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Gender Stereotyping in Young Children: Evidence to Support a Concept-Learning Approach[1]

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Two studies on early gender stereotyping based on a concept-learning approach were conducted. With the use of a forced choice format, study 1 found that both 2½ and 3½-year-old children showed significant and equal stereotyping of both gender-labeled infants and animals. These findings suggest both early learning and generalization of gender stereotypes. In study 2, although 5-year-olds stereotyped more strongly than 3-year-olds, both groups stereotyped others significantly more than themselves. When attributing traits to themselves, children chose the more socially desirable rather than the gender-traditional attributes. These findings are discussed in terms of the acquisition of gender stereotypes as a process distinct from the necessity for related self-schemas.

The process of gender-role acquisition has come under recent scrutiny by theorists who utilize information processing and cognitive models to integrate and advance our understanding of this complex process. Constantinople's model (1979) treats learning of gender roles as rule acquisition; Pleck (1975) has suggested that language acquisition is a fruitful model for understanding sex role acquisition; and Martin and Halverson (1981) have adopted schema models. These models place gender typing in the context of normal cognitive development and have raised new research issues. Yet, the origin of very early gender-role learning is not well understood or empirically documented.

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Some of the more recent cognitive models implicate self-attributions or schemas in the early phases of gender-role acquisition. Bem (1981) proposed that the young child learns an associative network that includes the particular behaviors and attitudes linked to sex. The learning of gender-role standards is viewed in the context of an evolving gender schema that has organizing and anticipatory functions. According to Bem, the child is concomitantly learning to evaluate him- or herself; i.e., the self-concept becomes tied to (or assimilated into) a gender schema. Martin and Halverson (1981) also view the child as developing gender schemas based on self-categorization as boys or girls. For martin and Halverson, gender typing schemas are self-defining schemas. Although Martin and Halverson acknowledge that matching self to others of the same gender may not be a basis of the early course of gender-role development, they propose that gender-typing information is acquired in relationships to the child's self-definition. In this model, gender identity, though not necessarily gender constancy, is a necessary condition for the development of a gender schema, and thus for gender-role learning. Gender understanding is implicated in the development of self-schemas, with the assumption that genderized self-schemas could not develop if there were not an awareness of what category (male or female) was the self-defining one. With the exception of Constantinople (1979), the more recent schema models do not acknowledge that the learning of gender stereotypes may be a process that does not depend on self-attributions or even awareness of one's own gender.

In contrast, we would suggest that early gender-role acquisition is concerned with the association of gender and stereotyped attributes and behavior, and need not necessarily concern the self at all. Studies by Haugh, Hoffman, and Cowan (1980), Kuhn, Nash, and Brucken (1978), Reis and Wright (1982), and Weinraub, Clemens, Sockloff, Ethridge, Gracely, and Myers (1984) have demonstrated that gender-role differentiation occurs by the age of 3. Haugh et al. (1980) found that children as young as 3-years-old significantly stereotyped an infant labeled boy or girl on trait attributions. They suggested that early gender stereotyping may be best explained on the basis of verbal associative concept learning.

According to Anglin (1977), the child first learns the names of objects likely to be acted upon or salient in his or her world. These words are likely to be acquired from mothers naming objects and people for the child. Anglin's work on early conceptual development indicates a positive relationship between performance on order of acquisition of category labels of word concepts and frequency of occurrence in children's spoken language, as catalogued by Rinsland (1945). "People" words are the second-most frequently occurring category in children's speech, including the words *boy, girl, lady, man, men,* and *women,* and these words are among the earliest words learned. Additionally, Macnamara's work (1982) shows that by the time they are able to speak, children are able to refer to material objects either as an individual

or as an exemplar of a class. In a study by Anglin (1977) of the relationship between order of acquisition of words and adult judgment (kindergarten teachers) of behavioral equivalence, the only inconsistency occurring between children and teachers was on the set of terms *boy, children, people.* Whereas teachers thought *children* to have the most behavioral equivalence, children acquired *boy* first. This study and other work on early naming suggest that genderized labels may be a more significant part of the child's early verbal environment than most other categories and hence may provide a readily available basis for early associative stereotype learning.

Once these gender labels are acquired, children learn to associate these verbal stimuli with attributes, behaviors, and roles. In the present model, the learning of stereotypes would require only that there be a discriminative stimulus (e.g., *boy, girl*) that is probably verbal and that indicates gender, associated with a set of attributes. Additionally, the concept, male or female, through generalization or extension, may come to be elicited by features of the environment such as physical features, clothing, or a genderized first name (Haugh et al., 1980). The degree to which an individual regards him- or herself as masculine or feminine, i.e., gender typing, may well be a later process, building upon the gender stereotypes acquired earlier. For a simple learning model of stereotype acquisition, that the child is a boy or girl and knows it may be unimportant, and self-schemas would not be a necessary component of stereotype acquisition.

The present research does not assess gender identity or constancy for two reasons. First, not all studies show gender understanding prior to stereotype acquisition. Thompson (1975) found that children at 24 months did not perform as well in applying gender labels to themselves (55%) as to others (87%). More recently, Weinraub et al. (1984) have shown that the majority of 26-month-old children in their study of sex role acquisition were able to demonstrate verbal gender labeling of pictures of males and females, whereas verbal and nonverbal gender identity were not observed in the majority until 31 months. Interestingly, verbal gender identity occurred prior to nonverbal gender identity and the two measures were not significantly correlated. This study illustrates the difficulty of assessing ages for attainment of gender identity and constancy, as varying ages for attainment have depended on the task used and the theoretical model employed (Martin & Halverson, 1983). Secondly, and more importantly, the presence of gender identity or constancy does not preclude stereotype acquisition as a process independent of self-schema. Awareness of one's own gender does not necessarily indicate that the awareness is a critical component of stereotype acquisition.

If stereotype acquisition obeys the laws of simple associative learning, such stereotyping should show stimulus generalization (extension). Hence children should stereotype animals as well as babies on a set of trait attribu-

tions if those animals are associated with gender labels. Study 1 extends the Haugh, Hoffman, and Cowan (1980) paradigm to the study of stereotyping of animals in order to empirically demonstrate stimulus generalization of the gender concept. Additionally, study 1 extends the age of stereotyping downward to 2-½ to determine if children younger on the average than 3 are able to stereotype. Kuhn et al. (1978) found stereotyping earlier than the age of 3 but not for abstract trait categories. Study 1 also differs from the Haugh et al. study (1980) in the materials used to elicit the stereotypes. Haugh et al. showed children videotapes of 12-month-old infants engaging in a wide variety of behaviors. The present study uses still photographs of infants and animals. If early stereotyping is as robust as expected, the use of simpler and less engaging stimuli should also elicit stereotypes.

Study 2 examines another implication of a model of stereotype acquisition that does not depend on self-schemas. If the self is an important early component of gender stereotyping, as Martin and Halverson (1981) and Bem (1981) have suggested, children should not only stereotype others but also themselves. If, as we have proposed, the learning of gender stereotypes in the early phase of gender-role acquisition occurs independently of self-schemas, young children should be able to demonstrate stereotype acquisition without stereotyping themselves. Self-stereotyping may develop on the basis of self-schemas and previously learned gender stereotypes; however, self-schemas are likely to be based on more than gender stereotypes. For example, social desirability of self-concept or self-esteem may play a more critical role in how one labels oneself, regardless of gender, in which the *good* of *good girl* or *good boy* has more in common than the gender. Also, self-stereotyping may be more reality based than other stereotyping; i.e., children can make observations of their own behavior and subsequently include these more inductively based generalizations into their self-schemas. For example, a boy who is smaller than others of his peer group may conclude that he is "little" as compared to "big," regardless of the stereotype that boys are bigger than girls. D. Bem's model of self-perception (1972), though not applied to the process of gender typing, would suggest that self-attributions depend on our observations of our own behavior. Further, in labeling ourselves, we are subject to repeat self-observations over time, compared to the labeling of the generalized other. A cognitive bias in comparing attributions of traits to ourselves compared to others is the actor-observer difference in attributions; actors are less likely to utilize trait explanations for their own behavior than for the behavior of others (Jones & Nisbett, 1971). These attributional factors are likely to complicate the process of self-stereotyping.

In study 2, children are given the opportunity to stereotype themselves as well as to demonstrate their knowledge of gender stereotypes. No relationship should be found between self- and other stereotyping. Because other

stereotyping is assumed to reflect basic concept-formation processes unencumbered by issues of self-observation, esteem maintenance, and attributional biases, children should stereotype others more than themselves.

If gender is the major concept learned and the attributes associated with gender are merely elaborations of the concept, children should be more likely to demonstrate stereotype acquisition if the concept (gender) is the stimulus and they are asked to select the attribute associated with it than if the attribute is given first and they are asked to identify the associated gender. Objects (sortals) are apparently primary in the child's early semantic world, and attributes are grounded in objects and are learned later than objects (Macnamara, 1982). In his work on early naming, Macnamara concluded that the child's environment is individuated in terms of objects, not attributes. Thus, an additional exploratory dimension in study 2 was the variation in presentation of the stimuli for other stereotyping. Though not critical to any particular model of gender, this hypothesis is based on a conceptualization of stereotype acquisition as concept learning.

STUDY 1

Method

Subjects. Seventy-two children, 18 girls and 18 boys from each of 2½ to 3-year-old (range: 30 to 40 months, $M = 33$) and 3½ to 4-year-old (range: 42 to 51 months, $M = 45$) age groups participated in the study. Participants were from four preschools in the inland southern California area that varied in their orientations: one private religious, two private secular, and one college. Participating children represented diverse racial, religious, and socioeconomic backgrounds, varied in the number of hours each spent in preschool each week, and were selected randomly from the 92 children who had returned written parental permission to participate (of 120 children receiving letters requesting permission).

Materials. A pair of color 21.6-cm × 25.4-cm photographs were selected for each of the infant, dog, and horse stimuli; each photograph was mounted on a white mat board with a 1.27-cm border. Each stimulus pair was matched as closely as possible by experimenters for attractiveness and to prevent discernment of actual gender. While for each pair of infants, one picture was actually of a male and one of a female, pre-experimental examination indicated that for both infant and animal stimuli, pilot subjects, who were children of varying ages, chose both stimuli in each pair equally often as the male or the female when not labeled by the experimenter. A .61 × .91 m black flannel board was used to display the individual stimulus pairs.

Procedure. All children were tested utilizing the infant stimulus pair. Half the children within each age and sex group were randomly assigned to see either the infant or the animal stimulus pair first, to have either the dog or the horse stimuli, and to one of twocontrol conditions in which they were told either that picture A of a pair was a "boy" and B was a "girl" or vice versa.

Each child was tested individually by a female experimenter in a room located at his or her preschool. Before presentation of the stimuli each child was told that s/he was to watch very closely as s/he would be asked some questions about the pictures. When the stimulus pair was presented, each picture was identified by gender and with a genderized first name according to the condition to which the child was assigned. With the use of a correction procedure, each subject was asked to identify which photo was the boy and which the girl, a task the children found relatively easy, with all able to respond correctly three times in succession before proceeding. Each child was then questioned regarding the eight bipolar adjective pairs selected for the study. These adjective pairs were derived by Haugh et al. (1980) to represent common attributes indicated as gender stereotyped by adults and by children in prior literature, and were responded to in a gender-stereotyping direction in their study as well: *big*/little, *mad*/scared, *fast*/slow, *strong*/weak, nice/*mean*, quiet/*loud*, *smart*/dumb, and soft/*hard*.[3] Following the procedure of Haugh et al., for both the infant and animal stimuli, when a pair was presented, each child was told by way of example, "One of these babies (or dogs or horses) is big (or little) and one is little (or big); point to the baby (or dog or horse) which is big (or little," thus creating a forced-choice situation. Two separate random orders for presenting the adjective-pair list were used. The presenting order for each adjective within a pair was randomized, as was the left or right position of stimuli in a pair for successive trials. The entire procedure lasted approximately 10 to 15 min per child.

Results

A three-factor mixed analysis of variance, Age (2) × Sex (2) × Stimulus (2)—infant or animal—with repeated measures on the last factor, was performed on the number of gender stereotypic of eight possible choices to each of the infant and animal stimuli. There were no significant main or interaction effects indicated in this analysis and therefore no differences in the number of stereotypic response made by boys or girls in either age group and no difference in stereotypic responses to the infant or animal stimuli (overall $M = 5.18$). In all, children across sex and age responded in a gender-

[3]Italicized attributes are associated with males.

stereotypic manner to both the infant stimuli (64%, 373 of 576 choices, $\chi^2(1, N = 576^4) = 50.17, p < .001$, and to the animal stimuli (62.2%, 358 of 576 choices), $\chi^2(1, N = 576) = 34.02, p < .001$. Children responded in a significantly stereotypic manner to both the dog stimulus pair (59.38%, 171 of 288 choices), $\chi^2(1, N = 288) = 10.13, p < .01$, and the horse stimulus pair (64.93%, 187 of 288 choices), $\chi^2(1, N = 288) = 25.68, p < .001$. Chi-square analyses revealed no order effects, i.e., whether children were shown the infant or animal stimuli first, and no differences based on which picture of a pair was labeled as the boy or the girl. For the total sample, five of the eight bipolar adjective pairs were responded to in a gender-stereotypic direction for both the infant and the animal stimulus pairs: big/little, fast/slow, strong/weak, quiet/loud, soft/hard. Significant gender stereotyping was obtained for nice/mean only for the infant stimuli and for mad/scared only for the animal stimuli, $\chi^2(1, N = 72)$: values for each of these analyses were significant beyond the .01 level.

STUDY 2

Method

Subjects. One hundred and forty four boys and girls, 72 3-year-olds (range: 36 to 47 months: $M = 41.6$) and 72 5-year-olds (range: 60 to 71 months: $M = 64$) participated. These children were selected from six different preschools in the inland southern California area. As in study 1, the children participating represented diverse racial, religious, and socioeconomic backgrounds, varied in the number of hours each spent in preschool a week, and were randomly selected from those who returned written parental permission to participate (232 of 279 letters).

Materials. Drawings in black ink on white cardboard 26.7 × 35.4 cm were used for those children assigned to the experimental conditions designed to assess stereotyping of others. For the concept-to-attribute condition, two drawings, one of a boy and one of a girl, were utilized. For the attribute-to-concept condition eight pairs of drawings of children depicting bipolar attributes or sets of activities were used. In each drawing pair the children shown were drawn to be of indeterminate sex, and differed only with respect to activities and facial expressions so as to illustrate the attributes intended. These materials were selected from a larger set of stimuli based on the responses of young children in early elementary school who served as pilot

[4]*N*s represent number of responses in both studies 1 and 2. Binomial tests yield similar results.

subjects and pre-experimentally demonstrated their comprehension of the dimensions depicted in these pairs. The eight pairs of stimuli used depicted five attributes used in study 1: big/little, mad/scared, fast/slow, strong/weak, and nice/mean, as well as dirty/clear and two gender-typed activities found to be stereotyped in previous literature (Kuhn et al., 1978): doll/truck and baseball/sweeping.

Procedure. Children were assigned to one of three experimental groups using a block randomized procedure, so that there were n children of each age and sex within each group before there were $n + 1$ children in any one group. In all, there were 12 children of each age and sex in each of the experimental groups. Two of these groups were first examined for gender stereotyping of others; one group was tested with concept-to-attribute and the other with attribute-to-concept tasks. Both of these groups were then given the gender stereotyping of self-task, along with a third group of children not tested first for the stereotyping of others.

Each child was tested individually by a female experimenter in a room located at his or her preschool. In the concept-to-attribute group, children were shown the drawings of a boy and a girl and told that "This is the boy and his name is Bobby. This is the girl and her name is Lisa." After ensuring that the children were able to label the drawings accurately, with the use of a correction procedure, they were asked which child (Bobby or Lisa) was, for example, big (or little) and which was little (or big) for each of the eight pairs of attributes and activities indicated above. Two separate orders for presenting the adjective-pair list were utilized. The presenting order for each adjective within a pair was randomized, as was the left and right placement of the pictures of the boy and the girl. In the attribute-to-concept condition, children were shown the eight pairs of stimuli, with the experimenter describing the attributes or activities depicted when presenting the pictures. The children were asked to indicate, in a forced-choice manner, which was the picture of a boy and which was the picture of a girl.

Children in the concept-to-attribute and the attribute-to-concept groups, as well as the third group that did not have a gender stereotyping of others task first, were presented verbally with 11 bipolar adjectives and asked to attribute one of each set to themselves (e.g., "Tell me what is most like you. Are you strong or are you weak?"). The three additional attributes used were the three not used from study 1 in the other-attribution task because they could not be adequately depicted in line drawings: quiet/loud, smart/dumb, and soft/hard. The order of the presentation of these adjective pairs was randomized, as was the order of the presentation of attributes within each pair. The entire procedure lasted about 12 min for children having both tasks and about 5 min for children in the self-stereotyping only group.

Results

An analysis of variance was performed on the number of stereotypic responses of the children who were given both the self and other stereotyping tasks ($N = 94$: two children were omitted because they did not respond to every question), with age, sex, and condition (concept-to-attribute and attribute-to-concept) as the between-group variables, and self- and other stereotyping as the within-group variable. For this analysis the eight pairs of stereotypes common to both tasks were included. A significant main effect of age was found, $F(1, 86) = 61.97$, $p < .001$, with 5-year-olds found to have stereotyped more than 3-year-olds (Ms = 5.78 and 4.66). A main effect for object of stereotyping, self vs other, was also found, $F(1, 86) = 51.69$, $p < .001$, with significantly greater stereotyping of others ($M = 5.50$) than self-stereotyping ($M = 4.96$). There were no main effects of condition or sex, and none of the interactions were significant. The correlations between self- and other stereotyping when all 11 attributes in the self-stereotyping task were used were .275 for 5-year-olds and .124 for 3-year-olds—both not significant. When only the eight attributes used in both tasks were examined, the correlation for 5-year-olds was .297, $p < .05$, and .087 for 3-year-olds.

Chi-square analyses were conducted to determine if stereotyping was greater than chance, using a critical alpha level of $p < .01$ to control for experimentwise alpha. Overall, the percentage of responses stereotyped on the eight attributes or activities for the other-stereotyping task was 69.89% (529 of 768 responses), $\chi^2(1, N = 768) = 109.50$, $p < .001$. Five-year-olds stereotyped others 77.34% of the time and 3-year-olds 60.42%. Both age groups, however, stereotyped significantly beyond chance, $\chi^2(1, N = 384)$ for 5-year-olds = 114.84, $p < .001$, $\chi^2(1, N = 384)$ for 3-year-olds = 16.66, $p < .001$. Further specification of the chi-squares by sex, age, and condition showed that the only group that did not significantly stereotype others was the 3-year-olds in the attribute-to-concept condition, $\chi^2(1, N = 96) = .375$.

In order to examine stereotyping for each of the eight attributes/activities, and because there were no sex or condition differences, findings were collapsed on those variables. Five-year-olds significantly stereotyped others on seven of the eight attributes or activities: strong/weak, mad/scared, big/little, baseball/sweeping, doll/truck, and nice/mean at the .01 level, and fast/slow approached significance at the .05 level. Dirty/clean did not show significant stereotyping, $\chi^2(1, N = 48) = 2.08$, but was in the expected direction. Three-year-olds significantly stereotyped others on three of the eight attributes or activities: strong/weak, baseball/sweeping, and doll/truck, at the .01 level of significance. Two of the remaining five attributes were in the expected direction but were not significant; nice/mean and mad/scared, $\chi^2(2,$

Table I. Percent Other and Self-Stereotyping Responses in 3- and 5-Year-Olds

	Other stereotyping (%)[b]		Self stereotyping (%)[c]	
	Age		Age	
Attributes[a]	Three	Five	Three	Five
Strong/Weak	69[d]	90[d]	52	62
Big/Little	58	79[d]	54	57
Fast/Slow	48	67	56	56
Mad/Scared	60	77[d]	41	58
Clean/*Dirty*	46	60	49	53
Nice/Mean	*56*	*71*[d]	57	51
Ball/Sweep	69[d]	83[d]	69[d]	86[d]
Doll/*Truck*	*73*[d]	92	79[d]	88[d]
Soft/*Hard*	—	—	67	56
Smart/Dumb	—	—	40	49
Quiet/*Loud*	—	—	46	40

[a]Italicized attributes are consensually associated with males.
[b]N = 96 (48 3-year-olds and 48 5-year-olds).
[c]N = 144 (71 3-year-olds and 72-5 year-olds).
[d]$p < .01$.

$N = 48) = 2.08$. Table I presents the percent stereotyping of others and self on each attribute.

For the analysis of the extent of self-stereotyping, the responses of those children who had been previously given the task of stereotyping others and those who had not were not significantly different on the 11 attributes or activities, with 58.37 and 56% respectively. Since no significant difference was found between the two groups, data were combined. The total percent of self-stereotyping was 58.01%, which was significantly different from chance, $\chi^2(1, N = 1584) = 40.52, p < .001$. The average percent stereotyping of self on the two activities, baseball/sweeping and doll/truck, was 80.55%, $\chi^2(1, N = 288) = 107.55, p < .001$. When the two activities were excluded from the analysis, children's self-stereotyping was minimal (52.98%), $\chi^2(1, N = 96) = 4.59, p < .05$. The only attribute significantly self-stereotyped was soft/hard and this only by the females $\chi^2(1, N = 72) = 7.01$, $p < .01$. Thus, a greater degree of self-stereotyping was found on activities than on traits.

Although children showed some tendency to stereotype themselves, a much stronger effect was found when the findings were examined based on the social desirability of the alternatives. Seven of the nine trait attributions could be considered to have a more and less socially desirable pole: strong/weak, fast/slow, clean/dirty, nice/mean, quiet/loud, smart/dumb, and big/little. On each of these seven attributes, both boys and girls

Table II. Percent Responses in Socially Desirable Direction on Self-Stereotyping Task[a]

Attributes[b]	Girls (%)	Boys (%)
Strong/Weak	71	86
Big/*Little*	68	79
Fast/*Slow*	75	79
Clean/Dirty	88	86
Nice/Mean	92	83
Quiet/Loud	81	85
Smart/Dumb	92	81

[a]All 14 χ^2s(1, N = 1) comparing the obtained socially desirable responses to chance were significant, $p < .01$.
[b]The more socially desirable responses are italicized.

significantly chose the more socially desirable alternative to describe themselves (see Table II). They saw themselves as strong (70%), big (74%), fast (77%), nice (88%), quiet (83%), smart (86%), and clean (87%). Overall, 79.76% of the responses on the self-attribution of trait were in the socially desirable direction: 74% for 3-year-old girls, 80% for 3-year-old boys, 82% for 5-year-old girls, and 83% for 5-year-old boys.

DISCUSSION

Study 1 demonstrates that children as young as 2-½ gender stereotype and do so as much as 3-½ year olds. This finding confirms the evidence presented by Kuhn et al. (1978) and Weinraub et al. (1984) that children as young as two have acquired knowledge of gender stereotypes. In addition, a dog or horse that was gender labeled elicited as much stereotyping as a gender-labeled infant. Thus, stereotypes are acquired and show stimulus generalization at an early age, basically as early as they can be tested. The proposition that a significant component of gender-role acquisition—the learning of stereotypes—is subject to the same principles of learning that govern other early concept acquisition is supported. If children's developing awareness of gender norms results in an ascription of attributes, activities, and objects to a specific gender, then it is possible that the reverse can occur. When animals and other objects in the environment are genderized, through stimulus generalization, they may elicit those attributes that have been previously associated with gender. Stimulus generalization of gender to adults, babies, animals, and eventually to a wide variety of environmental stimuli, such as tools, clothing, and occupations, may provide a mechanism for the prevalence

of gender schemas in how individuals structure their cognitions (see Bem, 1981).

A straightforward learning approach to early gender-role acquisition – independent of gender identity or constancy or a broader self-schema – may help demystify the process of gender-role acquisition by placing the process of early stereotype learning more firmly in normative cognitive development. That gender is a highly salient early verbal label for children should not exclude it from the same principles governing other concept formation, generalization, and discrimination processes.

Study 2 addresses the differential effects of two strategies in eliciting stereotypes, with gender or attributes/activities as the discriminative stimulus. The prediction that the attribute-to-concept condition would elicit less stereotyping than the concept-to-attribute condition was not supported. Overall, no difference in stereotyping was found between the two conditions. The lack of importance of the eliciting condition may depend on the fact that the concept/attribute association has been previously learned, and only a newly formed association would be less available if the attribute were the stimulus, rather than the object or concept. Analysis of separate age and sex groups, however, did suggest a difference for 3-year-old boys in the predicted direction. Although the analysis of variance showed no effects, the chi-squares determining the extent of stereotyping indicated that 3-year-old boys in the concept-to-attitude condition stereotyped others and did not in the attribute-to-concept condition. Sex differences in maturation (Maccoby & Jacklin, 1974) may account for this finding, although 3-year-old boys were not different in ascribing positive traits to themselves. Macnamara's work on early naming (1982) suggest that gender differences may be due to boys paying less attention than girls, and perhaps the attribute-to-concept task required more focus attention.

The major focus in study 2 was the difference between self- and other stereotyping. If gender-relevant information is acquired in the context of a self-schema, a positive relationship between self- and other stereotyping would be expected. Similarly, from the model of gender-role acquisition in which gender understanding plays a central role, stronger self-stereotyping of 5-year-olds than of 3-year-olds would be expected, as 5-year-olds are more likely to have achieved constancy.[5] The findings do not support this model. Instead, children stereotype others more strongly than they stereotype themselves, both at 3 and 5 years-old, and knowledge of stereotypes is minimally related to self-stereotyping (only for 5-year-olds, when the eight attributes common to both tasks were used, and at the .05 level of

[5]Although some evidence suggests a relationship between stereotyping and gender constancy at an early age (Kuhn et al., 1978), critics of the gender-understanding model suggest that gender typing occurs earlier than gender constancy (Constantinople, 1979; Maccoby & Jacklin, 1974).

significance). The findings of Eisenberg, Murray, and Hite (1982), that 3- and 4-year-old children use gender-role oriented thinking to explain other children's toy choices but not their own, are consistent with the present findings, as are Weinraub et al.'s findings (1984) that knowledge of adult gender-typed objects is demonstrated earlier than knowledge of gender typing of children's toys. These studies support the distinction between stereotype acquisition and cognitive self-implication.

Rather than trait stereotyping themselves, children overwhelmingly chose the more socially desirable pole when describing themselves. Only two of the eleven responses were in gender-traditional direction and involved activities, not attributes. Inoff, Halverson, and Pizzigati (1983) also have shown with 5- to 13-year-olds that, although children know the content of stereotypes, they are more likely to rate themselves in a socially desirable direction. Concerning self-attribution of gender traits, the tendency for positive self-evaluation appears stronger than that of conforming to a known gender identity.

A secondary issue in the two studies is age differences. Age differences in stereotyping were not found between 2-½ and 3-½ year-olds in study 1; however, in study 2, 5-year-olds stereotyped others significantly more than 3-year-olds. Because different materials were used in studies 1 and 2, and both differed from the videotapes of infants used by Haugh et al. (1980), it is not possible to draw developmental implications across both of the present studies and the Haugh et al. study. The materials in study 1 were still color photographs of babies and animals, and those in study 2 were simplified black and white line drawings. It is possible that more stereotyping may be elicited by true-to-life stimuli; i.e., black and white line drawings are less representational, prototypic, and compelling than color photographs, which in turn are less attention getting than the videotapes used in the Haugh et al. study. In work with young children, the nature of materials used and how lifelike and engaging they are may influence the extent of stereotyping demonstrated.

Although the process of stereotype acquisition will itself proceed at a more elaborative and complex level as the child's cognitive abilities increase (Condry, 1984), we are suggesting that the earlier learning of stereotyping appears to be an easier process to understand than that in which the child becomes gender typed. The internalization of stereotypes is an "imperfect mirror" of the standards that all members of a culture learn. Certainly, self-valuation, when it conflicts with self-stereotyping, may inhibit attribution of gender-specific traits to oneself in children as well as in adults. Although gender stereotypes are not free of social desirability, future research might control for social desirability by giving young children the opportunity to choose between masculine and feminine stereotypes matched for social

desirability (e.g., strong vs nice). This study is not intended to clarify that more complex process in which self-schemas, reality-based information that may supercede stereotypes, and positive self-valuation are important.

In conclusion, we suggest that future research on gender-role acquisition clarify the distinction between acquisition and use of stereotypes in cognitions about the sexes and self-description. Moreover, these overlearned associative networks or schemas may provide the basis for understanding early cognitive-learning processes previously not well documented. It may be instructive to approach the process of acquisition of stereotypes by designing studies that utilize basic learning and concept-formation paradigms and constructs.

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