

Identity Development and Perceived Parental Behavior as Sources of  
Adolescent Egocentrism

Jeannie Scarfo ©

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**Abstract**

Adolescent egocentrism involves heightened self-consciousness and feelings of uniqueness and invulnerability (Elkind, 1967). Some studies have found that adolescent egocentrism is associated with identity development, whereas other studies have found that egocentrism is associated with perceived parental behavior. The purpose of this investigation was to simultaneously examine the associations between perceived parental behavior, identity development, and adolescent egocentrism. Specifically, we attempted to determine whether the association between perceived parental behavior and adolescent egocentrism observed in previous research stems from identity development, or whether the association between perceived parental behavior and adolescent egocentrism is independent of the identity development process. Four-hundred twenty-five subjects from 12 to 21 years of age completed established measures of perceived parental behavior, identity development and egocentrism. It was found that identity development was more strongly related to egocentrism than was perceived parental behavior, but that perceived parental behavior had a relationship with egocentrism that was in addition to (or separate from) the effect for identity development. The implications of these findings for theories of adolescent egocentrism are discussed.

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### **Identity Development and Perceived Parental Behavior as Sources of Adolescent Egocentrism**

During adolescence many individuals become self-conscious, idealistic, self-centered, and sometimes even obnoxious. Elkind (1967) referred to this phenomenon as "adolescent egocentrism" and claimed it consisted of two specific beliefs: the imaginary audience and the personal fable.

Adolescents' belief in an imaginary audience refers to their tendency to assume that others pay very close attention to them. Adolescents supposedly develop a self-conscious feeling of always "being in the spotlight." They seem unable to differentiate their own point of view and what they feel is important from the views and concerns of other people. They may even assume that their own thoughts are actually shared by others. In sum, the imaginary audience involves an under-differentiation between one's own thoughts and perceptions and those of others (Rebok, 1987, p. 407).

Another common feature of adolescent egocentrism is the belief in a personal fable. The personal fable can be described as a story a person constructs idealizing his or her feelings and experiences (Rebok, 1987, p. 407). Teenagers often pour their every thought into a diary because they consider their feelings and experiences to be unique and intense. They believe no one can, or will, ever understand them. In contrast to the imaginary audience, the personal fable involves an over-differentiation of one's feelings and experiences from those of others (Rebok, 1987). These two beliefs are assumed to account for a variety of typical adolescent behaviours such as their idealism, feelings of invulnerability, faddish dress and their desire for privacy (Elkind, 1967).

#### Formal Operations and Adolescent Egocentrism

Elkind proposed that adolescent egocentrism arose as a by-product of attaining of

formal operations (Elkind, 1967). During adolescence, a dramatic change occurs in cognitive processes, from a concrete to an abstract way of thinking about the world. This change in cognition opens up a whole range of imagined possibilities, among them an ability to engage in recursive thinking. As well, when solving problems adolescents learn to formulate a set of alternatives and to test these alternatives against reality. At this stage, adolescents can begin to take into account the thoughts of others. Adolescents at this stage are supposedly more acutely aware that others have their own thoughts and perceptions, but mistakenly assume that others' thoughts are focused on oneself. For example, they assume that others are as attentive to their appearance and behaviour as they themselves are. This belief results from the difficulty they have in distinguishing their own self-perceptions and self-concerns from those of others. Perhaps because adolescents believe that others pay close attention to them they come to perceive themselves as unique and special. The social consequences are acute self-consciousness and the accompanying imaginary audience and personal fable beliefs.

Although the emergence of formal operations has been a popular explanation of adolescent egocentrism, researchers have failed to find empirical support for this hypothesis. Studies by Goosens (1984), Gray and Hudson (1984), Hudson and Gray (1986), Lapsley, Milstead, Qunitana, Flannery and Buss (1986), O'Connor and Nikolic (1990), Pesce and Harding (1986), Peterson (1982) and Riley, Adams and Nielsen (1984) have found little or no support for the formal operations hypothesis. Due to this consistent lack of support, another explanation of the source of egocentrism is required.

#### Identity Development and Adolescent Egocentrism

A more recent theory is that attempts at identity development may be the source of adolescent egocentrism (O'Connor & Nikolic, 1990). During the identity development

process adolescents are expected to explore life alternatives, make commitments, and establish a sense of self. At this point, adolescents already have a sense of who they were as children, and they are now beginning to develop a sense of the person they might be becoming. As well, they have a sense of the expectations others have of them and they have of themselves. Individuals find themselves immersed in biological, psychological, and social changes and they begin asking themselves, "Who am I?" (Erikson, 1968). Parents and other socialization agents expect young individuals to begin developing their own identities (Violata & Holden, 1988; Williamson & Campbell, 1985), and society grants the individual time and opportunities to develop a coherent set of personal values (Erikson, 1968). Adolescents may therefore become self-conscious in social situations because of their own personal concern with who they are, and because they assume that others will be surveying them closely for signs of individuality, since budding individuality is expected at this time of life. The self-concerns and social demands of the identity development process may lead adolescents to confuse their own concerns with the concerns of others. Their feelings of uniqueness and invulnerability may stem from the fact that having an identity, or having the opportunity to find an identity, is so new to them. Never before have they dealt with the pleasures, difficulties, and responsibilities that come with making choices and defining oneself to others.

O'Connor and Nikolic's (1990) specific hypotheses about the relationship between identity development and egocentrism were based on Marcia's (1966, 1980) conceptualization of identity development as a two-dimensional process. One dimension, "crisis," refers to the extent to which individuals actively question or struggle with their identities and experiment with alternative roles. The second dimension, "commitment," refers to the extent to which individuals possess stable and clearly defined beliefs and values. These two dimensions combine to yield four possible identity statuses: (1) Moratorium or identity crisis, referring to individuals who are exploring but who have not yet arrived at

personal commitments; (2) Achievement, referring to individuals who have been through an identity crisis and who have identified personal and ideological commitments; (3) Foreclosure, referring to individuals who have merely adopted the commitments of others without going through a true crisis; and (4) Diffusion, referring to individuals who have not experienced an identity crisis and who do not have commitments.

In the present study, as in the study by O'Connor and Nikolic (1990), it was hypothesized that adolescent egocentrism would be associated with higher scores on measures of identity crisis and identity achievement, and with lower scores on a measure of identity diffusion. Achievement may be associated with reduced egocentrism among older adults, but having an identity is probably so novel an experience for young people that it may be associated with heightened egocentrism. These predictions have received some empirical support. O'Connor and Nikolic (1990) found that adolescent egocentrism was associated with higher scores on identity crisis, identity achievement, and with lower scores on identity diffusion. It should be noted that Adams, Abraham, and Markstrom (1987) predicted and found that egocentrism was associated with less identity achievement. These conflicting findings may result from the use of different measures of egocentrism, an issue that will be addressed below.

#### Perceived Parental Behavior and Adolescent Egocentrism

Another possible source of adolescent egocentrism is parental behavior. Adams and Jones (1982) believe that an over-reliance upon the cognitive-developmental approach to egocentrism has led researchers to overlook the possible importance of family socialization experiences. Parent-child relations influence children's personality and social development, hence Adams and Jones were concerned with the possible influence of perceived parental behavior on adolescent egocentrism. They hypothesized that positive behaviours such as

physical affection, companionship and interpersonal support would be associated with less self-consciousness. These behaviours may create feelings of mutual interdependence which would serve to minimize the adolescent's sense of uniqueness. Perceived parental rejection and control were expected to be associated with greater egocentrism. In their research it was found that parental support decreases egocentrism, whereas parental rejection-control increases egocentrism (Adams & Jones, 1982).

Other research findings in this area also support the hypotheses that parent-adolescent relationships can contribute to self-consciousness, and that low levels of parental support may make it difficult for adolescents to learn to appreciate other people's points of view (Anolik, 1981, p. 449). These circumstances may lead to a greater concern with the imaginary audience.

The possibility that perceived parental behavior may be a source of adolescent egocentrism was further supported by the research of Riley, Adams and Nielsen (1984). They found that "parental relationship style establishes a foundation for psychological security that either diminishes or ... enhances self-consciousness during early adolescence" (p. 415). "Specifically, parental support and affection diminish self-consciousness, while parental rejection heightens self-consciousness of adolescents" (p.416). This research concluded with the observation that "emotionally supportive parents diminish the likelihood of heightened states of self-consciousness during adolescence" (p.416). Limited parental support may make it difficult for an adolescent to appreciate the views of others. This may result in increased egocentrism in social situations.

#### Perceived Parental Behavior and Identity Development

The above mentioned research indicates that adolescent egocentrism is associated with both identity development and perceived parental behavior. It is therefore not surprising

that perceived parental behavior has been found to influence identity development. Identity development does not occur in a vacuum. Recent research suggests that certain familial and social factors may influence the course of identity development (Grotevant, 1983; Kamptner, 1988).

After reaching puberty, most adolescents inevitably begin to experience their next 'major life event' - separation from their parents. In order to facilitate the transition from dependence upon parents to dependence upon one's self, adolescents must first develop a stable sense of their own identity. Numerous studies reveal that high self-esteem and a clear sense of self are both associated with positive perceptions of, and rewarding relationships with, parents. The family plays an influential and important role in influencing the extent to which adolescents can achieve a sense of independence and personal identity. "Parenting styles characterized by warmth, feelings of ... security ... and frequent demonstrations of praise appear to enhance the identity formation process during adolescence" (Kamptner, 1988, p. 494). As well, the familial security inherent in these styles of parenting "provide the support and trust that aid in the development of self-esteem (as well as) the exploration of alternatives deemed so important for identity consolidation. Exploring and experimenting with identity options assists adolescents in discovering their respective likes and dislikes, skills and abilities, and their unique personal attributes" (p. 495). Once a secure attachment has been developed between an adolescent and his or her own family, the adolescent can then comfortably move away from them in order to build his or her own identity.

Additional support for the importance of perceived parental behavior has come from the research of LaVoie (1976) and Adams and Jones (1983). "Adolescents who were autonomous and self-directed, had parents who were warm, supportive and consistent in rule enforcement and who used inductive discipline" (LaVoie, 1976, p. 373). As well, "advanced identity status formation is associated with warm and supportive parental behaviour" (Adams

& Jones, 1983, p. 255).

The general results in this area of research tend to suggest that supportive parental behavior increases identity development, and that rejection or control decreases identity development (Adams, 1985, Adams & Jones, 1983, Grotevant, 1983; LaVoie, 1976; Kamptner, 1988). Adolescents who are developing their own identities and who have parents who are critical of their emerging individuality may be the individuals who are most prone to adolescent egocentrism.

#### A Model of the Associations Between Perceived Parental Behavior, Identity Development and Adolescent Egocentrism

O'Connor and Nikolic (1990) suggested that identity development processes are the primary source of adolescent egocentrism. However, perceived parental behavior has also been found to be related to egocentrism as well as to identity development. A logical deduction from O'Connor and Nikolic's (1990) hypothesis, therefore, is that perceived parental behavior influences identity development, and identity development, in turn, influences egocentrism. In the proposed model, there is no direct relationship between perceived parental behavior and egocentrism. The effect of perceived parental behavior on egocentrism is completely mediated by identity development.

#### The Present Study

This research was the first study to simultaneously examine perceived parental behavior, identity development and adolescent egocentrism. Specifically, we examined whether the association between perceived parental behavior and adolescent egocentrism is dependent on, or independent of, identity development. The above model of adolescent egocentrism is most properly tested in longitudinal research, which would permit causal

inferences. However, before embarking on such expensive extended research, it is important to know whether it would be worthwhile. The present cross-sectional study used multiple regression analyses to determine whether family variables have a relationship with egocentrism that is in addition to any relationship between identity development and egocentrism. If there is no such separate, additional relationship then there will be tentative support for the above causal model and grounds for longitudinal research. However, if family variables are found to have a relationship with egocentrism that is in addition to any effect of identity development, then the above identity development model would be an incomplete explanation of the source of egocentrism and a new model that incorporates perceived parental behavior as an independent variable would be required.

The present study also attempted to clarify the direction of the relationships between identity development, perceived parental behavior and egocentrism. Specifically, past research (Adams, Abraham, & Markstrom, 1987; Adams & Jones, 1982; Anolik, 1981; Riley, Adams, & Nielsen, 1984) has found that positive parental behaviors enhance identity development and decrease egocentrism. These studies have used the Imaginary Audience Scale (Elkind & Bowen, 1979) to assess egocentrism. However, O'Connor and Nikolic (1990) found that identity development was positively correlated with egocentrism as measured by the Adolescent Egocentrism Scale (Enright, Lapsley & Shukla, 1980) and negatively, but very weakly, correlated with egocentrism as measured by the Imaginary Audience Scale. Therefore, it appears that perceived parental behavior and identity development display a negative relationship with egocentrism when the Imaginary Audience Scale (IAS) is used, and a positive relationship when the Adolescent Egocentrism Scale (AES) is used. The present study used both measures to examine whether this is true. If the expected conflicting findings emerge, the implication will be that the measures of egocentrism require examination and comparison, and that past conclusions about the

positive relationship between parental behavior and egocentrism should be revised.

A serious problem with the research on adolescent egocentrism is that the two primary measures of the construct, the IAS and the AES, are not significantly correlated with one another (Cohn, Millstein, Irwin, Adler, Kegeles, Dolcini, & Stone, 1988; Goossens, Seiffge-Krenke, & Marcoen, 1992; O'Connor & Nikolic, 1990; see also Dolcini, Cohn, Adler, Millstein, Irwin, Kegeles, & Stone, 1989). An examination of the items reveals that while both measures appear to tap public self-consciousness, the IAS also appears to tap low self-esteem (a reluctance to reveal oneself to others) whereas the items of the AES appear quite neutral with regards to self-esteem. Furthermore, the AES appears to measure feelings of uniqueness, whereas the IAS does not. The two measures thus appear to tap different phenomena (Cohn et al., 1988). Therefore, in the present study measures of public self-consciousness, self-esteem, and uniqueness were included in an attempt to confirm these suspected differences between the two primary measures of adolescent egocentrism.

## **Method**

### **Subjects**

After receiving approval from both the Lakehead Board of Education and the Lakehead University Ethics Committee, 425 subjects were recruited from local public schools and high schools (grades 8-13), and from a first year university class. There were 164 males, 254 females, and seven missing values for gender. There were seven 12-year olds; twenty-six 13-year olds; forty-six 14-year olds; forty-nine 15-year olds; sixty-seven 16-year olds; thirty-five 17-year olds; twenty-six 18-year olds; one-hundred twenty-one 19-year olds; thirty-five 20-year olds; and thirteen 21 year-olds. The mean age was 17 years with a standard deviation of 2.3 years.

### Procedure

Subjects were informed that their participation was voluntary and that they were free to withdraw at any time. Public and high school subjects were asked to fill out the questionnaires during class time. Prior to the distribution of questionnaires, parental consent forms were completed and returned (see Appendices A & B). The university students were invited to complete the questionnaire at a pre-arranged time. All subjects were asked to complete a small set of demographic questions (see Appendix C). All responses were kept confidential, and participants were debriefed upon completion.

### Measures

Adolescent Egocentrism. Two measures of adolescent egocentrism were used. The Imaginary Audience Scale (Elkind & Bowen, 1979) consists of twelve items tapping the willingness of adolescents to reveal aspects of oneself to others (see Appendix D). This is a multiple choice questionnaire consisting of the Transient Self Scale (dealing with embarrassing situations of a transient nature that reflect momentary behaviours or appearances) and the Abiding Self Scale (dealing with a person's willingness to reveal more enduring or permanent characteristics of oneself to others). For each item subjects are required to select one of three choices (a) an unwillingness to reveal oneself to others; (b) indifference; or (c) a willingness to reveal oneself to others. High overall scores indicate an unwillingness to self-reveal and are used to infer the existence of an imaginary audience.

The Adolescent Egocentrism Scale (Enright, Lapsley, Drivas & Tehr, 1980) consists of separate sub-scales for the Imaginary Audience (AES-Imaginary Audience), the Personal fable (AES-Personal Fable), and for the tendency to focus attention on oneself (AES-Self-Focus). Subjects are required to rate the importance of each of 15 items on Likert scales (see Appendix E).

Identity Development. Identity development was assessed by the Extended Objective Measure of Ego Identity Status (EOMEIS; Adams, Bennion & Huh, 1987). The EOMEIS is a self-report measure that was designed as a substitute for Marcia's (1966, 1980) Ego Identity Interview. The measure consists of 64 items measuring the presence or absence of crisis and commitment in both ideological and interpersonal realms. There are four subscales, Moratorium, Achievement, Foreclosure, and Diffusion, each composed of 16 items (eight from each realm). The Moratorium scale measures the degree of identity crisis, which is the degree to which individuals are exploring but have not yet arrived at personal commitments; the Achievement scale measures the extent to which individuals have identified personal and ideological commitments; the Foreclosure scale measures the degree to which individuals have merely adopted the commitments of others without reshaping or modification; and the Diffusion scale measures the degree of absence of identity consciousness or identity motivation. Sample items include "I've gone through a period of serious questions about faith and can now say I understand what I believe in as an individual" (Achievement); "I am looking for an acceptable perspective for my own 'life style' view, but haven't really found it yet" (Moratorium); "I might have thought about a lot of different jobs, but there's never really been any question since my parents said what they wanted" (Foreclosure); and "I guess I just kind of enjoy life in general, and I don't see myself living by any particular viewpoint to life" (Diffusion). Responses were provided on 7-point Likert scales ranging from (1) Strongly Disagree to (7) Strongly Agree (see Appendix F).

Perceived Parental Behavior. The measure of perceived parental behavior was that used by Riley, Adams and Nielson (1984). There are seven items tapping parental emotional support and five items tapping parental rejection-control. Subjects were administered the questions for their relationships with each of their parents individually, and indicated their degree of agreement with the items on seven-point scales (see Appendix G). A variety of

measures of perceived parental behavior have been used in research on adolescence, but the one chosen for this study is the only measure that has been associated with both identity development and egocentrism in previous studies (Adams & Jones, 1982, 1983; Anolik, 1981; Riley, Adams, & Neilsen, 1984).

Other Measures. Three other measures were included to help identify the differences between the measures of adolescent egocentrism. Subjects completed the Public Self-Consciousness scale (Fenigstein, Scheier, & Buss, 1975), which measures the tendency to be aware of publicly displayed aspects of oneself. Subjects also completed Rosenberg's (1979) measure of general self-esteem, and two items tapping uniqueness were constructed specifically for this study ("I am special and unique," and "My feelings are special and unique"). The measures can be found in Appendix H.

## **Results**

### Measures

The internal consistency (Cronbach's alpha) values for the measures used in this study ranged from 0.65 to 0.92 and are presented in Table 1. These values indicate moderate to high levels of reliability and are similar to those observed in previous research. The scale means and standard deviations are also reported in Table 1. As in previous research, the two measures of Adolescent Egocentrism were not significantly related,  $r = .05$ . The correlations between the four Identity Development sub-scales ranged from  $-.30$  to  $.35$  and were similar to values reported by Adams, Bennion and Huh (1987).

The three measures that were included to elucidate the differences between the two measures of egocentrism all displayed acceptable levels of internal consistency (alpha = .82 for Public Self-Consciousness, .83 for Self-Esteem, and .86 for Uniqueness). The IAS and the AES displayed the expected pattern of correlations with these three variables. Both

measures were positively associated with Public Self-Consciousness,  $r = .26$ ,  $p < .001$  for the IAS, and  $r = .38$ ,  $p < .001$  for the AES. The AES was positively associated with Uniqueness,  $r = .29$ ,  $p < .001$ , whereas the IAS was negatively associated with Uniqueness,  $r = -.26$ ,  $p < .001$ . Finally, the IAS was negatively associated with Self-Esteem,  $r = -.35$ ,  $p < .001$ , whereas the AES was not significantly related to self-esteem,  $r = .08$ ,  $p = .14$ . High scores on the IAS thus indicate a person who is self-conscious, who feels negative about themselves (low self-esteem) and not very special. This is a person who would rather not reveal themselves to others. In contrast, high scores on the AES indicate a person who is self-conscious, but who does feel unique and who may fall anywhere on the self-esteem continuum. These findings suggest that the AES is clearly the more appropriate and general measure of adolescent egocentrism.

#### Identity Development and Adolescent Egocentrism

The Pearson correlations between the measures of identity development and adolescent egocentrism are presented in Table 2. (The findings for males and females are reported separately because there were occasionally important differences.) The correlations are similar to the coefficients observed by O'Connor and Nikolic (1990). Higher scores on the AES were associated with higher levels of Achievement and Moratorium. For males, higher scores on the IAS were associated with less Achievement, and with higher levels of Moratorium and Diffusion. The effects were generally weaker for females.

#### Perceived Parental Behavior and Adolescent Egocentrism

The correlations between the perceived parental behavior variables and adolescent egocentrism are presented in Table 3. Again, there were differences in the findings for the AES and IAS, and differences between males and females. For males, Emotional Support

from parents was associated with greater AES egocentrism and with less IAS egocentrism. The Emotional Support correlations for females were weak and negligible. Parental Rejection-Control was associated with greater AES egocentrism among females, and maternal Rejection-Control was associated with greater IAS egocentrism among males.

#### Perceived Parental Behavior and Identity Development

The correlations between the perceived parental behavior variables and identity development are reported in Table 4. Among males parental Emotional-Support was associated with greater Achievement and with less Diffusion. Among females Emotional-Support was associated with greater Foreclosure. The only effect for Rejection-Control was a positive association with Moratorium among females.

#### Perceived Parental Behavior, Identity Development and Egocentrism

Hierarchical regression was used to determine whether the identity development variables and perceived parental behavior variables display independent (or separate) associations with egocentrism. The results are reported in Table 5. The Rsquare-change values indicate the increase in variance accounted for by one set of variables after variables from the other set have been entered into the equation. For males, there were significant effects for both sets of variables. In other words, identity development and parental relationships displayed separate and non-overlapping associations with adolescent egocentrism. There were somewhat similar findings for females, but they occurred only on the AES and they were generally weaker.

#### The Effect of Self-Esteem on Correlates of Adolescent Egocentrism

As reported above, self-esteem was significantly correlated with the IAS, a finding

which is at odds with Elkind's (1967) description of egocentrism. The above analyses were therefore performed a second time with self-esteem partialled out, in the hope of clarifying conflicting findings in the present study and in past research. Many of the previously significant correlations for the IAS disappeared when self-esteem was partialled out, whereas the correlations for the AES either remained the same or increased slightly. For example, among males the zero-order correlation between Achievement and the IAS was  $-.17, p < .05$ , whereas the partialled correlation was  $-.01$ . For the AES these coefficients were  $.41, p < .001$ , and  $.45, p < .001$  respectively. The positive correlation between Moratorium and the IAS,  $.26, p < .001$ , remained significant when controlling for self-esteem,  $.26, p < .001$ , as did the correlation for Diffusion among females,  $.13, p < .05$ , and  $.18, p < .01$  respectively.

For the parental variables all of the four previously significant correlations for the IAS (see Table 3) disappeared when self-esteem was partialled out. Only one of the significant correlations for the AES was lost when controlling for self-esteem (mother's Emotional Support went from  $.20$  to  $.06$ ), but the remaining correlations either stayed the same or increased slightly.

Similar results emerged when self-esteem was partialled out in the regression analyses (see Table 5). For males, the Rsquare change for the set of family variables went from  $.08, p < .05$ , to  $.03, p = n.s.$  when self-esteem was partialled out of the IAS, and none of the individual predictors remained significant. The Rsquare change for the set of identity development variables remained unchanged ( $.09$  versus  $.07$ , both  $p < .01$ ), as did the standardized beta weight for Moratorium ( $.29$  versus  $.27$ ). The coefficients for the AES were almost unchanged when controlling for self-esteem.

### Supplementary Analyses

A variety of other analyses were performed, primarily examining age, gender and

subscale differences. Females were more egocentric than males on both the AES ( $M = 4.93$  and  $M = 4.70$ ,  $t = 3.24$ ,  $p = .001$ ) and IAS ( $M = 1.92$  and  $M = 1.78$ ,  $t = 4.70$ ,  $p < .001$ ) whereas males scored higher than females on Achievement ( $M = 4.50$  and  $M = 4.67$ ,  $t = 2.56$ ,  $p = .011$ ), and Foreclosure ( $M = 2.72$  and  $M = 2.45$ ,  $t = 3.12$ ,  $p = .002$ ).

In order to examine age differences subjects were categorized into three groups: 12-15 year olds, 16-18 year olds, and 19-21 year olds. It was found that the younger groups scored higher on Moratorium,  $F(2, 422) = 8.01$ ,  $p = .0004$ , Foreclosure,  $F(2, 422) = 5.50$ ,  $p = .004$ , and Diffusion,  $F(2, 422) = 10.75$ ,  $p < .0001$ , than older groups. There were no age-group differences in egocentrism, and the age-difference findings were essentially the same for males and females.

The various zero-order correlations between the variables were computed for each of the age groups, and for each age group within gender. There were no substantial or consistent differences in the nature of the correlations across age.

All of the above analyses were also performed on the subscales of the IAS and AES, and on the interpersonal and ideological subscales of the measures of identity development. There were only occasional subscale differences in the results, and the differences were small and probably not reliable or meaningful. The subscale results are not reported because they would overwhelm the reader and detract from the central goal of the study.

## Discussion

This was the first study to simultaneously examine perceived parental behavior, identity development and adolescent egocentrism. There were two main purposes of the study: (1) to determine whether perceived parental behavior has a relationship with egocentrism that is in addition to any relationship between identity development and egocentrism, and (2) to attempt to clarify the direction of the relationships between these variables. A variety of

findings emerged, most of which were consistent with previous research.

A key to understanding the various, sometimes conflicting findings is a careful consideration of the measurement of adolescent egocentrism. The two primary measures of this construct (the IAS and AES) were not strongly correlated in the present study or in previous studies (Cohn, Millstein, Irwin, Adler, Kegeles, Dolcini, & Stone, 1988; Goossens, Seiffge-Krenke, & Marcoen, 1992; O'Connor & Nikolic, 1990). The three measures that were included to elucidate the differences between the measures proved informative. Both the IAS and AES tap public self-consciousness, but high scorers on the IAS tend to have low self-esteem and do not feel very special, whereas high scorers on the AES feel unique and may fall anywhere on the self-esteem continuum. A comparison of these findings with Elkind's (1967) original description of adolescent egocentrism reveals that the AES is clearly the better measure. For example, Elkind said that the egocentric adolescent tends to believe that "others are as admiring or as critical of him as he is of himself" (p. 1030). "Admiring or critical" implies an absence of association with self-esteem, which is the case for the AES but not the IAS. Similarly, Elkind said that the egocentric adolescent "comes to regard himself, and particularly his feelings, as special and unique" (p. 1031). In this study feelings of uniqueness were positively correlated with the AES and negatively correlated with the IAS. In sum, the AES seems to be a better measure of Elkind's construct than is Elkind's own measure.

#### Identity Development and Adolescent Egocentrism

The guiding theory of egocentrism in the present study was that the phenomenon is a by-product of identity development processes. Adolescents supposedly become self-conscious because they realize that emerging individuality is expected of them at this time of life, and that others may be attending to them for signs of such individuality. Teenagers may

feel unique and invulnerable because of the novel feelings and autonomy that stem from efforts to create and define oneself. Consistent with this view was the finding that egocentrism (as measured by the AES) was associated with higher levels of identity achievement and identity crisis. This was true for both males and females. The findings for the IAS were noticeably weaker, held only for males, and were different in direction: IAS egocentrism was associated with higher levels of identity crisis and diffusion, and with less identity achievement. These findings were almost identical to those of O'Connor and Nikolic (1990). The apparently contradictory findings for Achievement (it is associated with higher AES egocentrism and with lower IAS egocentrism) seem to be due to the contaminating influence of self-esteem on IAS scores. When self-esteem is statistically controlled the significant negative relationship between the IAS and Achievement, also observed by Adams, Abraham, and Markstrom (1987) disappears. Adolescent egocentrism is thus positively associated with both identity achievement and identity crisis, especially among males.

#### Perceived Parental Behavior and Adolescent Egocentrism

Another possible source of adolescent egocentrism is perceived parental behavior. "Parental relationships may establish a foundation for psychological security that either diminishes or, perhaps, enhances self-consciousness" (Riley, Adams, & Neilsen, 1984, p. 415). In support of this possibility is the finding that parental support and affection are associated with lower levels of IAS egocentrism, whereas parental rejection-control is associated with higher levels of IAS egocentrism (Adams & Jones, 1982; Anolik, 1981; Riley, Adams, & Neilsen, 1984). In the present study similar, although somewhat weaker, findings emerged. Parental emotional support was associated with lower levels of IAS egocentrism (but mainly among males), whereas the correlations for rejection-control were in the expected

direction but were weak or nonsignificant. However, when self-esteem was statistically partialled out of these measures all of the significant correlations between perceived parental behavior and IAS egocentrism disappeared. Thus, the findings that positive parental behavior reduces egocentrism is an artifact of IAS contamination with self-esteem. Positive perceptions of parental behavior seems to increase self-esteem but not egocentrism.

As might be expected, the results for the AES were different: parental emotional support was associated with higher levels of egocentrism among males, and parental rejection-control was associated with higher egocentrism among females. These effects are not mediated by identity development processes, because when the identity variables were controlled in multiple regression equations father's emotional support remained positively associated with egocentrism among males, and mother's rejection-control remained positively associated with egocentrism among females. These gender differences are perplexing and require further investigation.

#### Perceived Parental Behavior and Identity Development

A third set of relationships examined in this study were those between perceived parental behavior and identity development. Previous studies found that parental emotional support is associated with higher levels of identity achievement and moratorium, whereas parental rejection-control is associated with less moratorium and achievement and with greater identity foreclosure and diffusion (Adams, 1985; Adams & Jones, 1983; Lavoie, 1976). However, these findings have not emerged in all previous studies (in which the subjects were usually women) and the pattern was not as apparent in the present results. First, and in accordance with past research, emotional support was associated with higher identity achievement among males. But there were no significant effects for rejection-control. The findings for females were most perplexing: parental emotional support was

associated with greater foreclosure, and parental rejection-control was associated with greater moratorium. The relationship between perceived parental behavior and identity development is therefore not very consistent across studies that have used the same measures. The present findings cannot be easily dismissed because the sample size was 2-3 times larger than those in previous studies. Perhaps sample differences are responsible for the inconsistent results. Or perhaps the measures of perceived parental behavior are too general and that emotional support or rejection-control take different forms which are differentially related to identity development. The explanation of these conflicting findings remains a challenge for future research.

#### Theories of Adolescent Egocentrism

Both identity development and parental relations have been associated with egocentrism during adolescence in previous research. In this study it was hypothesized that the relationship between perceived parental behavior and egocentrism may be mediated by identity development: parental behavior affects identity development, which in turn influences egocentrism. According to this hypothesis, there should be no relationship between parental behavior and egocentrism that is independent of identity development. However, the results of the present research point to a different conclusion: rather than being mediated by the effects of identity development, perceived parental behavior (specifically, father's emotional support for males and mother's rejection-control for females) has a significant direct relationship with adolescent egocentrism that is in addition to the effect of identity development. This points to the need for an expanded model of egocentrism that incorporates perceived parental behavior as a possible influence. However, the precise nature of this influence is perplexing: a theory of egocentrism must be developed to account for why parental emotional support contributes to egocentrism among males, and

why emotional support and rejection-control have varying and sometimes conflicting relationships with egocentrism among females.

Other factors besides identity development and perceived parental behavior also probably contribute to egocentrism. The amount of variance in egocentrism accounted for by the variables in this study was significant but moderate (.12 to .32). This is probably due, in part, to error variance in the measurement of egocentrism and identity development. Although measurement error limits the magnitude of the coefficients that can be obtained, there could very well be other factors that should be incorporated for a more complete understanding of adolescent egocentrism. One possibility has been suggested by Lapsley and Rice (1988), who proposed a social-cognitive, neopsychoanalytic explanation of egocentrism. In this view, the separation-individuation process is considered most important, although in a different way than our own identity development explanation. Specifically, adolescents supposedly develop an imaginary audience in response to separation anxiety. As adolescents de-idealize their perceptions of their parents they suffer "mourning reactions" and fantasize about being admired by others and about having special powers to escape dangerous situations. In sum, the imaginary audience and personal fable are believed to stem from separation anxiety and from early experiences of personal agency and individuation. Perhaps more of the variation in egocentrism scores could be accounted for in future research if measures of these variables are included along with measures of identity development and perceived parental behavior.

In devising a more complete theory of egocentrism it would seem best for researchers to avoid portraying the phenomenon as undesirable or pathological. Elkind's (1967) original account was quite non-evaluative, but subsequent descriptions seem decidedly negative. For example, egocentric adolescents have been described as having unsupportive or rejecting parents, and to be developmentally delayed in some way. The present findings suggest a

neutral, if not positive, picture: egocentric males experienced higher levels of parental support and tended to be identity achieved or at least experiencing an identity crisis. Thus, according to both the identity development and separation-individuation explanations, egocentrism may be a by-product of normal, natural developmental processes.

#### Limitations of the Present Study

There were a variety of limitations with the present study which suggest some caution in interpreting the results. This was a correlational study and so it is not possible to make cause and effect inferences about the relationships between egocentrism and the other variables. Although we used the best measures available, the reliabilities of the measures of egocentrism and identity development were not as high as they should be. Better measures seem necessary, which would perhaps clarify the conflicting findings. Perhaps the present study could be replicated by using structured interviews to assess the various constructs, given Marcia's (1980) arguments favoring this form of assessment. In the present study only "perceived" parental behavior was examined and future researchers could also assess parents' actual behaviors or perceptions. This would seem to be important because of a seemingly common tendency for parents and adolescents to have differing interpretations of each others' behavior.

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**Appendix A**  
**Letter to Parents**

Dear Parent

I am a professor at Lakehead University and I am writing to request your permission to ask your child if he/she would like to participate in a study that I am conducting with a Masters student (Jeannie Nikolic). The purpose of the study is to gather information about social behavior and parental behavior. In the study groups of students will complete a standardized questionnaire (which should take about 40 minutes to complete) in their classroom at school during school time, or they may complete the questionnaire at home. The questionnaire will be available for your scrutiny in the principal's office.

The study has been approved by the Research Ethics Committee of Lakehead University; by the Lakehead Board of Education; and by the school principal. Students will be informed of the nature of the study and will be asked if they would like to participate. No deception is involved, and there are no risks. All contributions will remain completely confidential and participants will be told beforehand that they are free to withdraw at any time. They will be told not to give their names, as names are not required. Participants are also free to inquire about the results once the data have been analyzed. The study is concerned with patterns that are evident in adolescents in general, and a given person's responses are meaningful only in relation to the responses of other participants.

Please sign below, indicating whether or not you are willing to let your child participate in the study. Should you have any questions, please feel free to contact me. I can be reached at 343-8322. Thank you very much.

Sincerely,

Brian O'Connor, Ph.D.

I permit / do not permit my child to participate in the study. (Circle your choice)

Name of child: \_\_\_\_\_

Signed: \_\_\_\_\_  
(signature of parent or guardian)

**Appendix B****Participant's Consent Form**

We are from Lakehead University and we would very much appreciate your help in a study we are conducting. It involves completing a questionnaire, and should take about 40 minutes. The purpose of the study is to gather information about the relationship between social behavior and parental behavior. The study has been approved by the Ethics Committee of Lakehead University; by your school board; and by your school principal. No deception is involved, and there are no risks. Your contributions will remain completely confidential and you are free to withdraw at any time. You are also free to inquire about the results once the data have been analyzed. If you agree to let us use your responses confidentially, please sign below.

I consent to take part in the above study on the relationship between social behavior and parental behavior. I understand that there are no direct benefits to me for participating in the study, and that there are no risks. My responses will remain completely anonymous and confidential. My participation in the study was completely voluntary and I may withdraw at any time. I have also been told that I may obtain a copy of the final results from Dr. Brian O'Connor or Jeannie Nikolic, Department of Psychology, Lakehead University, Thunder Bay, Ontario, P7B 5E1, 343-8322.

Signature: \_\_\_\_\_

Name (please print): \_\_\_\_\_

Date: \_\_\_\_\_

Thank You Very Much

**Appendix C**

**Demographic Questions**

How old are you? \_\_\_\_\_ years      Sex: Male    Female

What grade are you in at school? \_\_\_\_\_

How many brothers and sisters do you have? \_\_\_\_\_

What is your birth order? (i.e., Are you the oldest, second oldest,  
youngest, etc. in your family?) \_\_\_\_\_

## Appendix D

## Imaginary Audience Scale (Elkind &amp; Bowen, 1979)

Please read the following stories carefully and assume that the events actually happened to you. Place a check next to the answer that best describes what you would do or feel in the real situation. There are no right or wrong, or good or bad answers. Just put down what is true for you. Choose only one answer.

1. You have looked forward to the most exciting dress up party of the year. You arrive after an hour's drive from home. Just as the party is beginning, you discover a noticeable grease spot on your pants or skirt. (There is no way to borrow clothes from anyone.) Would you stay or go home?

- Go home.  
 Stay, even though I'd feel uncomfortable.  
 Stay, because the grease spot wouldn't bother me.

2. Let's say some adult visitors came to your school and you were asked to tell them a little bit about yourself.

- I would like that.  
 I would not like that.  
 I wouldn't care.

3. It is Friday afternoon and you have just had your hair cut in preparation for the wedding of a relative that weekend. The barber or hairdresser did a terrible job and your hair looks awful. To make it worse, that night is the most important basketball game of the season and you really want to see it, but there is no way you can keep your head covered without people asking questions. Would you stay home or go to the game anyway?

- Go to the game and not worry about my hair.  
 Go to the game and sit where people won't notice me very much.  
 Stay home.

4. If you went to a party where you did not know most of the kids, would you wonder what they were thinking about you?

- I wouldn't think about it.  
 I would wonder about that a lot.  
 I would wonder about that a little.

5. You are sitting in class and have discovered that your jeans have a small but noticeable split along the side seam. Your teacher has offered extra credit toward his/her course grade to anyone who can write the correct answer to a question on the blackboard. You think you know the correct answer. Would you get up in front of the class and go to the blackboard, or would you remain seated?

- Go to the blackboard as though nothing had happened.  
 Go to the blackboard and try to hide the split.  
 Remain seated.

6. When someone watches me work...

- I get very nervous.  
 I don't mind at all.  
 I get a little nervous.

7. Your class is supposed to have their picture taken, but you fell the day before and scraped your face. You would like to be in the picture but your cheek is red and swollen and looks funny. Would you have your picture taken anyway or stay out of the picture?

- Get the picture taken anyway even though you'd be embarrassed.
- Stay out of the picture.
- Get your picture taken and not worry about it.

8. One young person said, "When I'm with people I get nervous because I worry about how much they like me."

- I feel like this often.
- I never feel like this.
- I feel like this sometimes.

9. You have been looking forward to your friend's party for weeks, but just before you leave for the party your mother tells you that she accidentally washed all your good clothes with a red shirt. Now all your jeans are pink in spots. The only thing left to wear are your jeans that are too big and too baggy. Would you go to the party or would you stay home?

- Go to the party, but buy a new pair of jeans to wear.
- Stay home.
- Go to the party in either the pink or baggy jeans.

10. Suppose you went to a party that you thought was a costume party but when you got there you were the only person wearing a costume. You'd like to stay and have fun with your friends but your costume is very noticeable. Would you stay or go home?

- Go home.
- Stay and have fun joking about your costume.
- Stay, but try to borrow some clothes to wear.

11. Let's say you wrote a story for an assignment your teacher gave you, and she asked you to read it aloud to the rest of the class.

- I would not like that at all.
- I would like that but I would be nervous.
- I would like that.

12. If you were asked to get up in front of the class and talk a little bit about your hobby...

- I wouldn't be nervous at all.
- I would be a little nervous.
- I would be very nervous.

**Appendix E**  
**Adolescent Egocentrism Scale**  
**(Enright, Lapsley, Drivas, & Tehr, 1979)**

The following questions are in the form of statements with which you may agree or disagree. There are no right or wrong, or good or bad, answers. Please just give the most accurate, truthful response for you. If you find any of the questions too personal, you do not have to respond, although it would be most helpful to us if you answered every question. For each question your first impression is probably correct. Using the 1-7 scale below, indicate your degree of agreement with each statement by placing the appropriate number in the blank ("\_\_\_\_") beside each question.

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

**AES-Personal Fable**

- \_\_\_\_ I accept the fact that others don't know what it's like being me.
- \_\_\_\_ I try to get to know other people to better understand why I do the things I do.
- \_\_\_\_ I explain my unique feelings and viewpoints to others so they can get some idea about what I am like.
- \_\_\_\_ I try to tell other people what it's like being me.
- \_\_\_\_ I accept that no one will ever really understand me.

**AES-Imaginary Audience**

- \_\_\_\_ When walking in late to class or to a group meeting I try not to distract everyone's attention.
- \_\_\_\_ I try to figure out how other people will react to my accomplishments and failures.
- \_\_\_\_ I daydream about great successes and think about other peoples' reactions.
- \_\_\_\_ I think about having a lot of money someday and how people will admire that.
- \_\_\_\_ I try to figure out if two people are talking about me when they are looking my way.

**AES-Self-Focus**

- \_\_\_\_ I am becoming very good at being able to think through my own thoughts.
- \_\_\_\_ I think about my own feelings.
- \_\_\_\_ I am very good at knowing what others are thinking of me.
- \_\_\_\_ I know my own thoughts and feelings.
- \_\_\_\_ I think about myself a lot.

## Appendix F

### Extended Objective Measure of Ego Identity Status

(Adams, Bennion, & Huh, 1987)

The following questions are in the form of statements with which you may agree or disagree. There are no right or wrong, or good or bad, answers. Please just give the most accurate, truthful response for you. If you find any of the questions too personal, you do not have to respond, although it would be most helpful to us if you answered every question. For each question your first impression is probably correct. Using the 1-7 scale below, indicate your degree of agreement with each statement by placing the appropriate number in the blank ("\_\_\_\_") beside each question.

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

- \_\_\_\_ 1) I haven't chosen the occupation I really want to get into. I'm just doing whatever I can until something better comes along.
- \_\_\_\_ 2) When it comes to religion I just haven't found anything appeals to me and I don't really feel the need to look.
- \_\_\_\_ 3) My ideas about men's and women's roles are identical to my parents'. What has worked for them will obviously work for me.
- \_\_\_\_ 4) There is no single "life style" which appeals to me more than another.
- \_\_\_\_ 5) There are a lot of different kinds of people. I'm still exploring the many possibilities to find the right kind of friends for me.
- \_\_\_\_ 6) I sometimes join in recreational activities when asked, I rarely try anything on my own.
- \_\_\_\_ 7) I haven't really thought about a "dating style". I'm not concerned whether I date or not.
- \_\_\_\_ 8) Politics is something that I can never be too sure about because things change so fast. But I do think it's important to know what I can politically stand for and believe in.
- \_\_\_\_ 9) I'm still trying to decide how capable I am as a person and what jobs will be right for me.
- \_\_\_\_ 10) I don't give religion much thought and it doesn't bother me one way or the other.
- \_\_\_\_ 11) There are so many ways to divide responsibilities in marriage, I'm trying to decide what will work for me.
- \_\_\_\_ 12) I'm looking for an acceptable perspective for my own "life style" view, but I haven't really found it yet.
- \_\_\_\_ 13) There are many reasons for friendship, but I choose my close friends on the basis of certain values and similarities that I've personally decided on.

- \_\_\_ 14) While I don't have one recreational activity I'm really committed to, I'm experiencing numerous leisure outlets to identify one I can truly enjoy.
- \_\_\_ 15) Based on past experiences, I've chosen the type of dating relationship I want now.
- \_\_\_ 16) I haven't really considered politics. It just doesn't excite me much.
- \_\_\_ 17) I might have thought about a lot of different jobs, but there's never really been any question since my parents said what they wanted me to do.
- \_\_\_ 18) A person's faith is unique to each individual. I've considered and reconsidered it myself and know what I can believe.
- \_\_\_ 19) I've never really seriously considered men's and women's roles in marriage. It just doesn't seem to concern me.
- \_\_\_ 20) After considerable thought I've developed my own individual viewpoint of what is an ideal "life style" and don't believe anyone will be likely to change my perspective.
- \_\_\_ 21) My parents know what is best for me in terms of how to choose friends.
- \_\_\_ 22) I've chosen one or more recreational activities to engage in regularly from lots of things and I'm satisfied with those choices.
- \_\_\_ 23) I don't think about dating much. I just kind of take it as it comes.
- \_\_\_ 24) I guess I'm pretty much like my parents when it comes to politics. I follow what they do in terms of voting and such.
- \_\_\_ 25) I'm really not interested in finding the right job, any job will do. I just seem to flow with what is available.
- \_\_\_ 26) I'm not sure what religion means to me. I'd like to make up my mind but I'm not done looking yet.
- \_\_\_ 27) My ideas about men's and women's roles have come right from my parents and family. I haven't seen any need to look further.
- \_\_\_ 28) My own views on a desirable life style were taught to me by my parents and I don't see any need to question what they taught me.
- \_\_\_ 29) I don't have any real close friends, and I don't think I'm looking for one right now.
- \_\_\_ 30) Sometimes I join in leisure activities, but I really don't see a need to look for a particular activity to do regularly.
- \_\_\_ 31) I'm trying out different types of dating relationships. I just haven't decided what is best for me.
- \_\_\_ 32) There are so many different political parties and ideals. I can't decide which to follow until I figure it all out.
- \_\_\_ 33) It took me a while to figure it out, but now I really know what I want for a career.
- \_\_\_ 34) Religion is confusing to me right now. I keep changing my views on what is right and wrong for me.

- \_\_\_ 35) I've spent some time thinking about men's and women's roles in marriage and I've decided what will work best for me.
- \_\_\_ 36) In finding an acceptable viewpoint to life itself, I find myself engaging in a lot of discussions with others and some self exploration.
- \_\_\_ 37) I only pick friends my parents would approve of.
- \_\_\_ 38) I've always liked doing the same recreational activities my parents do and haven't ever seriously considered anything else.
- \_\_\_ 39) I only go out with the type of people my parents expect me to date.
- \_\_\_ 40) I've thought my political beliefs through and realize I can agree with some and not other aspects of what my parents believe.
- \_\_\_ 41) My parents decided a long time ago what I should go into for employment and I'm following through their plans.
- \_\_\_ 42) I've gone through a period of serious questions about faith and can now say I understand what I believe in as an individual.
- \_\_\_ 43) I've been thinking a lot about the roles that husbands and wives play a lot these days, and I'm trying to make a final decision.
- \_\_\_ 44) My parents' views on life are good enough for me, I don't need anything else.
- \_\_\_ 45) I've had many different friendships and now I have a clear idea of what I look for in a friend.
- \_\_\_ 46) After trying a lot of different recreational activities I've found one or more I really enjoy doing by myself or with friends.
- \_\_\_ 47) My preferences about dating are still in the process of developing. I haven't fully decided yet.
- \_\_\_ 48) I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.
- \_\_\_ 49) It took me a long time to decide but now I know for sure what direction to move in for a career.
- \_\_\_ 50) I attend the same church as my family has always attended. I've never really questioned why.
- \_\_\_ 51) There are many ways that married couples can divide up family responsibilities. I've thought about lots of ways, and now I know exactly how I would want it to happen for me.
- \_\_\_ 52) I guess I just kind of enjoy life in general, and I don't see myself living by any particular viewpoint to life.
- \_\_\_ 53) I don't have any close friends. I just like to hang around with the crowd.
- \_\_\_ 54) I've been experiencing a variety of recreational activities in hopes of finding one or

more I can really enjoy for some time to come.

- \_\_\_ 55) I've dated different types of people and know exactly what my own "unwritten rules" for dating are and who I will date.
- \_\_\_ 56) I really have never been involved in politics enough to have made a firm stand one way or the other.
- \_\_\_ 57) I just can't decide what to do for an occupation. There are so many that have possibilities.
- \_\_\_ 58) I've never really questioned my religion, or my lack of religion. If it's right for my parents it must be right for me.
- \_\_\_ 59) Opinions on men's and women's roles seem so varied that I don't think much about it.
- \_\_\_ 60) After a lot of self-examination I have established a very definite view on what my own life style will be.
- \_\_\_ 61) I really don't know what kind of friend is best for me. I'm trying to figure out exactly what friendship means to me.
- \_\_\_ 62) All of my recreational preferences I got from my parents and I haven't really tried anything else.
- \_\_\_ 63) I date only people my parents would approve of.
- \_\_\_ 64) My parents have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along with accepting what they have.

## Appendix G

### Perceived Parental Behavior (Riley, Adams, & Nielsen, 1984)

The following questions are in the form of statements with which you may agree or disagree. There are no right or wrong, or good or bad, answers. Please just give the most accurate, truthful response for you. If you find any of the questions too personal, you do not have to respond, although it would be most helpful to us if you answered every question. For each question your first impression is probably correct. Using the 1-7 scale below, indicate your degree of agreement with each statement by placing the appropriate number in the blank ("\_\_\_\_") beside each question.

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

#### Father's Emotional Support

- \_\_\_\_ My father trusts me.
- \_\_\_\_ I can count on my father to help me.
- \_\_\_\_ My father feels affection for me.
- \_\_\_\_ My father shows interest and support for me.
- \_\_\_\_ I feel secure in my relationship with my father.
- \_\_\_\_ My father approves of me.
- \_\_\_\_ My father tells me how much he loves me.

#### Father's Emotional Rejection-Control

- \_\_\_\_ My father is always finding faults in me.
- \_\_\_\_ My father tells me how to behave.
- \_\_\_\_ My father often complains about what I do.
- \_\_\_\_ My father is always trying to change me.
- \_\_\_\_ My father is always getting after me.

#### Mother's Emotional Support

- \_\_\_\_ My mother trusts me.
- \_\_\_\_ I can count on my mother to help me.
- \_\_\_\_ My mother feels affection for me.
- \_\_\_\_ My mother shows interest and support for me.

\_\_\_\_\_ I feel secure in my relationship with my mother.

\_\_\_\_\_ My mother approves of me.

\_\_\_\_\_ My mother tells me how much she loves me.

**Mother's Rejection-Control**

\_\_\_\_\_ My mother is always finding faults in me.

\_\_\_\_\_ My mother tells me how to behave.

\_\_\_\_\_ My mother often complains about what I do.

\_\_\_\_\_ My mother is always trying to change me.

\_\_\_\_\_ My mother is always getting after me.

## Appendix H

### Public Self-Consciousness, Self-Esteem, and Uniqueness

The following questions are in the form of statements with which you may agree or disagree. There are no right or wrong, or good or bad, answers. Please just give the most accurate, truthful response for you. If you find any of the questions too personal, you do not have to respond, although it would be most helpful to us if you answered every question. For each question your first impression is probably correct. Using the 1-7 scale below, indicate your degree of agreement with each statement by placing the appropriate number in the blank ("\_\_\_\_") beside each question.

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

#### Public Self-Consciousness

- \_\_\_\_ I care a lot about how I present myself to others.
- \_\_\_\_ I'm self-conscious about the way I look.
- \_\_\_\_ I usually worry about making a good impression.
- \_\_\_\_ Before I leave my house, I check how I look.
- \_\_\_\_ I'm concerned about what other people think of me.
- \_\_\_\_ I'm usually aware of my appearance.

#### Self-Esteem

- \_\_\_\_ On the whole, I am satisfied with myself.
- \_\_\_\_ At times I think I am no good at all.
- \_\_\_\_ I feel that I have a number of good qualities.
- \_\_\_\_ I am able to do things as well as most other people.
- \_\_\_\_ I feel I do not have much to be proud of.
- \_\_\_\_ I certainly feel useless at times.
- \_\_\_\_ I feel that I'm a person of worth, at least on an equal plane with others.
- \_\_\_\_ I wish I could have more respect for myself.
- \_\_\_\_ All in all, I'm inclined to feel that I am a failure.
- \_\_\_\_ I take a positive attitude toward myself.

#### Uniqueness

- \_\_\_\_ I am special and unique.
- \_\_\_\_ My feelings are special and unique.

Table 1

Means, Standard Deviations, and Internal Consistencies

	Mean	Standard Deviation	Cronbach's Alpha
Imaginary Audience Scale	1.87	0.32	.66
Adolescent Egocentrism Scale	4.84	0.68	.70
Achievement	4.61	0.73	.73
Moratorium	3.90	0.69	.69
Foreclosure	2.57	0.82	.82
Diffusion	3.51	0.74	.74
Mother's Emotional support	5.90	1.11	.91
Father's Emotional support	5.26	1.49	.93
Mother's Rejection-control	3.33	1.56	.89
Father's Rejection-control	3.31	1.58	.89

Note. The IAS means are on a 1-to-12 scale, and all other means are on a 1-to-7 scale.

Table 2

## Correlations Between Identity Development and Adolescent Egocentrism

	AES	IAS
<b>Males:</b>		
Achievement	.41a	-.17c
Moratorium	.26a	.27a
Foreclosure	.03	-.07
Diffusion	.01	.28a
<b>Females:</b>		
Achievement	.24a	-.12
Moratorium	.20b	.03
Foreclosure	.08	.13c
Diffusion	-.17b	.11

Note: "a" indicates  $p < .001$ ; "b" indicates  $p < .01$ , "c" indicates  $p < .05$ .

Table 3

## Correlations Between Perceived Parental Behavior and Adolescent Egocentrism

	Emotional Support		Rejection-Control	
	Mother	Father	Mother	Father
<b>Males:</b>				
AES	.20c	.36a	.03	-.02
IAS	-.20c	-.27a	.18c	.14
<b>Females:</b>				
AES	-.12	-.05	.25a	.17b
IAS	-.13c	-.10	.08	.06

Note: "a" indicates  $p < .001$ ; "b" indicates  $p < .01$ , "c" indicates  $p < .05$ .

Table 4

## Correlations Between Perceived Parental Behavior and Identity Development

	Emotional Support		Rejection-Control	
	Mother	Father	Mother	Father
<b>Males:</b>				
Achievement	.17c	.31a	-.09	-.08
Moratorium	-.01	.09	.07	.12
Foreclosure	-.16	.03	.14	.12
Diffusion	-.24b	-.18c	.11	.05
<b>Females:</b>				
Achievement	.13c	.08	-.07	.04
Moratorium	-.13c	-.05	.22a	.15c
Foreclosure	.20b	.25a	-.10	-.04
Diffusion	-.01	-.03	-.05	-.04

Note: "a" indicates  $p < .001$ ; "b" indicates  $p < .01$ , "c" indicates  $p < .05$ .

Table 5

Regression Analyses of Adolescent Egocentrism on Identity Development and Perceived Parental Behavior.

	Males		Females	
	AES	IAS	AES	IAS
<b>Identity Development:</b>				
R <sup>2</sup> Change =	.20a	.09b	.09a	.04
Achievement	.44a	-.04	.19b	-.11
Moratorium	.13	.29b	.22b	-.05
Foreclosure	-.03	-.01	.01	.18c
Diffusion	.08	.03	-.14c	.03
<b>Perceived Parental Behavior:</b>				
R <sup>2</sup> Change =	.06b	.08c	.04	.02
Mother's Emotional support	.11	-.05	.03	-.11
Father's Emotional support	.24b	-.28b	.01	-.09
Mother's Rejection-control	.13	.07	.19c	-.01
Father's Rejection-control	.14	-.06	.04	-.01
Multiple R	.60a	.43a	.39a	.23
Adjusted Rsquare	.32a	.18a	.12a	.02

Note. Coefficients in the same column are from the same regression equation. The coefficients are standardized beta weights, except for the Rsq. change values which represent the increase in Rsquare for one set of variables after entering variables from the other set; "a" indicates  $p < .001$ ; "b" indicates  $p < .01$ ; "c" indicates  $p < .05$ .