

Physical Attractiveness of Boys with Gender Identity Disorder

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University students blind to group status rated boys with gender identity disorder and clinical control boys regarding their physical attractiveness. Ratings were made of the face and upper torso from photographs taken at the time of clinical assessment (\bar{x} age, 8.1 years). On all five adjectives (attractive, beautiful, cute, handsome, and pretty), boys with gender identity disorder were judged to be more attractive than were the clinical control boys. Attractiveness correlated with extent of behavioral femininity in the clinical control group, but not in the group of boys with gender identity disorder. The extent to which the group differences in attractiveness were due to objective, structural differences in facial attractiveness vs. socially created, or subjective, processes is discussed.

KEY WORDS: physical attractiveness; gender identity disorder of childhood; boys.

INTRODUCTION

Social psychologists have long pointed to the potency of physical attractiveness as a variable that influences person perception (Berscheid and Walster, 1974; Dion, 1986). From a developmental perspective, physical attractiveness has been conceptualized as a child characteristic that might influence social interaction with significant others (e.g., Langlois, 1986).

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There is considerable evidence that the (facial) attractiveness of infants and children can be rated reliably by both adults (Anderson, 1990; Hildebrandt, 1983; Smith, 1985; Sugarman, 1980) and children (Cavior and Lombardi, 1973; Cross and Cross, 1971; Dion, 1973; Styczynski and Langlois, 1977; Vaughn and Langlois, 1983). Even premature infants vary reliably in their physical attractiveness (Corter *et al.*, 1978). Moreover, several studies have shown that children retain their rank of physical attractiveness over time (Adams, 1977; Maruyama and Miller, 1981; Pittenger *et al.*, 1989; Sussman *et al.*, 1983). Although not well-studied in children, there is some evidence regarding the structural, or objective, features of infant faces that elicit judgments of cuteness or attractiveness; for example, Hildebrandt and Fitzgerald (1979a) concluded that a "cute" infant is likely to have "short and narrow features, large eyes and pupils, and a large forehead" (p. 329) (cf. Alley, 1981; Horvath *et al.*, 1987; Maier *et al.*, 1984; Sternglanz *et al.*, 1977).

A corpus of empirical studies has shown that variations in physical attractiveness affect the social perceptions of adult raters. Infants and young children preselected as cute or attractive receive more favorable judgments regarding personality traits (e.g., sociability, intelligence) than do infants and children preselected as not cute or unattractive (e.g., Dion, 1972; Hildebrandt and Fitzgerald, 1978, 1981; Hildebrandt and Stern, 1984; Karraker and Stern, 1990; Kenealy *et al.*, 1988; Langlois and Stephan, 1977; Moore *et al.*, 1987; Power *et al.*, 1982; Stephan and Langlois, 1981; Wheeler *et al.*, 1987). More important, perhaps, are data that demonstrate behavioral correlates of physical attractiveness. Langlois and Downs (1979), for example, found that among 5-year-old same-sex dyads, aggressive behavior was most common when at least one member of the pair was unattractive (for overviews of the normative physical attractiveness literature on infants and children, see Adams, 1981; Hildebrandt, 1982; Langlois, 1986; Langlois and Stephan, 1981; Patzer and Burke, 1988).

There has been some effort to understand the role physical attractiveness might play in the expression of various forms of clinical symptomatology (e.g., Archer and Cash, 1985; O'Grady, 1982) or major mental disorders (e.g., Burns and Farina, 1987; Farina *et al.*, 1977), but this has been mainly with adults. The present study assessed the physical attractiveness of boys with a DSM-III diagnosis of gender identity disorder (American Psychiatric Association, 1980). Based on clinical experience with several cases, Stoller (1968) proposed a model that attempted to explain the development of marked cross-gender identification in boys. Although Stoller placed great weight on parental influences, it was also suggested that the extreme physical attractiveness of the boy served as a type of stimulus—the "spark" (Stoller, 1975)—that facilitated parental feminization,

particularly on the mother's part. Stoller (1975) commented on the appearance of these boys at the time of their clinical assessment: "We have noticed that they often have pretty faces, with fine hair, lovely complexions, graceful movements, and — especially — big, piercing, liquid eyes" (p. 43). Thus, Stoller seemed to concur with the mothers that these boys were objectively quite attractive.

Green (1987) and his colleagues (Green *et al.*, 1985; Roberts *et al.*, 1987) systematically studied physical attractiveness in a larger sample of feminine boys and a male control group. At the time of assessment (\bar{x} age, 7.1 years), the parents of both groups of boys were asked to describe the faces of their infant sons. Blind ratings of interview transcripts and questionnaire responses showed that the parents of the feminine boys more often described their sons during infancy as "beautiful" and "feminine" than did the parents of the controls. There was also a trend for the parents of the feminine boys to recall that strangers commented, "He would make a beautiful girl," than did the parents of the control boys.

Roberts *et al.* (1987) also reported the correlation between physical attractiveness and a measure of the boys' current feminine gender role behavior, which was based on a composite score that maximized the difference between the two groups. Degree of (recalled) physical attractiveness was significantly correlated with extent of femininity in the control group but not in the feminine boy group, although both correlations were in the positive direction ($r_s = .40$ and $.15$, respectively). Two other studies of normal children have also shown some relation between gender role behavior and attractiveness. Langlois and Downs (1979) found that unattractive 3- and 5-year-old boys and girls were more likely to engage in masculine sex-stereotyped play during dyadic interaction than were their attractive counterparts whereas pairs of attractive girls were most likely to engage in feminine sex-stereotyped play. It was also found that pairs of attractive boys and girls were more likely to engage in low active play than were the other dyadic pairs (e.g., pairs of unattractive boys). Similar data have been reported by LaVoie and Andrews (1976).

In general, Green's (1987) data lend some support for Stoller's (1968, 1975) clinical observations. Nevertheless, it remains unclear whether Green's data implicate an objective physical characteristic of the feminine boy as infant or some type of parental retrospective distortion. It could be argued that parental recall of earlier attractiveness was affected by the son's current femininity. Recollection of the boy as feminine-like in appearance could provide a certain continuity to, or perhaps even an explanation for, the current behavioral pattern. It is also possible that parents who condoned or reinforced the boy's femininity (Green, 1987) might be particularly prone to distort memories in the direction of a more feminine-like infant.

Given what has been learned about the structural, or objective, properties of infant facial cuteness, it is conceivable that prefeminine infant boys have morphological features that distinguish them from premasculine infant boys. Moreover, the normative literature on the continuity of attractiveness suggests that such differences might persist into childhood. The present study assessed the physical attractiveness of boys with gender identity disorder and clinical control boys using photographs taken at the time of clinical assessment.

METHOD

Subjects

The probands were 17 boys with a DSM-III diagnosis of Gender Identity Disorder of Childhood ($n = 13$) or Atypical Gender Identity Disorder ($n = 4$). These boys had been referred by either their parents or a professional to a clinic specializing in gender identity problems in children and adolescents, which is housed within the child psychiatry service of a psychiatric research institute. The 17 clinical control boys were referred to the same service for a variety of reasons and thus were heterogeneous with regard to psychiatric diagnosis.

An attempt was made to pair-match each boy with gender identity disorder to a clinical control boy for age, IQ, and parents' social class (Hollingshead, 1975) and marital status (see Table I). The pair-matching of the two groups was determined as follows. As part of a larger study on gender identity disorder, 22 clinical control boys were recruited to serve as one of several comparison groups. Of these, 5 boys were not included in the present study: 1 boy's parents declined permission to use his photograph, 1 boy was non-white,⁵ 1 boy's photograph was not taken, 1 boy's photograph was defective, and the parents of 1 proband would not allow his photograph to be used and another appropriate match from the larger pool of gender identity referrals could not be found.

Of the 17 clinical controls who participated, 10 were pair-matched to the same boy with gender identity disorder with whom they had been originally matched in the larger investigation. For the remaining 7 boys, it was necessary to find a replacement boy with gender identity disorder: the parents of 2 boys declined permission to use their photograph; 3 boys were non-white; 1 boy's photograph was not taken; and 1 boy did not meet the DSM-III criteria for gender identity disorder of childhood or the residual

⁵Because race was not used as a pair-matching variable, non-whites were excluded from both groups to reduce error variance.

Table I. Sample Characteristics

	Group	
	Gender identity disorder	Clinical controls
Age (years)		
\bar{x}	8.1	8.1
SD	2.5	2.4
IQ		
\bar{x}	107.2	113.1
SD	14.3	13.6
Social Class ^a		
\bar{x}	33.4	39.3
SD	12.2	13.2
Marital status		
Married (<i>n</i>)	10	11
Divorced/reconstituted (<i>n</i>)	7	6
Child Behavior Checklist		
Number of elevated scales		
\bar{x}	2.6	2.6
SD	2.3	2.9
Number of items		
\bar{x}	40.1	46.3
SD	15.9	15.0
Sum of items		
\bar{x}	47.8	55.9
SD	21.0	26.1
Internalizing <i>T</i>		
\bar{x}	65.2	65.1
SD	8.2	7.8
Externalizing <i>T</i>		
\bar{x}	60.9	66.7
SD	8.1	8.3

^aHollingshead's four-factor index of social status (absolute range, 8–66).

diagnosis, atypical gender identity disorder. The replacements were selected on a consecutive basis, that is, the next boy referred for gender identity problems, and who was comparable on the four matching criteria, served as the proband. Table I shows that the two groups were closely matched on these four demographic variables. Table I also shows that the two groups of boys showed similar levels of general psychopathology, as judged by maternal report, on the Child Behavior Checklist (Achenbach and Edelbrock, 1981). Of the five measures, only the Externalizing T score was significantly higher for the clinical control boys ($p < 0.05$).

Procedure

At the time of assessment, a colored photograph was taken of each boy, usually from the chest up. The boys were instructed to smile. Subsequent inspection of the photographs showed that only one boy did not smile. The relative surface area of the photograph occupied by the boy was determined by measuring the distance from the boy's left to right shoulder and multiplying this value by the distance from the top of the boy's head to the part of his body that was at the bottom edge of the photograph. This value was then divided by the product of the length and width of the total photograph. The proportion of the photograph occupied by the probands ($\bar{x} = 0.455$) did not differ significantly from the proportion of the photograph occupied by the clinical controls ($\bar{x} = 0.481$), $t < 1$.

The photographs were made into standard 2-inch \times 2-inch (5.1 \times 5.1 cm) slides. The raters were 10 men and 26 women ($\bar{x} = 20.1$ years) in Introductory Psychology at the University of Toronto, who participated in the study for course credit. Each rater was seen individually in a small test room located in a university building. The raters were unaware of the clinical status of the boys. They were informed only that they would be viewing slides of "school-age boys" and that they were to make attractiveness ratings of each youngster. Each of five traits was rated on a 5-point scale: attractive, beautiful, cute, handsome, and pretty. With the exception of the trait "handsome," the other four traits were culled from the previous clinical and research literature (Green, 1987; Stoller, 1968; see also Rubin *et al.*, 1974). The trait "handsome" was included to ascertain whether it would elicit ratings in the direction opposite to that of the other four traits, since it has a stereotypic masculine connotation. The slides of the two groups of boys were presented in one of two quasi-random orders, one the reverse of the other. The order of rating the five traits was randomly determined across the 34 slides. The test room was dark except for a small light that allowed the raters to see their rating sheet. The distance from the rater to a screen was about 9 ft (2.7 m).

Table II. Attractiveness Ratings

Variable ^a	Group				<i>p</i> ^b	<i>d</i>
	Gender identity disorder		Clinical controls			
	\bar{x}	SD	\bar{x}	SD		
Attractive	2.67	0.65	2.30	0.63	0.000	0.58
Beautiful	2.45	0.62	2.03	0.60	0.000	0.69
Cute	2.94	0.65	2.79	0.66	0.100	0.23
Handsome	2.70	0.49	2.44	0.53	0.001	0.49
Pretty	2.29	0.58	1.95	0.53	0.000	0.63
Composite	2.61	0.48	2.30	0.33	0.000	0.94

^a Response scale ranged from 1–5.

^b Multivariate main effect for group, $F(5,30) = 12.7$, $p < .000$; p values are from univariate F tests.

Assessment of Sex-Typed Behavior

At the time of assessment, the sex-typed behavior of both groups of boys was measured in several ways. For the present study, a composite sex-typed score was derived from the following measures: the Draw-a-Person test, a free play task, the proportion of masculine and feminine responses on the Rorschach test, and factor or scale scores on three parent-report questionnaires: the revised Gender Behavior Inventory for Boys; the Games Inventory; and Activity Level, a factor on a modified version of Rowe and Plomin's (1977) temperament questionnaire. All of these measures have distinguished children with gender identity disorder from controls (Zucker, 1992). More detailed descriptions of these measures may be found elsewhere (Zucker *et al.*, 1985, 1992). The composite score was z-transformed such that a higher score reflected greater femininity. Only subjects who had complete data for the sex-typed measures were used for this analysis.

RESULTS

Table II presents the trait ratings. A 2 (Sex of Rater) \times 2 (Group) multivariate analysis of variance (MANOVA) yielded main effects for the sex of rater, $F(5, 30) = 3.0$, $p = 0.025$, and group, $F(5, 30) = 12.7$, $p < 0.000$. Univariate ANOVAS showed that the female raters gave higher attractiveness ratings than did the male raters on all five traits, three of

Table III. Correlations Between Attractiveness Ratings and Demographic Variables

Variable	Group							
	Gender identity disorder				Clinical controls			
	Age	IQ	SC ^a	MS ^b	Age	IQ	SC ^a	MS ^b
Attractive	0.05	0.19	0.06	-0.00	-0.51 ^c	-0.20	-0.08	0.16
Beautiful	-0.17	0.30	0.20	-0.02	-0.66 ^c	0.20	-0.34	0.01
Cute	-0.67 ^c	0.51 ^c	0.22	-0.11	-0.77 ^c	0.43 ^c	-0.09	-0.10
Handsome	-0.11	0.43 ^c	0.24	-0.19	-0.42 ^c	-0.34	-0.14	0.00
Pretty	-0.39	0.44 ^c	0.37	-0.00	-0.51 ^c	0.15	-0.12	0.20
Composite	-0.30	0.43 ^c	0.26	-0.07	-0.74 ^c	0.09	-0.18	0.05

^a Social class.

^b Marital status, dummy variable where 1 = both parents and 2 = mother only/reconstituted.

^c $p \leq 0.05$, one-tailed.

which were statistically significant (all $ps < 0.05$). Effect size, as calculated by d (Glass *et al.*, 1981), ranged from .35 to .58 for rater's sex. Univariate ANOVAS also showed that boys with gender identity disorder had higher attractiveness ratings than the clinical controls on all five traits, four of which were statistically significant (see Table II).

A factor analysis of the attractiveness ratings revealed one strong factor, accounting for 46.9% of the variance. This justified a composite rating, which is also shown in Table II. Effect size ranged from .23 to .69 for the five traits. The effect size for the composite was .94, indicating that the two group means were almost 1 SD apart.

For descriptive purposes, each proband and his control was analyzed separately. Of the 17 pairs, 13 pairs showed a significant multivariate effect (all $ps < 0.05$). Of 65 univariate tests (5 traits per pair), 41 were statistically significant ($p < 0.05$), 34 (82.9%) of which showed that the boy with gender identity disorder was more attractive than his clinical control. Of the remaining 4 pairs, 2 showed a borderline multivariate effect ($p < 0.10$), with subsequent univariate tests showing higher attractiveness ratings for the boy with gender identity disorder. Thus, the between-groups differences did not appear to be limited to a small percentage of the pairs.

Table III shows the correlations between the attractiveness ratings and the four demographic variables: age, IQ, social class, and parents' marital status. It can be seen that parents' social class and marital status were unrelated to the attractiveness ratings for both groups of boys. For the boys with gender identity disorder, age correlated negatively with only

Table IV. Correlation Between Attractiveness Composite and Femininity Composite^a

	Group		
	Gender identity disorder	Clinical controls	Combined
<i>r</i>	0.142	0.458	0.370
<i>p</i> ^b	ns	0.043	0.024
<i>n</i>	14	15	29

^a Only subjects with complete data for the sex-typing measures that formed the composite were retained. For the composite sex-typed measure, the mean *z* score for the boys with gender identity disorder and clinical controls boys was 0.51 (SD = 0.32) and -0.48 (SD = 0.21), respectively, $t(28) = 10.0$, $p < .001$.

^b One-tailed.

one of the five attractiveness traits and the correlation with the composite was not significant. In contrast, age correlated negatively with all of the attractiveness traits for the clinical controls and the correlation with the composite was significant. IQ was positively associated with attractiveness for the boys with gender identity disorder, but much less so for the clinical controls.

Table IV shows the correlation between the composite attractiveness rating and the sex-typed behavior of the two groups. For the combined sample, attractiveness was positively related to femininity ($p = 0.024$, one-tailed). When analyzed by group, the relation was considerably stronger for the clinical controls.

For the combined sample, age was significantly correlated with both attractiveness ($r = -.415$, $p = 0.012$, one-tailed) and femininity ($r = -.267$, $p = 0.08$, one-tailed). The relation between attractiveness and femininity was reduced somewhat when age was partialled out ($r = .296$, $p = 0.063$, one-tailed). For the clinical controls, the correlation between attractiveness and femininity was reduced from .458 to .350 when age was partialled out and was no longer significant ($p = 0.11$, one-tailed).

DISCUSSION

The present study compared the physical attractiveness of boys with gender identity disorder to that of demographically matched boys with other clinical diagnoses. Unlike the previous clinical and research work

(Green, 1987; Roberts *et al.*, 1987; Stoller, 1975), our study examined the physical attractiveness of boys with gender identity disorder at the time of their assessment rather than in infancy, as judged by parental recall. The results showed that university student raters, blind to group status, perceived boys with gender identity disorder to be significantly more attractive than the clinical control boys. Thus, our data suggest that there might well be a developmental continuity to the recalled infant attractiveness reported by the parents of the feminine boys in Green's (1987) study.

It should be noted that four of the five adjectives used were intended to be at least somewhat stereotyped in a feminine direction.⁶ The univariate ANOVAS yielded significant group differences on three of these four adjectives (attractive, beautiful, and pretty). As it turned out, the boys with gender identity disorder were also rated as more handsome, for which we had predicted the reverse. It is possible that this was caused by a halo effect. Because we did not formally pretest the five adjectives for sex-stereotyped connotations, it would appear warranted to do so in subsequent investigations in order to clarify this issue. For example, it would be of interest to test whether the boys with gender identity disorder would receive different attractive ratings than controls on adjectives more clearly identified as relatively masculine vs. feminine.

Although the normative literature implicates the influence of structural, or objective, facial features on attractiveness ratings (cf. Hildebrandt and Fitzgerald, 1979a), our data do not allow us to determine the extent to which the between groups difference was due to such a factor or was the result of socially created, or subjective, influences on physical appearance. It is conceivable that a structural analysis of the boys' faces would yield differences in the direction suggested by Hildebrandt and Fitzgerald (1979a) to be associated with cuteness during infancy. Along the same lines, it appears warranted to analyze infant photographs of boys with gender identity disorder to see if similar properties could be identified. This would be particularly intriguing from a psychosexual perspective, since recent studies have implicated objective properties of infant faces, even newborns, that are correlated with accurate predictions of biological sex (e.g., Gewirtz and Hernandez, 1984, 1985; Gewirtz *et al.*, 1990). For example, Gewirtz *et al.* (1990) found that neonatal sex differences in facial size (female smaller) appear to be a cue used by blind raters to assign sex. Hildebrandt

⁶Most physical attractiveness studies instruct the rater to judge the attractiveness of the stimulus with the simple anchor points of "attractive" vs. "unattractive" or "very cute" vs. "not very cute." One would presume that there are gender-specific notions associated with the perception of attractiveness in males and females. In the present study, we relied on the clinical and normative literature to select adjectives that were hypothesized to be more commonly associated with girls.

and Fitzgerald (1977, 1979b) found that perceived facial “cuteness” predicted college students’ judgments that infants were female which, as noted earlier, is associated with certain physical parameters (Hildebrandt and Fitzgerald, 1979a). Perhaps prefeminine infant boys have facial properties more commonly associated with infant girls.

Regardless of the role of objective facial properties in determining attractiveness, there is clinical evidence (e.g., Green, 1974) that the parents of some feminine boys, particularly the mother’s, dress and style the hair of their sons in a manner that might be construed as cute or unmasculine, possibly even feminine. Clinical experience also suggests that the boys themselves shape their appearance to create a softer, cuter look. This type of evidence would implicate social (subjective) determinants to the attractiveness. When engineered by the boys, the heightened feminine-like attractiveness could even be interpreted as simply a symptom of the underlying cross-gender identification.

Our correlational data on the relation between age and the attractiveness composite implicate social influences, at least to some extent. Age and attractiveness were substantially negatively correlated among the clinical control boys, suggesting that with age these boys were losing the features that elicited the higher (putatively) feminine-valenced attractiveness ratings. In contrast, the relation between age and attractiveness was substantially lower in the gender identity disorder group, suggesting that these boys retained the features that elicited the female-valenced attractiveness ratings.⁷

Like Roberts *et al.* (1987), we found that the correlation between attractiveness and extent of behavioral femininity was significant in the control group but not in the gender identity disorder group. Given the small samples and inconsistent pattern of variance (for attractiveness, greater in the gender group; for femininity, smaller in the gender group — see Tables II and IV) and the possible confounding influence of age, considerable caution is required in attempting to examine the meaning of the difference in correlational patterns.

Among normal preschool boys, Langlois (1986) has reported that physical attractiveness does not confer the same social advantages (e.g., popularity) that have been observed for girls. Because the attractive boys studied by Langlois were less sex-stereotyped than were the unattractive boys, it was suggested that such actual behavioral differences may have eventually resulted in relative exclusion of the attractive boys from the peer

⁷Note in Table III that the adjective “cute” was most strongly negatively related to age among the boys with gender identity disorder. This indicates that this descriptor has a stronger age connotation than the other four traits that were used.

group of boys mainly interested in conventional masculine activities. There is, of course, considerable evidence that boys with gender identity disorder have difficulty affiliating with same-sex peers (Green, 1976). This has been most often explained as a result of their very different sex-typed interests. The results of the present study suggest that a more feminine-like physical appearance is another variable that distinguishes boys with gender identity disorder from other boys. The extent to which appearance plays a significant role in their social interactions and self-perceptions requires further empirical study.

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