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Effects of Physical Atypicality on Children's Social Issues and Intergroup Attitudes

By

Meagan M. Patterson and Rebecca S. Bigler

Abstract:

Individuals vary in the degree to which they are representative, or typical, of their social groups. To investigate the effects of atypicality on intergroup attitudes, elementary-school-age children ($N = 97$) attending a summer school program were assigned to novel color groups that included typical (blue or green) and atypical (light blue or light green) members. Children's state self-esteem, ingroup identification, and intergroup attitudes (e.g., trait ratings, evaluations, peer preferences) were assessed following several weeks in the classroom. Results indicated that atypicality primarily affected children's views of their ingroup. Among younger (but not older) children, atypical group members viewed themselves as more similar to—but less happy being a member of—their ingroup than typical group members.

Effects Of Physical Atypicality On Children's Social Identities And Intergroup Attitudes

Individual members of social groups (e.g., gender, racial, ethnic groups) vary in the degree to which they are typical, or representative, of their groups. Individuals may have preferences (e.g., activity interests), behaviors (e.g., speech patterns), or physical characteristics (e.g., height) that are typical or atypical of the members of their group. So, for example, African American children may have skin coloring that is common or unusual for their racial group; girls may have toy preferences that are common or unusual for their gender. What effect might a child's status as a typical versus atypical group member have on his or her self-perceptions and intergroup attitudes? Despite the important theoretical and applied implications of the answer, little developmental research has addressed this question. Thus, the primary purpose of this study was to experimentally manipulate children's status as typical versus atypical members of novel social groups ("green" and "blue" groups, marked by colored t-shirts) and examine the possible consequent effects on their views of themselves, their peers, and the novel social groups.

Forms of Atypicality

There are several important conceptual distinctions to draw among forms of atypicality. The first important distinction is between physical and psychological atypicality. An individual might differ from his or her social group with respect to some perceptually discriminable characteristic that is correlated with group membership. One might, for example, be unusually tall for a woman. On the other hand, individuals might differ from their group with respect to some internal, or non-observable, attribute. One might, for example, be an exceptionally mathematically gifted woman.

The majority of existing research on atypicality concerns psychological or non-observable (rather than physical) attributes and has been conducted with adults rather than children (Hogg, Hardie, & Reynolds, 1995; Jetten, Branscombe, & Spears, 2002; Jetten, Spears, & Manstead, 2001; Pickett, Bonner, & Coleman, 2002; Roccas & Schwartz, 1993). Non-observable attributes are likely to have received greater attention than observable attributes, in part, because of the greater ease of manipulating psychological atypicality. For example, in a typical paradigm, researchers inform participants that their

values or attitudes are unusual among their peer group (e.g., Pickett et al., 2002). Although the results of such studies (described below) informed our own work, the present study focuses on the consequences of physical atypicality. We chose to focus on physical atypicality because children have a tendency to focus on physical rather than psychological aspects of persons (Livesley & Bromley, 1976; Piaget, 2000) and because anecdotal evidence indicates that children are teased for having physical characteristics that set them apart from their group (Olweus, 1992; Sweeting & West, 2001). In addition, we hoped to relate the results of this study to our broader research program, which concerns the effects of membership in perceptually discriminable groups (e.g., racial and gender groups) on children's development (Bigler, 1995; Bigler, Jones, & Lobliner, 1997; Bigler & Liben, 2006; Patterson & Bigler, 2006).

A second important conceptual distinction is between objective and perceived atypicality. Some forms of atypicality (e.g., height) can be assessed and compared to group norms, allowing an objective computation of deviation. For example, Kreiger (2005, April) collected data about the activity preferences of male and female elementary-school-age children. He then identified children whose activity preferences were unusual for their gender group and examined various possible correlates of gender-atypical activity preferences. It is also possible, however, for individuals to have a *subjective* experience of themselves as typical (or not) of their group that may—or may not—be related to objective indices (e.g., women with high numbers of masculine qualities might nonetheless perceive themselves as typically feminine; see Spence, 1984). The majority of available evidence concerning typicality stems from studies of perceived typicality. That is, researchers typically manipulate participants' perceptions of their typicality rather than participants' actual physical or psychological characteristics (e.g., Jetten et al., 2002; Pickett & Brewer, 2001; Pickett et al., 2002).

In this study, we directly manipulated an objective index of typicality by assigning a small number of children in each of the two color groups ("greens" and "blues") to receive an atypical shirt color. In addition, we assessed children's *perceptions* of similarity to their ingroup and outgroup, thereby allowing us evaluate whether objective atypicality leads children to develop a subjective sense of difference from their ingroup.

A third important conceptual distinction concerns the direction of atypicality. An individual group member may differ from typical ingroup members in a way that brings him or her either closer to, or further from, a contrasting outgroup. So, for example, an African American child might be atypical as a result of being either darker- or lighter-complexioned than his or her African American peers, with the latter placing the child closer in perceptual similarity to European Americans. Most existing research has examined the consequences of possessing characteristics that make one more similar to a targeted outgroup (e.g., Pickett & Brewer, 2001), in part because this condition is thought to threaten the psychological need for intergroup differentiation (Brewer, 2001). Following this tradition, we manipulated atypicality by creating a subgroups within each novel color group that were more—rather than less—similar to the contrasting outgroup.

Outcomes of Atypicality

Although atypicality is likely to affect a wide variety of social process and developmental outcomes, we focused on four primary outcomes: (a) affective reactions to the intra- and intergroup context, (b) ingroup identification, (c) intergroup bias, and (d) intragroup (i.e., typicality) bias. The social psychological literature has examined some of these outcomes and, when relevant, we drew on those studies to form hypotheses.

Few studies have examined children's affective responses to atypicality, although anecdotal reports indicate that children often loathe being different from their peers in their clothing or hairstyles. Although little research has examined individuals' emotional reactions to manipulations of typicality, some work within social psychology has examined the effects of being a marginal group member. Moreland and Levine (1989), for example, examined the effects of believing oneself to be a new member of an established group. They report that group members who believed themselves to be new (and thus in some way atypical) showed more anxiety and less confidence than individuals who were not told that they were entering an established group (Moreland & Levine, 1989). In a related body of work with children, several authors have reported that self-perceived gender typicality relates to psychological adjustment (Egan & Perry, 2001; Smith & Leaper, 2006), with those children who report being more typical showing

higher self-esteem than those children who report being atypical. In addition, some evolutionary theorists have argued that a sense of group belongingness is central to human psychological functioning (Fishbein, 2002) and that identities that fail to support a sense of belongingness are associated with dysfunctional outcomes. In order to examine children's affective reactions to atypicality, we asked children to complete a state self-esteem scale (Heatherton & Polivy, 1991). We expected such a measure to be sensitive to effects of atypicality within the classroom on children's transitory perceptions of their self-worth and personal competence. We expected that children who were assigned typical status in their color groups would show higher levels of state self-esteem than their atypical peers.

A good deal of theoretical and empirical work within social psychology has examined the effects of typicality on ingroup identification. Brewer (2001) proposed a theoretical model aimed at explaining the motivational biases that drive social identification and intergroup attitudes. She argued that individuals seek simultaneously to maximize group assimilation and differentiation, achieving a level of "optimal distinctiveness." As a consequence, she argued, individuals identify most strongly with, and are most loyal to, those groups that provide a sense of similarity to *and* difference from others. Individuals who subjectively experience self-categorization that is too individuated, including individuals who are, or feel, atypical of their ingroup, are expected to maximize their ingroup identification.

Support for Brewer's model comes from studies that manipulate adults' sense of typicality. Pickett, Bonner, and Coleman (2002), for example, found that participants who were told they were different from ingroup members (a threat to ingroup assimilation) stated that they personally possessed typical ingroup characteristics more often than participants who were told that they were similar to ingroup members. The authors interpreted the findings as indicating that atypicality produces increased ingroup identification.

Other work, however, indicates that atypical individuals respond in the opposite manner. Jetten and colleagues (Jetten et al., 2001, 2002) reported that atypical group members have less secure group identities than typical members, particularly when atypicality is expected to continue over time. As a consequence, atypical individuals disidentify with the ingroup, basing their self-esteem more strongly on

the self than on the group. Peripheral group members have also been found to show low group loyalty and low motivation to work for the group if they expect their peripheral status to continue over time (Jetten, Branscombe, Spears, & McKimmie, 2003).

We expected our manipulation of atypicality to pose a serious threat to children's identities as color group members because the atypical characteristic (shirt color) was both perceptually salient and permanent (at least within the school setting). We were unsure, however, about how children would respond to this threat. According to Brewer, atypical children should be highly motivated to identify with their ingroup, thereby satisfying their need for assimilation (i.e., inclusion and security). According to Jetten and colleagues (Jetten et al., 2001, 2003), in contrast, atypical children should be motivated to disidentify with their color group, showing weaker attachment to the ingroup than typical group members. We tested these competing hypotheses by comparing typical and atypical children's ratings of the importance of their group membership, happiness with their group membership, and similarity to ingroup members.

Social psychological studies have also examined effects of atypicality on ingroup bias. Jetten and colleagues have argued that atypicality leads individuals to develop insecure group membership, which in turn leads to higher levels of ingroup bias (Jetten et al., 2001). Consistent with this notion, Jetten et al. (2001) reported that adults show higher level of ingroup bias when similarity between ingroups and outgroups is high than when it is low. Other researchers have also reported that threats to individuals' pride and self-esteem produce elevated levels of ingroup bias (Cameron, Duck, Terry, & Lalonde, 2005). To examine intergroup bias, we asked children to report their perceptions of the traits of ingroup and outgroup members, their ratings of the competencies of the ingroup and outgroup, and their preferences for ingroup and outgroup peers. We expected atypical children to show higher levels of ingroup bias than typical children.

Perceptions of Atypicality

In addition to affecting individuals' intergroup attitudes and self-perceptions, atypicality is likely to affect one's treatment by others and such treatment may serve to magnify or minimize the

consequences of being atypical. That is, effects of typicality on intergroup attitudes and self-perceptions may be moderated by other individuals' (both ingroup and outgroup members) perceptions and treatment of typical and atypical individuals (Freeman, 1987; Rogers & Ritter, 2002; Sczesny & Kuhnen, 2004). Thus, in addition to examining the effects of typicality on children's attitudes toward their novel social group, we examined children's perceptions of typical and atypical group members.

Social psychological research on individuals' perceptions of atypical ingroup members indicates that members who deviate from group norms attract more attention than those who conform (Mullen, 1991). The attention is not, however, necessarily positive. Typicality has been found to be an important determinant of liking, with individuals favoring typical over atypical ingroup members (Hogg et al., 1995). Furthermore, atypical group members have sometimes been found to be the targets of exclusion or derogation (Frable, Blackston, & Scherbaum, 1990).

Peer relations is one of the few domains in which research on typicality has been conducted with children. Abrams and colleagues have conducted extensive research on subjective group dynamics and exclusion of deviant ingroup members (also called the "black sheep" effect; see Abrams, Marques, Bown, & Henson, 2000; Abrams, Rutland, & Cameron, 2003; Marques, Abrams, Paez, & Martinez-Taboada, 1998). These researchers have found that children consistently show a preference for ingroup members who conform to group norms over ingroup members who violate group norms. The patterns of findings from these intergroup studies appear to generalize to studies of actual social groups. Research indicates, for example, that boys who engage in gender atypical behavior are especially likely to be socially rejected by their peers (Crick, 1997; Smith & Leaper, 2006). Furthermore, psychological adjustment of gender atypical children is, at least partially, moderated by peer acceptance (Smith & Leaper, 2006).

Based on extant research (Abrams et al., 2000), we expected typical children within both color groups to show preferences for their typical over atypical peers. Less clear was what to expect from atypical members. It seemed possible that atypical peers might share others' view that typical peers are preferable to atypical peers. Given children's tendency to form ingroup biases, it also seemed possible that atypical children would show preferences for other atypical peers over typical peers.

Finally, it is important to consider the possibility that age may mediate or moderate the effect of typicality on children's intergroup attitudes. Younger atypical children (unlike their older counterparts) might fail to psychologically differentiate typical and atypical group members, and thus identify strongly with their ingroup. In a study of gender attitudes, for example, Martin, Wood, and Little (1990) found that young children ignored individuating information about atypicality and relied on category membership in predicting the toy preferences of other children. On the other hand, young children's reliance on perceptual cues (Aboud, 1988; Livesly & Bromley, 1973; Piaget, 2000) may lead younger (but not older) atypical children to identify primarily with their atypical subgroup (e.g., light-blue children), rather than with their broader ingroup (e.g., blue-shirted children), and thus show low levels of ingroup identification and intergroup bias.

Method

Participants were 97 elementary-school-age children (48 boys, 49 girls) attending a summer school program in the Midwest. Forty-eight additional students were enrolled in the program (and wore colored shirts) but were not tested because of school absences ($n = 14$) or lack of parental consent ($n = 34$). Participants ranged in age from 70 months (5 years, 10 months) to 143 months (11 years, 11 months), $M = 107$ months (8 years, 10 months), $SD = 18.15$ months. For children in the typical condition, the age range was 75 to 139 months, $M = 107$ months; for children in the atypical condition, the age range was 70 to 143 months, $M = 108$ months. The majority of the children ($n = 89$) were European American; 3 were Asian American, 3 were Latino, and 2 were biracial (African American and European American). Prior to the start of the study, children were grouped according to age and assigned to one of eight classrooms. Classes ranged in size from 17 to 19 pupils.

Overview of Procedure

On the first day of summer school, children in each classroom were randomly assigned to novel social groups ('green' or 'blue') denoted by colored t-shirts. This paradigm has been employed to study a range of questions concerning intergroup attitudes (e.g., Bigler, 1995; Bigler, Brown, & Markell, 2001; Bigler et al., 1997), in part because it allows for experimenter control over group characteristics (e.g.,

discriminability, size). To manipulate typically, each color group consisted of two hues. The majority of children in each classroom (13-15 per classroom) wore shirts of a medium hue (half wore royal blue; half wore kelly green), whereas a minority of the children (2-3 per color group per classroom) wore shirts of a lighter hue (light blue or light green). Thus, atypical group members were more—rather than less—similar to members of the outgroup.

Over the course of the summer school program, children's teachers made frequent use of the color groups in daily classroom interactions. Teachers used these social groups to label children (e.g., "The blue and green groups are both doing a nice job!") and organize their classrooms (e.g., desks were arranged by color group). Teachers were, however, instructed to treat the two groups equally and to prevent competition between the novel groups because these conditions have been found to promote negative intergroup relations (Sherif, Harvey, White, Hood, & Sherif, 1956). Teachers did not label or otherwise make reference to light or dark subgroups and treated typical and atypical group members identically.

After four weeks, children whose parents had given permission were interviewed by one of three (two female, one male) trained interviewers. Children were given measures of self and group attitudes similar to those used in previous research (Bigler, 1995; Brown & Bigler, 2002), including assessments of state self-esteem, group satisfaction, perceived similarity to group members, group evaluations, and peer preferences. Measures were presented in the following set order: peer preference, state self-esteem, group importance, group happiness, trait ratings, group preference, competency ratings, group similarity, light/dark favoritism. The peer preference and state self-esteem measures were given first because these measures did not explicitly label groups.

Dependent Measures

State Self-esteem

Participants completed a measure of state self-esteem based on the State Self Esteem Scale (Heatherton & Polivy, 1991). Fifteen of the original 16 items on the scale were retained; wording was modified to be more appropriate for children. Children were asked how much they agreed with statements

about their thoughts and feelings (e.g., “Right now, I feel good about myself.”). Response options were “not at all” (1), “a little bit” (2), and “pretty much” (3). Responses were summed across items and averaged, and thus possible scores ranged from 1 to 3, with higher scores indicating more positive state self-esteem. Cronbach’s alpha for this scale was $\alpha = .72$.

Attitudes Toward Color Groups

Group importance. Participants were asked, “How important is being a blue [green] group member to you?” with response options ranging from “not important” (0) to “very important” (3).

Group happiness. Participants were asked, “How happy are you to be in the blue [green] group?” with response options ranging from “not happy” (0) to “very happy” (3).

Group preference. Participants were asked, “If you could choose the color of your shirt, would you choose a blue shirt or a green shirt?” and “If a new student came to your class, would that student choose a blue shirt, a green shirt, or either one?”

Self-Group similarity. Participants were asked to rate the veracity of seven statements that assessed perceived similarity to members of one’s own color group, based on Egan and Perry’s (2001) gender typicality scale (e.g., “I fit in with the other kids in the blue [green] group.”). Response options ranged from “really true” (1) to “really not true” (4). Unfortunately, the Cronbach’s alpha for this scale was $\alpha = .35$, indicating that children simultaneously endorsed that the views that they were similar to, and different from, their ingroup. Because of the unacceptably low reliability, this scale was not subjected to further statistical analyses.

In addition, participants rated their similarity to each of the color groups (“How much are you like the kids in the blue [green] group?”) on a scale from “not at all alike” (0) to “a lot alike” (4). We subtracted children’s ratings of the outgroup from their ratings of the ingroup to create a single index of bias. Thus, positive scores indicate higher similarity to the ingroup and negative scores indicate higher similarity to the outgroup.

Bias norms. Participants rated the veracity of three statements regarding their ingroup’s norms for intergroup behavior, based on questions developed by Egan and Perry (2001). The statements included:

(a) “The kids who are in the green [blue] group think that green [blue] kids should all do the same kind of things;” (b) “The kids who are in the green [blue] group think that green [blue] kids should only play with green [blue] kids;” and (c) “I think kids who are in the green [blue] group should play just with green [blue] kids”. Response options ranged from “really not true” (1) to “really true” (4) Thus, possible scores ranged from 3 to 12, with higher scores indicating stronger perceptions of biased group norms. Cronbach alpha for this scale was $\alpha = .73$.

Peer preferences. Participants rated how much they liked to play with each other child in their class, using the response options “a lot” (3), “a little” (2), and “not too much” (1). Average scores were computed for ingroup and outgroup peers and for typical and atypical peers. To obtain a single index of *intergroup* bias, we subtracted children’s ratings of outgroup peers from their ratings of ingroup peers. Thus, higher positive scores indicate greater ingroup bias. To obtain a single index of *intragroup* bias, we subtracted children’s ratings of atypical peers from their ratings of typical peers. Thus, higher positive scores indicate greater bias in favor of typical group members.

Trait ratings. Participants rated how many members of each color group possessed seven positive traits (friendly, helpful, nice, pretty/handsome, smart, good, hard working), as in previous research by Bigler and colleagues (Bigler, 1995; Bigler et al., 1997; Bigler et al., 2001; Brown & Bigler, 2002). Children gave two judgments for each of the seven traits, one for blue group members and one for green group members. Response options were “all of the green [blue] group” (3), “most of the green [blue] group” (2), “some of the green [blue] group” (1), or “none of the green [blue] group” (0). Possible overall scores ranged from 0 to 21, with higher scores indicating a more favorable view of the target group. Following the procedures of Bigler and colleagues (Bigler et al., 1997; Brown & Bigler, 2002), we subtracted children’s ratings of the outgroup from their ratings of the ingroup to create a single index of bias. Thus, higher positive scores indicate greater ingroup bias.

Competency ratings. Participants were asked to predict the performance of the two color groups in both positive and negative contexts. For example, children predicted which color group would win a spelling bee and earn the most time-outs for negative classroom behavior. Children could choose that the

ingroup, the outgroup, or a tie. The scale contained six items. Negative events were reverse-scored and thus possible scores ranged from 0 to 6, with higher scores indicating greater ingroup bias.

Attitudes Toward Typical and Atypical Group Members

Trait ratings. Participants rated the veracity of three statements about typical and atypical children, each with the phrasing “Most dark [light] shirted kids *really are* _____ than light [dark] shirted kids.” The traits included smarter, nicer, and better-looking. Children gave two judgments for each of the three statements, one for typical (i.e., dark-shirted) children and one for atypical (i.e., light-shirted) children. Response options were “not true” (0), “a little true” (1), and “really true” (2). Possible scores ranged from 0 to 6, with higher scores indicating more positive evaluations.

Perceptions of peers’ trait ratings. Participants rated the veracity of a parallel set of statements about their peers’ view of typical and atypical children (e.g., “Most dark [light] shirted kids *think they are* _____ than light [dark] shirted kids”). Children gave two judgments for each of the three statements, one for typical children and one for atypical children. Response options were “not true” (0), “a little true” (1), and “really true” (2). Possible scores ranged from 0 to 6, with higher scores indicating greater belief that the target group peers (i.e., atypical and typical children) endorse ingroup biased attitudes.

Perceptions of peers’ bias. To examine whether children perceived their peers (both typical and atypical) to endorse ingroup biased attitudes based on false (e.g., they think that they are better than us, but they really *aren’t*) rather than accurate (e.g., they think that they are better than us and they really *are*) assessments of group traits, ratings of actual peer characteristics were subtracted from ratings of perceived peer characteristics to obtain a score of perceived bias. Separate scores were computed for ratings of typical and atypical peers. Positive scores indicate that the child perceived his or her peers (typical or atypical) to believe themselves to possess more positive characteristics than was warranted (i.e., the peers showed ingroup bias). Negative scores, in contrast, indicate that the child perceived his or her peers to have more positive characteristics than the peers themselves claimed to possess (i.e., the peers showed humility).

Typicality-based preferences. Children were asked (a) which shade of green [blue] they preferred, and (b) which shade of green [blue] they thought other children preferred. For each question, children selected either “light” or “dark.”

Results

Overview and Preliminary Analyses

Our primary research question concerned the effects of typicality on children’s intergroup attitudes. By definition, our experimental groups (i.e., typical and atypical) were necessarily of unequal sizes. Because analyses of variance with discrepant cell sizes result in a significant loss of statistical power, we used regression analyses to examine the effects of typicality on each of the dependent variables. In order to reduce the number of predictor variables, and because there was no theoretical or empirical reason to expect that attitudes toward novel groups would vary according to gender (see Bigler et al., 2001), we ran preliminary regression analyses that included participant gender as a predictor variable. Gender was not a significant predictor of responding on any of the measures and was dropped from subsequent analyses.

Thus, for all dependent measures, regression models were run in which participant age (in months, centered on mean age), experimental group (dummy coded), and the age by experimental group interaction term served as predictor variables. For follow-up analyses of interactions, regression slopes of the effects of age at each level of typicality with 95% confidence intervals were plotted and the results were examined. A summary of dependent variables, including means and standard deviations, appears in Table 1.

State Self-esteem

The overall model was nonsignificant, $F(3, 82) = 2.33, p > .05, R^2 = .08$. Neither age, typicality, nor their interaction was a significant predictor of state self-esteem. Overall, children showed relatively high levels of state self-esteem ($M = 2.38, SD = 0.33$).

Attitudes Toward Color Groups

Group importance. Results indicated the overall model was nonsignificant, $F(3, 93) = 1.48, p > .10, R^2 = .05$. Neither age, typicality, nor their interaction was a significant predictor of ratings of group importance. Overall, children rated their group membership as moderately important (i.e., midway between “a little” and “pretty” important).

Group happiness. The overall model was significant, $F(3, 93) = 3.36, p < .05, R^2 = .10$. Results indicated a marginally significant effect of typicality, $\beta = 0.17, t(92) = 1.73, p = .086$. This effect was subsumed by a significant age x typicality interaction, $\beta = -0.47, t(92) = 2.40, p < .05$, indicating differential effects of typicality among children of different ages. Regression slopes with 95% confidence intervals (presented in Figure 1) indicated effects of typicality among younger (but not older) children. Among participants below the age of approximately 8 years, typical children were happier with their color group membership than atypical children.

Group preference. Children were asked if they would like to keep or change their color group membership. A greater percentage of typical children (87%) than atypical children (75%) wanted to keep their group membership.

Children were also asked which color group they thought a new child entering their classroom would prefer to join. A greater percentage of typical children (49%) than of atypical children (36%) stated that a new child entering the classroom would choose their ingroup.

Self-Group similarity. In order to obtain a single index of similarity bias, children’s ratings of similarity to the outgroup were subtracted from their ratings of similarity to the ingroup. Thus, positive scores indicate greater similarity to the ingroup than the outgroup, whereas negative scores indicate greater similarity to the outgroup than the ingroup. A regression analysis was conducted with age, typicality, and age x typicality interaction as predictors of perceived similarity. The overall model was marginally significant, $F(3,91) = 2.42, p = .07, R^2 = .07$. Results indicated marginally significant effects of typicality, $\beta = -0.18, t(90) = -1.82, p = .072$, and age, $\beta = -0.38, t(90) = -1.90, p = .061$. These effects were subsumed, however, by a significant age x typicality interaction, $\beta = 0.43, t(90) = 2.12, p < .05$. Regression slopes with 95% confidence intervals (presented in Figure 2) indicated effects of typicality

among younger (but not older) children. Among participants below the age of approximately 8 1 / 2 years, atypical children perceived themselves to be more similar to the ingroup than typical children.

A one-sample t-test for the entire sample indicated that participants' scores were significantly different from unbiased responding (0), $M = 0.65$, $t(95) = 3.98$, $p < .01$. Separate one-sample t-tests for typical and atypical group members indicated that both typical, $M = 0.49$, $t(67) = 2.48$, $p < .05$, and atypical, $M = 1.07$, $t(26) = 3.74$, $p < .01$, group members perceived themselves to be significantly more similar to their ingroup than their outgroup.

Bias norms. A regression analysis was conducted with age, typicality, and age x typicality interaction as predictors of perceived norms of ingroup bias. Results indicated the overall model was nonsignificant, $F(3, 92) = 0.96$, $p > .10$, $R^2 = .03$. Neither age, typicality, nor their interaction was a significant predictor of ratings of group norms. Overall, children did not perceive their ingroup to endorse norms of ingroup-biased behavior ($M = 5.11$, $SD = 2.75$).

Peer preferences—intergroup. To obtain a single index of bias, we subtracted children's ratings of outgroup peers from their ratings of ingroup peers. Thus, higher positive scores indicate greater ingroup bias. A regression analysis was conducted with age, typicality, and age x typicality interaction as predictors of peer bias. Results indicated the overall model was nonsignificant, $F(3, 92) = 0.89$, $p > .10$, $R^2 = .03$. Neither age, typicality, nor their interaction was a significant predictor of intergroup bias in peer preference ratings.

A one-sample t-test for the entire sample indicated that participants' ratings were not significantly different from unbiased responding (0). Separate one-sample t-tests for typical and atypical group members indicated that neither was significantly different from chance.

Trait ratings. A regression analysis was conducted with age, typicality, and age x typicality interaction as predictors of trait bias. Results indicated the overall model was nonsignificant, $F(3, 93) = 0.57$, $p > .10$, $R^2 = .02$. Neither age, typicality, nor their interaction was a significant predictor of ingroup bias on trait ratings.

A one-sample t-test for the entire sample indicated that participants' scores were not significantly different from unbiased responding (0). Separate one-sample t-tests for typical and atypical group members indicated that, although typical group members demonstrated higher bias ratings than atypical group members ($M_s = 0.45$ & 0.04 , respectively), neither group's ratings were significantly different from chance.

Competency ratings. A regression analysis was conducted with age, typicality, and age x typicality interaction as predictors of ingroup bias in ratings of hypothetical events. The overall model was significant, $F(3, 93) = 4.16, p < .01, R^2 = .12$. Results indicated age was a significant predictor of ingroup bias in ratings of the outcomes of hypothetical events, $\beta = -0.50, t(92) = -2.57, p < .05$, with younger children showing more ingroup bias in ratings of the outcomes of hypothetical events than older children. Neither typicality nor the age by typicality interaction was a significant predictor of ingroup bias on competency ratings.

A one-sample t-test for the entire sample indicated that ratings of competency were significantly higher than unbiased responding (0), $M = 2.25, t(97) = 13.20, p < .01$. Separate one-sample t-tests for typical and atypical group members indicated that both typical and atypical group members stated that their group would win significantly more contests than would be expected if responding had been unbiased, $M_{TYP} = 2.26, t(68) = 11.63, p < .01, M_{ATYP} = 2.21, t(27) = 6.32, p < .01$.

Attitudes Toward Typical and Atypical Group Members

Trait ratings. We first conducted regression analyses with participant age, typicality, and the age by typicality interaction term as predictors of children's belief that one group of children (typical or atypical) was actually smarter, nicer, and better looking than the other. Separate models were run for ratings of typical and atypical group members. For *typical* targets, the overall model was significant, $F(3, 92) = 4.00, p < .05, R^2 = .12$. However, neither age, typicality, nor the interaction term was a significant predictor of perceived traits of typical children.

For *atypical* targets, the overall model was significant, $F(3, 92) = 6.33, p < .01, R^2 = .17$. Age, typicality, and the age by typicality interaction were all significant predictors of perceived traits of

atypical children. Results indicated that younger children perceived atypical children more positively than did older children, $\beta = -0.68$, $t(91) = -3.58$, $p < .01$. In addition, atypical children perceived atypical children more positively than did typical children, $\beta = -0.24$, $t(91) = -2.55$, $p < .01$. These main effects were subsumed, however, by a significant age by typicality interaction, $\beta = 0.49$, $t(91) = 2.60$, $p < .05$. Regression slopes with 95% confidence intervals (presented in Figure 3) indicated effects of typicality among younger (but not older) children. Among participants below the age of approximately 9 years, atypical children perceived atypical children more positively than did typical children.

Perceptions of peers' trait ratings. We next examined children's ratings of typical and atypical group members' attitudes regarding subgroups (i.e., whether light or dark shirted children believed themselves to be smarter, nicer, and better looking than dark or light shirted children). Regression analyses were run in which age, typicality, and age x typicality interaction served as predictors of perceived attitudes. Separate models were run for ratings of typical and atypical group members.

For *typical* targets, the overall model was nonsignificant, $F(3, 91) = 1.54$, $p > .10$, $R^2 = .05$. For *atypical* targets, the overall model was significant, $F(3, 92) = 6.72$, $p < .01$, $R^2 = .18$. Age and the age by typicality interaction term were significant predictors of perceived group views of atypical children. Results indicated that younger children believed atypical children to have more positive views of their ingroup than did older children, $\beta = -0.84$, $t(91) = -4.46$, $p < .01$. This effect was subsumed by a significant age by typicality interaction, $\beta = 0.67$, $t(91) = 3.58$, $p < .01$. Regression slopes with 95% confidence intervals (presented in Figure 4) indicated differing effects of typicality among younger and older children. Among participants below the age of approximately 8 years, atypical children perceived atypical children to have more positive perceptions of their subgroup than did typical children. Among participants above the age of approximately 10 1/2 years, however, atypical children perceived atypical children to have more *negative* perceptions of their subgroup than did typical children. Typicality did not appear to differentially affect the perceptions of peers' trait ratings for children in the middle range of ages.

Perceptions of peers' ingroup bias. Finally, we examined children's ratings of perceived subgroup bias by typical and atypical group members (i.e., whether light or dark shirted children believed themselves to be smarter, nicer, and better looking than they really were). Regression analyses were conducted in which age, typicality, and age x typicality interaction term served as predictors of perceived subgroup bias. Separate models were run for rating of typical and atypical group members.

For *typical* targets, the overall model was nonsignificant, $F(3, 91) = 1.81, p > .10, R^2 = .06$. Neither age, typicality, nor the interaction term were significant predictors of the degree of subgroup bias children perceived their typical peers to endorse. For *atypical* targets, the overall model was again nonsignificant, $F(3, 91) = 1.89, p > .10, R^2 = .06$. Again, neither age, typicality, nor the interaction term were significant predictors of the degree of subgroup bias children perceived to their atypical peers to endorse.

Peer preferences—typicality. To obtain a single index of bias, we subtracted children's ratings of atypical peers from their ratings of typical peers. Thus, higher positive scores indicate greater bias in favor of typical peers. A regression analysis was conducted with age, typicality, and age x typicality interaction as predictors was again conducted. Results indicated the overall model was nonsignificant, $F(3, 92) = 0.33, p > .10, R^2 = .01$. Neither age, typicality, nor their interaction was a significant predictor of bias in ratings of atypical peers.

In order to examine whether atypical children were rejected by their peers (consistent with the “black sheep” effect), a paired-samples t-test comparing children's ratings of typical and atypical peers was conducted. Results indicated that atypical children did not receive lower peer preference ratings than their typical peers. In fact, atypical children received significantly higher peer preference ratings than typical children, $t(94) = -3.98, p < .01, Ms = 2.15 \& 1.95$, respectively.

Typicality group preference. Children were also asked to state which shade (light or dark) of their group color they preferred and which shade they thought others preferred. When asked which shade they preferred, 81% of typical children and 35% of atypical children stated that they preferred the typical group color. That is, both typical and atypical children preferred their own group status, although the

atypical children showed lower levels of preference for their own status than typical children (65% versus 81%, respectively). When asked what shade others preferred, however, a majority of children in both groups (67% of dark-shirted children and 72% of light-shirted children) stated that other children would prefer to be typical members of the color groups.

Discussion

The primary purpose of this study was to examine the effects of being a typical versus atypical member of a social group on children's transitory self-esteem, ingroup identification, and intergroup attitudes. To do so, we randomly assigned children to typical versus atypical group status and, after several weeks, gave children multiple measures of self-views and intergroup attitudes.

Most notably, results indicated several effects of typicality on children's identification with their ingroup. There was, for example, a significant effect of typicality on younger (but not older) children's happiness with their color group membership. Children who were atypical members of their color group rated themselves as less happy with their ingroup than children who were typical members of their color group. Furthermore, among younger children, more atypical than typical children stated that they would prefer to change color groups (33% versus 11%) and expected an individual who was new to the classroom to prefer the outgroup (33% versus 25%). The direction of these effects is consistent with those reported by Jetten and colleagues (Jetten et al., 2001, 2002) who have reported that atypicality leads to decreased ingroup identification.

Results also indicated a significant effect of typicality on young (but not older) children's perceptions of their similarity to the color groups. Children who were atypical for their color group rated themselves as more similar to their ingroup than children who were typical for their color group. That is, young children who wore shirts that were unusual for their color group claimed to be more similar to the members of their color group than their peers who wore shirts that were typical for their color group. This finding is consistent with Brewer's (2001) prediction that group members who feel overly distinctive will strive to maximize their ingroup identification. That is, young children may have viewed their

atypicality as threatening to their sense of belonging to the ingroup, and as a reaction to that threat, came to view themselves as similar to their ingroup (as in Lee & Ottati, 1995; Pickett & Brewer, 2001).

These results partially replicate those within the social psychological literature, despite using markedly different manipulations of typicality. It is unclear, however, why younger but not older children responded to atypicality by showing heightened ingroup identification and reduced happiness with their ingroup. One possible explanation concerns our use of a perceptually salient marker of atypicality. Given young children's greater reliance than older children on perceptual characteristics in making judgments about people, it seems possible that the manipulation of atypicality was functionally stronger among younger than older children. Older children might, in contrast, experience psychological atypicality as more threatening than younger children. Indeed, anecdotal evidence suggests that the children's strong desire to fit in with peers in terms of appearance lessens over time. Future research should examine the consequences of psychological atypicality (e.g., endorsing beliefs that are not shared by group members) on children's intergroup attitudes.

In contrast to the findings concerning children's identification and happiness with their groups, there was little evidence that being a typical or atypical member of a group affected levels of intergroup bias. Interestingly, children in this study demonstrated lower levels of intergroup bias than children in earlier studies using the same paradigm (e.g., Bigler et al., 1997; Bigler et al., 2001). One possible explanation for this finding is that greater variability among group members discourages the formation of strong ingroup biases. That is, social groups whose members vary markedly along perceptually salient dimensions may become the basis of weaker ingroup biases than social groups whose members are highly similar. Future research should further examine the effects of perceptual diversity among group members on intergroup attitudes.

Children's perceptions of typical and atypical peers were also assessed. Although most children expressed a preference for whatever status (typical or atypical) they were assigned, atypical children were more likely to express a desire to change their status than typical children. The majority of children (both typical and atypical) also endorsed the belief that most *other* children would prefer to be typical than

atypical members of social groups. This finding is consistent with previous research indicating that children dislike being members of atypical or minority groups (Brown & Bigler, 2002). Despite the fact that atypical group members were more likely to want to change status, atypical children's levels of state self-esteem were equivalent those of typical children. Thus, being marked as atypical for one's group did not appear to affect individuals' self-views negatively.

In addition to endorsing biased views of group members based on their typicality, children reported that their peers shared their bias favoring their own subgroup. Younger atypical children reported that their atypical peers (both blue and green) endorsed the view that atypical children are superior to typical children. Older atypical children, in contrast, did not endorse this view. There were no age differences among typical children; both younger and older typical children stated that their peers endorsed the view that typical children are slightly superior to atypical children. This finding is consistent with research on minority status indicating that children who are members of numerical minority groups are especially likely to demonstrate ingroup bias and believe that their peers do the same (Brown & Bigler, 2002). In addition, this finding suggests that contexts in which group membership is emphasized may encourage children to develop biases regarding relevant—but unlabeled—subgroups, as well as labeled groups.

One surprising finding of this study is that atypical children received higher peer preference ratings than typical children. This finding conflicts with previous studies suggesting that atypical individuals are often rejected by their peers (Abrams et al., 2000; Smith & Leaper, 2006). Again, our use of a physical marker of atypicality may account for this discrepancy. Previous research has examined the consequence of behaving in ways that are atypical for one's ingroup (e.g., violating ingroup norms). Atypical children in this study did not differ systematically from their peers in behavior or endorsement of group norms. Atypical children may have received more attention than typical children (see Mullen, 1991) and, because they did not differ from other children in their psychological or behavior characteristics (due to the random assignment of typical versus atypical status), this greater attention may have resulted in more positive ratings.

As is true of most research conducted in naturalistic settings, there are important limitations to this study, and thus it is necessary to use caution in interpreting the findings. Perhaps most importantly, the manipulation of typicality required that we create small groups of children who differed from their peers, and as a result, the sample size for this group is relatively small. It will be important for future work to replicate these findings with larger samples. In addition, it should be noted that this research was conducted with a group of relatively homogenous children attending summer school, who may differ from other children in systematic ways. Finally, the manipulation of typicality in this study differs from the experience of typicality in many naturally occurring social groups (e.g., racial and gender groups). For example, children's experience was temporally constrained and limited to one dimension of difference (rather than a complex set of characteristics). In addition, although the use of the novel groups was extensive within the classroom setting, it did not extend to other environments. Nonetheless, novel group studies such as this one are valuable for establishing the existence of possible causal relations between correlated variables (e.g., atypicality and low self-esteem). Consistency of findings across naturalistic and experimental studies will allow us to be especially confident in our conclusions about the ways in which children's experiences in social groups affect developmental outcomes.

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Perceptions of peers' trait ratings

11 Typical	1.44	1.81	0 – 6
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12 Atypical	1.32	1.59	0 – 6
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Perceptions of peers' subgroup bias

13 Typical	-0.15	1.93	-6 – 6
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14 Atypical	-0.01	1.59	-6 – 6
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15 Peer preferences	-0.20	0.49	-2 – 2
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Note. * $p < .05$, † $p < .07$

Table 1 continued.

Variable	Correlation				
	11	12	13	14	15
1 Age	-.158	-.254*	.156	-.021	.039
2 State self-esteem	-.240*	-.078	-.044	.074	.045
Ingroup identification					
3 Group importance	.148	-.068	.042	-.191†	-.275*
4 Group happiness	.157	-.136	-.081	-.274*	-.079
5 Group similarity bias	.104	-.017	.097	-.068	-.013
Intergroup bias					
6 Trait ratings	-.118	-.341*	.096	-.267*	.064
7 Competency ratings	.257*	.118	.058	-.058	-.082
8 Peer preferences	.121	.078	.152	-.002	.149
Intragroup/typicality bias					
Trait ratings					
9 Typical	.434*	.357*	-.536*	.050	-.051
10 Atypical	.431*	.518*	.102	-.463*	-.210*

Perceptions of peers' trait ratings

11 Typical	.537*	.528*	.123	.030
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12 Atypical	.168	.518*	.015	
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Perceptions of peers' subgroup bias

13 Typical		.071	.076	
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14 Atypical			.015	
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15 Peer preferences

Figure 1.

Effects of Typicality and Age on Happiness with Group Membership.

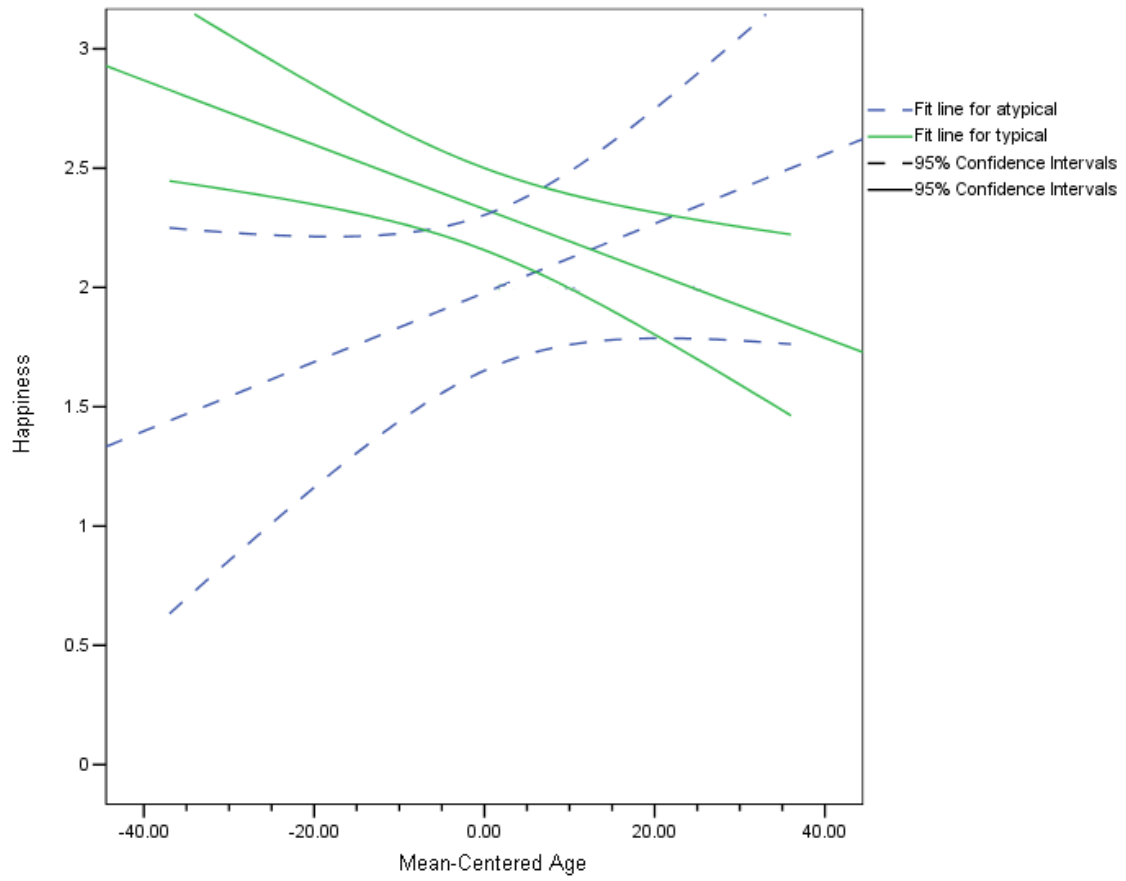


Figure 2.

Effects of Typicality and Age on Perceived Similarity.

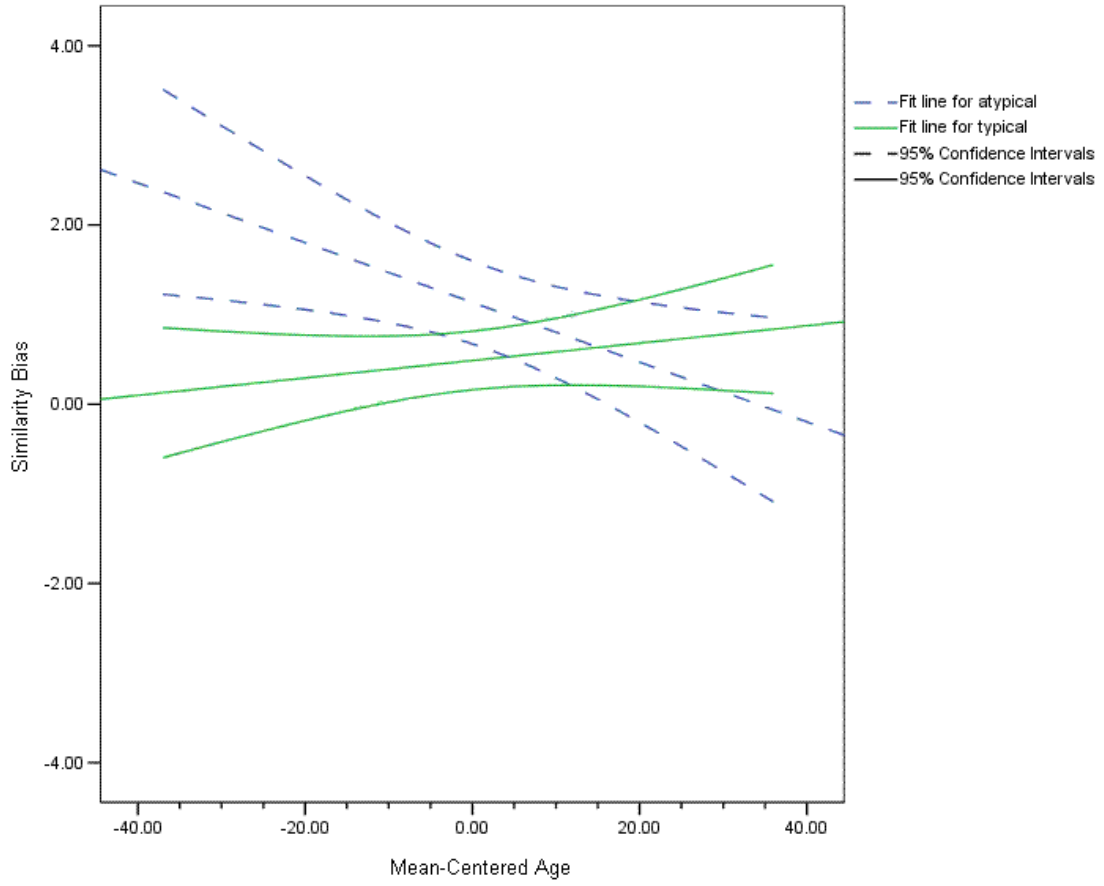


Figure 3.

Effects of Typicality and Age on Trait Ratings of Atypical Targets.

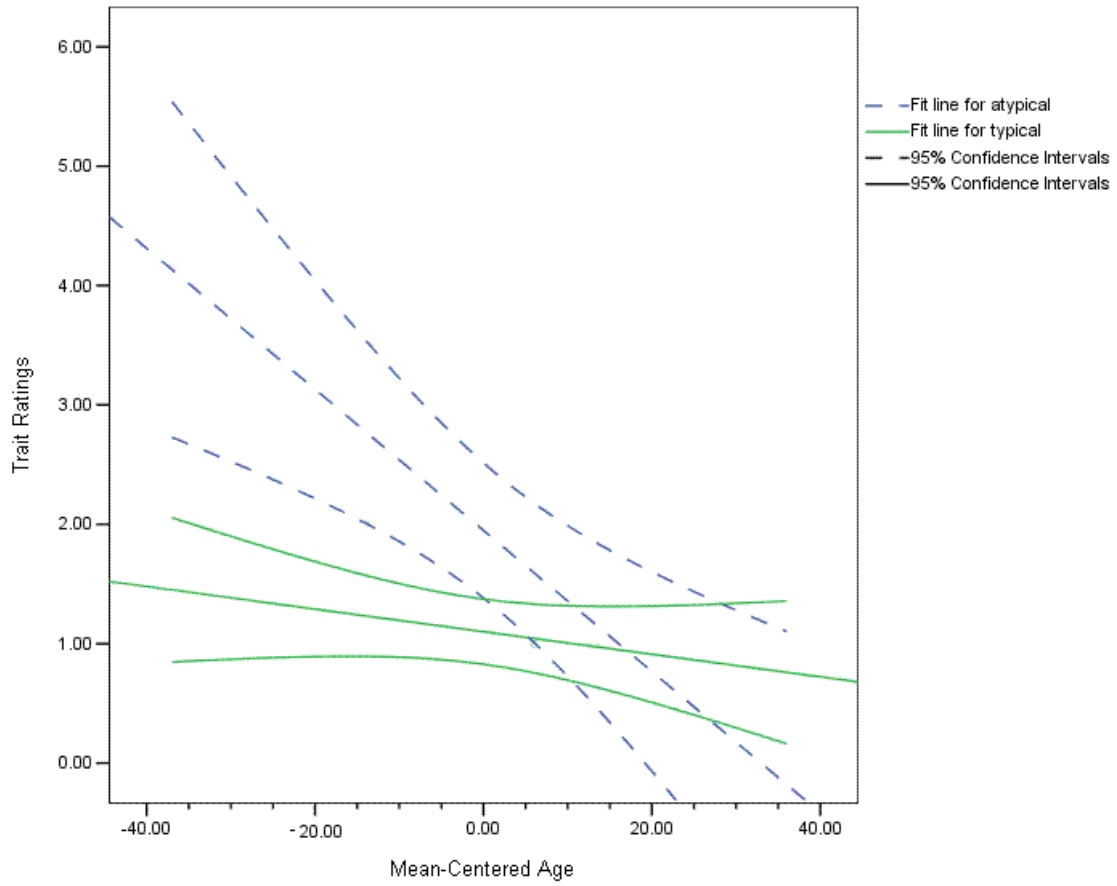


Figure 4.

Effects of Typicality and Age on Perceptions of Peers' Trait Ratings of Atypical Targets.

