800 84 4357)
info@genderbridge.org
www.genderbridge.org

Agender New Zealand Incorporated
Support group for NZ transgender
P.O. Box 27-560
Wellington
0800 AGENDER (0800 2436337)
agender@paradise.net.nz
www.agender.org.nz

Auckland Gay and Lesbian Line.
P.O. Box 3132
Auckland
09 303 3584
aglw@xtra.co.nz

AUT Counselling
Wellesley Campus:
Level 2, WB Building
09 917 9992

couselling@aut.ac.nz

Massey University Counselling
Gate 5, Oteha Rohe Campus,
Building 100, Oaklands Road, Albany.
09 443 9783
StudentHealth@massey.ac.nz

The information you give me will be used for the results of the master's thesis. The information will be stored for five years and then it will be deleted, as this is the policy of Massey University. Only the researcher and the supervisors will have access to the data during this time. You also have the option of sending a separate form to the Massey University School of Psychology if you wish to be sent out a summary of the results of the study.

Completion and submission of the questionnaire implies consent. You have the right to decline to answer any particular question.

I hope to use the information to assist male-to-female transsexuals in better understanding their own sexuality. You are most welcome to contact the researcher and/or the supervisors if you have any questions about the project.

Directions:

1. Complete the questionnaire.
2. Place the questionnaire in the stamped envelope addressed to Jamie Veale and send it.
3. If you wish to receive feedback on the survey results you may either:
 - i) Send a separate envelope that includes your name and address to the researcher at the address below, and the results of the study will be mailed to you when they are available (probably in June or July 2005)
 - or ii) Go to the web site www.tranz.org.nz where the results of the study will be accessible in June or July 2005

Thank you for taking the time to read this information sheet

Jamie Veale

Researcher contact:

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Auckland

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Supervisor contacts:

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School of Psychology
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Massey University
Albany Campus
Auckland

(09) 414 0800, Ext 9075

D.Clarke@massey.ac.nz

Dr Tess Lomax
School of Computer and Information Sciences
Auckland University of Technology
Private Bag 92006
Auckland 1020

(09) 917 9999, Ext 5214

tess.lomax@aut.ac.nz

QUESTIONNAIRE:

Note: The scale headings and values assigned to responses have been were not included the questionnaire version that was given to participants

Demographics:

1. Please select which of the following applies to you:

- ☐ I am a male-to-female transsexual.
- ☐ I have a female identity and I was born female.
- ☐ None of the above.

If you answered 'None of the above' to Question 1. then this survey has not been designed for you to complete and your answers will not be used in the research. Please contact the researcher if you have any more questions.

2. Age:

3. Ethnicity (please tick one or more):

- ☐ New Zealand European
- ☐ Maori
- ☐ Pacific Islander
- ☐ Asian
- ☐ Other

If other please specify:

4. Occupation:

5. Level of education (please select highest obtained):

- | | |
|---|--|
| <input type="checkbox"/> 3 years of high school or less (1) | <input type="checkbox"/> Bachelor's degree (5) |
| <input type="checkbox"/> 4 years of high school (2) | <input type="checkbox"/> Masters' degree (6) |
| <input type="checkbox"/> 5 years of high school (3) | <input type="checkbox"/> Doctoral degree (7) |
| <input type="checkbox"/> Diploma, trade certificate or apprenticeship (4) | <input type="checkbox"/> Other |

If other please specify:

6. Marital Status (please select one):

- | | |
|---|------------------------------------|
| <input type="checkbox"/> Single (never married) | <input type="checkbox"/> Divorced |
| <input type="checkbox"/> Married or living in a de facto relationship | <input type="checkbox"/> Separated |
| <input type="checkbox"/> Widowed | |

7. Number of biological children:

Sexual Orientation:

8. Rate the degree to which, *until the age of 16*, you felt sexually attracted to males on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

9. Rate the degree to which, *until the age of 16*, you felt sexually attracted to females on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

10. Rate the degree to which you *currently* feel sexually attracted to males on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

11. Rate the degree to which you *currently* feel sexually attracted to females on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

12. Rate the degree to which in your current sexual fantasies you are aroused by males on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

13. Rate the degree to which in your current sexual fantasies you are aroused by females on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

14. Rate the degree to which while in physical contact of any sort you have been conscious of sexual arousal to males on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

15. Rate the degree to which while in physical contact of any sort you have been conscious of sexual arousal to females on the following scale:

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

Attraction to Male Physique Scale:

16. I find certain aspects of the male body sexually appealing:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

If you answered 'not at all' to question 16 then you may proceed directly to question 22.

17. I find a males face (e.g. eyes, smile) to be particularly sexually appealing:

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

18. I find a males body (e.g. chest, arms, genitalia) to be particularly sexually appealing:

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

19. The first thing I notice about when I meet a male that I am sexually attracted to is:

- ☐ His face (e.g. eyes, smile). (4)
- ☐ His body (e.g. chest, arms). (4)
- ☐ The way that he seems to admire me. (0)
- ☐ I am not sexually attracted to males. (0)

20. I am currently in (or would like to have) a long-term committed relationship with a male:

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

21. A male showing a sexual interest in me is something I find sexually arousing:

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

Attraction to Feminine Males Scale:

22. I find feminine physical features are sexually attractive on males:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

If you answered 'not at all' to question 22 then you may proceed directly to question 30.

23. I find long hair on males to be sexually attractive:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

24. I find shaved legs to be sexually attractive on males:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

25. I find it sexually attractive when a male wears articles of female clothing:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

26. I find males who have a feminine figure to be sexually attractive:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

27. I find males who have feminine mannerisms to be sexually attractive:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

28. I find people who were born as males but have female breasts to be sexually attractive:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

29. I find males who identify as feminine to be sexually attractive:

Not at all (0) Slightly (1) Moderately (2) Quite (3) Extremely (4)
☐ ☐ ☐ ☐ ☐

Recalled Gender Identity Scale:

30. As a child, my favourite playmates were:

<input type="checkbox"/> Almost always girls (5)	<input type="checkbox"/> Almost always boys (1)
<input type="checkbox"/> Usually more girls than boys (4)	<input type="checkbox"/> I did not play with other children (0)
<input type="checkbox"/> Girls and boys equally (3)	<input type="checkbox"/> I do not remember (0)
<input type="checkbox"/> Usually more boys than girls (2)	

31. As a child, my best or closest friend was:

<input type="checkbox"/> Almost always a girl (5)	<input type="checkbox"/> Almost always a boy (1)
<input type="checkbox"/> Usually a girl more than a boy (4)	<input type="checkbox"/> I did not have a closest friend (0)
<input type="checkbox"/> A girl or a boy (3)	<input type="checkbox"/> I do not remember (0)
<input type="checkbox"/> Usually a boy more than a girl (2)	

32. As a child, my favourite toys and games were:

<input type="checkbox"/> Almost always girls' toys and games (5)	<input type="checkbox"/> Almost always boys' toys and games (1)
<input type="checkbox"/> Usually girls' toys and games more than boys' toys and games (4)	<input type="checkbox"/> Neither girls' toys and games nor boys' toys and games (0)
<input type="checkbox"/> Equally girls' toys and games and boys' toys and games (3)	<input type="checkbox"/> I do not remember (0)
<input type="checkbox"/> Usually boys' toys and games more than girls' toys and games (2)	

33. As a child, I liked to play with infant or baby dolls:

Almost always (5) Frequently (4) Sometimes (3) Rarely (2) Never (1) I do not remember (0)
☐ ☐ ☐ ☐ ☐ ☐

34. As a child, I enjoyed athletics and body contact sports:

Very much (1) Much (2) Somewhat (3) Little (4) Not at all (5) I do not remember (0)
☐ ☐ ☐ ☐ ☐ ☐

35. As a child, I put on or used cosmetics (make-up) and girls' or women's jewellery:

Almost always (5) Frequently (4) Sometimes (3) Rarely (2) Never (1) I do not remember (0)
☐ ☐ ☐ ☐ ☐ ☐

36. As a child, the characters on TV or in the movies that I imitated or admired were:

- | | |
|---|--|
| <input type="checkbox"/> Almost always boys or men (1) | <input type="checkbox"/> Almost always girls or women (5) |
| <input type="checkbox"/> Usually boys or men more than girls or women (2) | <input type="checkbox"/> I did not imitate or admire characters on TV or on the movies (0) |
| <input type="checkbox"/> Equally boys/men and girls/women (3) | |
| <input type="checkbox"/> Usually girls or women more than boys or men (4) | <input type="checkbox"/> I do not remember (0) |

37. As a child, I enjoyed rough play (e.g., “play wrestling” and “play fighting”):

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very much (1) | Much (2) | Somewhat (3) | Little (4) | Not at all (5) | I do not remember (0) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

38. In fantasy or pretend play, I took the role of:

- | | |
|---|---|
| <input type="checkbox"/> Almost always boys or men (1) | <input type="checkbox"/> Almost always girls or women (5) |
| <input type="checkbox"/> Usually boys or men more than girls or women (2) | <input type="checkbox"/> I did not do this type of pretend play (0) |
| <input type="checkbox"/> Equally boys/men and girls/women (3) | <input type="checkbox"/> I do not remember (0) |
| <input type="checkbox"/> Usually girls or women more than boys or men (4) | |

39. In dress-up play, I would:

- | | |
|--|---|
| <input type="checkbox"/> Almost always wear girls’ or women’s clothing (5) | <input type="checkbox"/> Almost always wear boys’ or men’s clothing (1) |
| <input type="checkbox"/> Usually wear girls’ or women’s clothing more than boys’ or men’s clothing (4) | <input type="checkbox"/> Not do this type of play (0) |
| <input type="checkbox"/> Equally often wear girls’ or women’s clothing and boys’ or men’s clothing (3) | <input type="checkbox"/> I do not remember (0) |
| <input type="checkbox"/> Usually wear boys’ or men’s clothing more than girls’ or women’s clothing (2) | |

40. As a child, I felt:

- | | | | | | | |
|--------------------------|--------------------------|------------------------------------|--------------------------|--------------------------|--|--------------------------|
| Very feminine (5) | Somewhat Feminine (4) | Equally masculine and feminine (3) | Somewhat masculine (2) | Very masculine (1) | I did not feel feminine or masculine (0) | I do not remember (0) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

41. As a child, my appearance (hair-style, clothing, etc.) was:

- | | | | | | | |
|--------------------------|--------------------------|------------------------------------|--------------------------|--------------------------|--|--------------------------|
| Very feminine (5) | Somewhat Feminine (4) | Equally masculine and feminine (3) | Somewhat masculine (2) | Very masculine (1) | I did not feel feminine or masculine (0) | I do not remember (0) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

42. As a child, I

- | | |
|--|---|
| <input type="checkbox"/> Almost always hated wearing dresses and other 'feminine' clothing (1) | <input type="checkbox"/> Almost never hated wearing dresses and other 'feminine' clothing (5) |
| <input type="checkbox"/> Usually hated wearing dresses and other 'feminine' clothing (2) | <input type="checkbox"/> Never wore dresses or other 'feminine' clothing (0) |
| <input type="checkbox"/> Sometimes hated wearing dresses and other 'feminine' clothing (3) | <input type="checkbox"/> I do not remember (0) |
| <input type="checkbox"/> Rarely hated wearing dresses and other 'feminine' clothing (4) | |

43. As a child, I

- | | |
|---|--|
| <input type="checkbox"/> Almost always felt good about the sex I was born in (TS: 1; BF: 5) | <input type="checkbox"/> Almost never felt good about the sex I was born in (TS: 5; BF: 1) |
| <input type="checkbox"/> Usually felt good about the sex I was born in (TS: 2; BF: 4) | <input type="checkbox"/> Never really thought about the sex I was born in (0) |
| <input type="checkbox"/> Sometimes felt good about the sex I was born in (3) | <input type="checkbox"/> I do not remember (0) |
| <input type="checkbox"/> Rarely felt good about the sex I was born in (TS: 4; BF: 2) | |

44. As a child, I felt close or related well:

- | | |
|--|--|
| <input type="checkbox"/> Much more to adult men than adult women (1) | <input type="checkbox"/> Somewhat more to adult women than adult men (4) |
| <input type="checkbox"/> Somewhat more to adult men than adult women (2) | <input type="checkbox"/> Much more to adult women than adult men (5) |
| <input type="checkbox"/> About equally to adult men and women (3) | <input type="checkbox"/> I do not remember (0) |

Core Autogynephilia Scale:

45. Have you *ever* become sexually aroused while picturing yourself having an attractive female body?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

46. Have you *ever* become sexually aroused while picturing yourself having certain attractive or more attractive features of the female body?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If you answered 'never' to both of the previous two questions (questions 45 and 46) then you may proceed directly to question 54.

47. Have you *ever* become sexually aroused while picturing yourself having attractive/more attractive female breasts?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

48. Have you *ever* become sexually aroused while picturing yourself having attractive/more attractive female buttocks?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

49. Have you *ever* become sexually aroused while picturing yourself having attractive/more attractive female legs?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

50. Have you *ever* become sexually aroused while picturing yourself having attractive/more attractive female genitals (private parts)?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

51. Have you *ever* become sexually aroused while picturing yourself having an attractive/more attractive female face?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

52. Which of the following pictures of yourself has been most strongly associated with sexual arousal?

- ☐ As a nude woman. (2)
- ☐ As a woman dressed only in underwear, sleepwear, or foundation garments (for example, a corset). (2)
- ☐ As a fully clothed woman. (2)
- ☐ Have never become sexually aroused while picturing yourself as a woman. (0)
- ☐ Have never pictured yourself as a woman. (0)

53. Have you *ever* been sexually aroused at the thought of being a woman?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

Autogynephilic Interpersonal Fantasy Scale:

54. Have you *ever* been sexually aroused while picturing yourself as a woman in the nude being admired by another person?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

55. Have you *ever* been sexually aroused while picturing yourself as a woman dressed only in underwear, sleepwear, or foundation garments (for example, a corset) being admired by another person?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

56. Have you *ever* been sexually aroused while picturing yourself as a fully dressed woman being admired by another person?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

57. Which of the following pictures of yourself has been the most strongly associated with sexual arousal?

- ☐ As a woman who is alone in private. (3)
- ☐ As a woman who is being admired by another person. (3)
- ☐ Have never become sexually aroused while picturing yourself as a woman. (0)

Fetishism Scale:

58. Do you think that certain inanimate (not alive) objects (e.g. velvet, silk, leather, rubber, shoes, female underwear etc.) have a stronger attraction for you than for most other people?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

59. Has the sexual attractiveness of an inanimate (not alive) thing ever increased for you if it had been worn by, or had been otherwise in contact with another person?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

60. Were you ever more strongly sexually attracted by inanimate things than by females or males?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

If you answered 'Never' to all of the previous three questions (questions 58 to 60) then you may proceed directly to question 64.

61. Is there more than one kind of inanimate thing that arouses you sexually?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

62. Through which of your senses did the thing act most strongly?

- ☐ Through the sense of smell (2)
- ☐ Through the sense of taste (2)
- ☐ Through the sense of sight (2)
- ☐ Through the sense of touch (2)
- ☐ Through the sense of hearing (2)
- ☐ Have never been attracted to inanimate objects (0)

63. At about what age do you remember first having a special interest in an inanimate thing which later aroused you?

- | | | |
|---|--|--|
| <input type="checkbox"/> Younger than 2 (2) | <input type="checkbox"/> Between 2 and 4 (2) | <input type="checkbox"/> Between 5 and 7 (2) |
| <input type="checkbox"/> Between 8 and 10 (2) | <input type="checkbox"/> Between 11 and 13 (2) | <input type="checkbox"/> Older than 13 (2) |
| <input type="checkbox"/> Have never been attracted to inanimate objects (0) | | |

Masochism Scale:

64. If you were insulted or humiliated by a person to whom you felt sexually attracted, did this increase their attractiveness?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

65. Has imagining that you were being humiliated or poorly treated by someone ever excited you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

66. Has imagining that you had been injured by someone to the point of bleeding ever excited you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

67. Has imagining that someone was causing you pain ever aroused you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

68. Has imagining that someone was choking you ever excited you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

69. Has imagining that you have become dirty or soiled ever excited you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

70. Has imagining that your life was being threatened ever excited you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

71. Has imagining that that someone was imposing on you heavy physical labour or strain ever excited you sexually?

- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Never (0) | Rarely (1) | Occasionally (2) | Often (3) | Almost all the time (4) | All the time (5) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

72. Has imagining a situation in which you were having trouble breathing ever excited you sexually?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

73. Has imagining a situation that you were being threatened with a knife or other sharp instrument ever excited you sexually?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

74. Has imagining that you are being tied up ever excited you sexually?

Never (0) Rarely (1) Occasionally (2) Often (3) Almost all the time (4) All the time (5)
☐ ☐ ☐ ☐ ☐ ☐

Sexual Versus Emotional Jealousy:

Please think of a serious committed romantic relationship that you have had in the past, that you currently have, or that you would like to have. Imagine that you discover that the person with whom you've been seriously involved became interested in someone else. Please rate how much the following situations would distress you:

75. Imagining your partner forming a deep emotional attachment to that person.

Not at all Slightly Moderately Very Extremely
distressing (0) distressing (1) distressing (2) distressing (3) distressing (4)
☐ ☐ ☐ ☐ ☐

76. Imagining your partner enjoying passionate sexual intercourse with that other person.

Not at all Slightly Moderately Very Extremely
distressing (0) distressing (1) distressing (2) distressing (3) distressing (4)
☐ ☐ ☐ ☐ ☐

77. Imagining your partner trying different sexual positions with that other person.

Not at all Slightly Moderately Very Extremely
distressing (0) distressing (1) distressing (2) distressing (3) distressing (4)
☐ ☐ ☐ ☐ ☐

78. Imagining your partner falling in love with that other person.

Not at all Slightly Moderately Very Extremely
distressing (0) distressing (1) distressing (2) distressing (3) distressing (4)
☐ ☐ ☐ ☐ ☐

Preference for Younger Partners:

79. Facial wrinkles in a potential romantic partner would be a real turn-off for me.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

80. I find grey hair to be somewhat sexy in a potential romantic partner.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

81. I could imagine myself being romantically and sexually involved with someone 20 years older than I.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

82. If I had to choose someone other than my current romantic partner as a long-term romantic partner I would choose someone aged:

83. If I had to choose someone other than my current romantic partner as a one-time sexual partner I would choose someone aged:

84. I am turned off by bodies that show signs of aging (such as sagging skin or varicose veins).

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

85. I am most sexually attracted to younger adults (aged 18-25).

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

86. If someone showed definite signs of aging it would be difficult for me to be very sexually attracted to them.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

87. I find attractive adolescents (aged 16-18) particularly sexy.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

88. I would be comfortable having a mate considerably older than I.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

89. It is hard for me to understand why anyone would have a strong preference for younger rather than older partners.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

Interest in Uncommitted Sex:

90. I would consider having sex with a stranger if I could be assured that it was safe and s/he was attractive to me.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

91. I like the idea of participating in a sex orgy.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

92. I would *not* enjoy sex without any emotional commitment at all.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

93. I do not need to respect or love someone in order to enjoy having sex with him/her.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

94. I can't imagine spending the rest of my life with one sex partner.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

95. Sometimes I'd rather have sex with someone I didn't care about.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

96. Monogamy is not for me.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

97. I believe in taking sexual opportunities when I find them, as long as no one gets hurt.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

98. I could easily imagine myself enjoying one night of sex with someone I would never see again.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

99. If an attractive person (of my preferred sex) approached me sexually, it would be hard to resist, no matter how well I knew him/her.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

Interest in Visual Sexual Stimuli:

100. Seeing attractive people nude doesn't sexually arouse me.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

101. It would be exciting to watch two people have sex.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

102. Seeing attractive people (of my preferred sex) in skimpy clothing such as lingerie or tight briefs is very sexually exciting to me.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

103. I find photographs of attractive naked bodies (of my preferred sex) sexually exciting.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

104. Being around a group of attractive naked people (of my preferred sex) does not sound very sexually arousing to me.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

105. When I meet someone I find attractive, I fantasize about what they would look like without clothes on.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

106. Seeing the genitals of an attractive person (of my preferred sex) would be extremely sexually arousing.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

107. Seeing my sexual partner undress is a real turn-on.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

108. Whether or not I approve of them, I find films of attractive people having sex to be very sexually exciting.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

109. When I see someone especially physically attractive, I may follow them briefly to get another look.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

110. When I fantasize about having sex with someone, I try to picture very vividly in my mind what their body would look like.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

111. If I had to choose, I'd rather have a long conversation with someone I'm attracted to than see them naked.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

Importance of Partner Status:

112. Ideally, I want a romantic partner who is at least as highly educated as I.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

113. It would be important to me if my partner were highly respected in the community.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

114. If I found that a potential romantic partner made substantially more money than I, it would make her/him more attractive to me.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

115. I would not mind being seriously involved with someone whose career ambitions were noticeably lower than mine.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)

☐ ☐ ☐ ☐ ☐ ☐ ☐

116. Although I don't necessarily expect it, having the other person pay for the date makes me feel good.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

117. It can be very romantic to get a very expensive gift.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

118. I would not want to get romantically involved with someone who did not have a job.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

119. I sometimes fantasize about being in a relationship with someone who is socially powerful and wealthy.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

120. I would like my partner to be from a higher social class background than I.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

121. I wouldn't like it if my partner made more money than I.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

122. The prospect of a romantic partner who was well enough established so that I didn't have to work if I didn't want to would be very attractive.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

123. I don't really care whether a potential romantic partner spends money on me.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

Importance of Partner's Physical Attractiveness:

124. It is easy to imagine becoming romantically involved with someone I initially felt was physically unattractive, as I grew to know their personality.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

125. Looks aren't that important to me.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

126. In the past, I've usually initially become romantically interested in someone largely due to their physical characteristics.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

127. It is more important to me how nice a potential romantic partner is than how good looking they are.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

128. I wouldn't consider being romantically involved with someone who was significantly overweight.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

129. It would be hard for me to get involved with someone with a noticeable skin problem.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

130. I like my romantic partner to dress attractively, even if it requires some effort on her/his part.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

131. I would be upset if my partner did not try to maintain her/his physical appearance.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

132. If my partner became much less physically attractive, it would be difficult for me to stay with her/him.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

133. I would be happy if my partner were more sexually attractive than I.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

Attraction to Transgender Fiction Scale:

Please indicate how sexually arousing you would find the following types of stories.

134. A story in which an unruly boy as a form of punishment must dress as a girl or become girl through other means.

Not at all sexually arousing (0) Slightly sexually arousing (1) Moderately sexually arousing (2) Very sexually arousing (3) Extremely sexually arousing (4)

☐ ☐ ☐ ☐ ☐

135. A story in which a male and a female character swap places. Either by magical, or science fiction means.

Not at all sexually arousing (0) Slightly sexually arousing (1) Moderately sexually arousing (2) Very sexually arousing (3) Extremely sexually arousing (4)

☐ ☐ ☐ ☐ ☐

136. A story in which the main character, a male is caught either fully dressed as female or wearing female undergarments. And must suffer, or dress more as a result of being caught.

Not at all sexually arousing (0) Slightly sexually arousing (1) Moderately sexually arousing (2) Very sexually arousing (3) Extremely sexually arousing (4)

☐ ☐ ☐ ☐ ☐

137. A story in which the main character is transformed into a female as the result of making a deal, part of a bet or accepting a dare.

Not at all sexually arousing (0) Slightly sexually arousing (1) Moderately sexually arousing (2) Very sexually arousing (3) Extremely sexually arousing (4)

☐ ☐ ☐ ☐ ☐

138. A story that involves a general male-to-female cross dressing theme.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

139. A story that involves a female dominating a male, or a woman who uses an authoritarian attitude.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

140. A story in which by some magical means a male is transformed into a female.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

141. A story in which a male has his mind altered by hypnosis or brainwashing to stop resisting feminising changes forced on him.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

142. A story in which the main character, a male is physically forced or blackmailed to dress as a female, or be transformed into a female against their will.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

143. A story that contain scenes where the main character, a male gets their hair cut, rolled or coloured into a feminine style either at home or in a hair salon.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

144. A story that contains scenes where female hormones are administered to the main character either voluntarily or involuntarily.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

145. A story that contain scenes where the main character, a male wears very high heels.

Not at all sexually arousing (0)	Slightly sexually arousing (1)	Moderately sexually arousing (2)	Very sexually arousing (3)	Extremely sexually arousing (4)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following sections of this questionnaire were only given to the transsexual participants.

146. What age were you when you first desired to change your sex?

147. Are you currently taking female hormones? ☐ Yes
☐ No

If you answered yes, about how many months have you been taking the hormones?

148. Have you undertaken sexual reassignment surgery? ☐ Yes
☐ No

Transgender Identity Scale:

149. When I wear women's clothing I do not consider it "cross-dressing" because my true gender is feminine (or mostly feminine).

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

150. I believe I am a "woman in a man's body".

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

151. I prefer to think of my feminine name as my real name.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

152. I can enjoy being a woman, but at other times I enjoy functioning like a man.

Strongly agree (0) Agree (1) Tend to agree (2) Undecided (3) Tend to disagree (4) Disagree (5) Strongly disagree (6)
☐ ☐ ☐ ☐ ☐ ☐ ☐

153. If it were possible, I'd choose to live my life as a woman (or I now do so).

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

154. I have received electrolysis/laser treatment.

No (0) A little (3) A lot (6)
☐ ☐ ☐

155. When in my feminine role I feel I am expressing my "true self," not putting on an act.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

156. I wish I had been born a woman.

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)
☐ ☐ ☐ ☐ ☐ ☐ ☐

157. I would like to undertake sexual reassignment surgery (or already have).

Strongly agree (6) Agree (5) Tend to agree (4) Undecided (3) Tend to disagree (2) Disagree (1) Strongly disagree (0)

☐ ☐ ☐ ☐ ☐ ☐ ☐

Attitudes Towards Autogynephilia Scale:

158. How familiar with the theory of 'autogynephilia' are you?

Not at all familiar (0) Slightly familiar (1) Fairly familiar (2) Very familiar (3)

☐ ☐ ☐ ☐

For those who are unfamiliar with the theory of autogynephilia, a brief summary of it is given below. This summary is taken from the web site of Anne Lawrence (www.annelawrence.com):

"Male-to-female transsexuals are popularly characterized as "women trapped in men's bodies," i.e., male-bodied persons who are very feminine, overtly or otherwise. And clearly there are some transsexuals for whom this is an accurate description. But there are also some of us male-to-female transsexuals to whom this popular description does not so obviously apply. Many of us transitioned in our 30's, 40's, or even later, after having lived outwardly successful lives as men. Often we were not especially feminine as children, and some of us are not especially feminine after transition, either. Many of us were, or occasionally still are, married to women; often we have fathered children. A sizable number of us identify as lesbian or bisexual after reassignment. Many of us have a past or current history of sexual arousal in association with cross- dressing or cross-gender fantasy. Yet there is no doubt that we experience gender dysphoria -- a term that denotes dissatisfaction with the sexed body -- as intensely as our more outwardly feminine transsexual sisters. And we pursue sex reassignment surgery every bit as avidly, too.

The term autogynephilia was coined in 1989 by Ray Blanchard. He defined autogynephilia as "the propensity to be sexually aroused by the thought or image of oneself as a woman."

Clinicians had observed for years that males who sought sex reassignment were not a homogeneous group. Several different categories of male-to-female transsexualism had been proposed, invariably based on sexual orientation, history of sexual arousal to crossdressing, or a combination of these. Many observers had noted that gender dysphoric males nearly always displayed at least one of two statistically uncommon erotic preferences: either sexual attraction to males, or a history of sexual arousal to crossdressing or cross-gender fantasy.

Based on his research, Blanchard concluded that there were really only two distinct categories of gender dysphoric males: an *androphilic* group, those who were sexually aroused primarily by males; and a non-androphilic group, those who were sexually aroused primarily by *the idea of being women*, either currently or in the past. Blanchard called this latter group *autogynephilic* -- "sexually aroused by the thought or image of oneself as a woman."

159. How much do you believe this theory of autogynephilia applies to *your own* experiences of transsexualism?

Definitely not at all (0) Probably not at all (1) A little bit (2) Quite a lot (3) Completely (4)

☐ ☐ ☐ ☐ ☐

160. How much do you believe this theory of autogynephilia applies to *other peoples* experiences of transsexualism?

Definitely not at all (0) Probably not at all (1) A little bit (2) Quite a lot (3) Completely (4)

☐ ☐ ☐ ☐ ☐

161. Please write any thoughts, comments or feelings that you have regarding the theory of autogynephilia:

The following comments question was given to all of the participants.

162. Please write any feelings or comments you have about the survey, your feedback is appreciated:

THANK YOU VERY MUCH FOR TAKING THE TIME TO PARTICIPATE IN THIS RESEARCH.

APPENDIX B: LIST OF MESSAGE BOARDS POSTED TO AND AN EXAMPLE OF WHAT WAS POSTED

The following message boards were posted to:

UNIQ Auckland	tgteenchatmk2@yahoogroups.com
Enn-Femme NZ	ts_aust@yahoogroups.com
sci.psychology.research	transgenders@yahoogroups.com
sci.psychology.misc	Transtasman Transgender
soc.women.lesbian-and-bi	psy-internet@egroups.com
soc.support.youth.gay-lesbian-bi	tgyouth@tgyouth.org.uk
uk.gay-lesbian-bi	antijen@antijen.org
transgender_teens@yahoogroups.com	TGS-PFLAG@youth-guard.org
transgender.co.nz	dragcommunity@yahoogroups.com
DragDirectUSA@yahoogroups.com	UK TS Forum
transgendersplendor@yahoogroups.com	VoiceTS@yahoogroups.com
youngtgirls@yahoogroups.com	trans-theory@yahoogroups.com
hijra@yahoogroups.com	trans-academics@yahoogroups.com
temenos-transyouth@yahoogroups.com	

An example of what was posted to these groups:

Subject: Transsexual Womens Survey

Hi there everyone my name is Jamie, I am an MTF transsexual, currently doing a Master's thesis in New Zealand. My research is looking female sexuality. I am doing a comparison between of male-to-female transsexuals, and other females.

I am looking to recruit MTF transsexuals, and other females to participate in this research. This implies taking a survey which is mostly multiple choice, and will take about 20-30 minutes to complete. If you would be kind enough to participate in my research the questionnaire can be found at:

www.tranz.org.nz

As the questions you will be asked are mostly sexual in nature it is hoped that this questionnaire is something that you will at least find interesting. Also you will be given the opportunity to view the results of the survey. All responses to this survey are kept strictly confidential, you will not be asked any information that will distinguish you (for example, your name), so your responses will be completely anonymous.

Thanks heaps, your help is greatly appreciated,

Jamie