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AN EMPIRICAL TEST OF THE MODELING THEORY OF SEX-ROLE LEARNING

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Sex-role learning has been linked to modeling and to Parsons' reciprocal role theories of parental identification. It was proposed that modeling theory would be sufficient to account for sex-role development even granting the validity of Parsons' basic principles of greater sex-role differentiation for the father and instrumental-expressive qualities as the essence of masculinity-femininity. It was predicted, on the basis of a modeling hypothesis, that sex-role distinctions between males and females would be maximal given an identification with a high-masculine father. Results based upon the behavioral self-descriptions of 279 college normals supported this prediction. Of the behaviors distinguishing males and females identified with each parent type, the following percentages were judged to be appropriately sex-typed: high-masculine father, 88 per cent; high-feminine mother, 58 per cent; low-feminine mother, 47 per cent; and low-masculine father, 43 per cent.

Johnson (1955) has recently proposed that the crucial factor in learning the masculine sex role for males and the feminine sex role for females is identification with the father. She bases her reasoning upon certain basic premises adopted from Parsons' role theory (Parsons, 1958; Parsons & Bales, 1955). First, Parsons considers identification as encompassing the behaviors a child learns in the context of a social role with a parent (i.e., the internalization of a reciprocal-role relationship). Accordingly, the learned behaviors need not be those which are typical of the adult but rather are those which are systematically elicited and reinforced in the course of the child's interaction with the adult. The child is presumed to make a series of successive identifications, both boys and girls making an initial identification with the mother which is not sex typed. The following identification with the father, in which he forms differentiated role relationships with the son and the

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CHILD DEVELOPMENT

daughter, provides the basis for sex-role learning in offspring of both sexes.

Second, Parsons regards the essence of masculinity and femininity to be a difference in instrumental and expressive orientation. The feminine-expressive role is distinguished by an orientation of giving rewarding responses in order to receive rewarding responses. Johnson states, "The expressive role player is oriented toward the relationships among the actors within a system. He is primarily oriented to the attitudes and feelings of those actors toward himself and toward each other. . . . By being solicitous, appealing, and 'understanding,' a woman seeks to get a pleasurable response by giving pleasure." (1963, pp. 320-321). The instrumental (masculine) role, in contrast, is defined as a behavioral orientation toward goals which transcend the immediate interactional situation. Since the interaction is viewed primarily as a means to an end, the instrumental-role player cannot be primarily oriented to the immediate emotional responses of others to him. Rather than soliciting positive responses from others like the expressive person, instrumental-role-playing requires an ability to tolerate the hostility which it will very likely elicit.

It is further proposed that the father (but not the mother) is capable of engaging in both instrumental and expressive roles. This follows from the assumption that the early relationship of both boys and girls with their mothers mediates learning of expressive behavior and that later boys, but not girls, learn a new orientation, instrumentality, so they can deal effectively with the non-familial environment. Thus, boys retain the capacity to respond in either an expressive or instrumental manner, whereas girls can behave only expressively. Ten studies are cited by Johnson (1963, pp. 323-327) that support the conclusion that fathers differentiate their own sex-role behavior toward male and female offspring more than mothers do.

Johnson summarized her hypothesis as follows: "The mother is predominantly expressive toward children of both sexes and uses, intentionally or not, 'love-oriented' techniques of control on both. It is in this first identification of both male and female children with the mother in a love-dependency relationship that the basic superego is laid down. Sex-role differentiation then follows the initial mother identification and results from the identification of both sexes with the father in differentiated role relationships. The father adds the specifically feminine element to the female's initial expressiveness by rewarding her, by his appreciative attitude, not simply for being 'good' but for being 'attractive.' With his son as with his daughter the father is solidary, but with his son he is also demanding, thus giving the extra push that instrumentality requires" (1963, p. 324).

Although Johnson presents a cogent argument for a reciprocal-role interpretation of sex-role learning, there is no reason, in principle, why a single mode of transmitting sex-role attributes from parents to children must be posited. For example, modeling theory (Sears, Maccoby, & Levin, 1957, pp. 368-376) would predict that sex-typed behaviors that are observed in

the repertoires of the parents and are modeled after by children represent an important basis for appropriate sex-typing. The major question pursued in the present investigation was whether modeling principles would also prove useful in predicting the sex-role behavior of children granting that fathers are more capable of sex-role differentiation than mothers and that the instrumental-expressive distinction represents a useful basis for defining the masculine and feminine sex roles. The present study did not compare the relative usefulness of the reciprocal-role and the modeling hypotheses, however, since no evidence relevant to the former was collected.

Even though the father typically assumes the instrumental role within the nuclear family, it must be assumed that individual differences in masculinity occur, since many fathers have not learned instrumentality in the course of their own social development. On the other hand, a very high proportion of fathers have at least been exposed to the conditions under which expressive qualities are presumably learned (early mother-child interaction). The observation that there are at least two classes of fathers—those who are primarily instrumental but retain the capacity for expressive behavior (i.e., can differentiate their roles) and a smaller proportion who are primarily expressive but lack the capacity for instrumental behavior (i.e., are less capable of differentiating their roles)—seems accurate. A similar case can be made for mothers; although most mothers may be regarded as expressive in orientation, some, at least, will have learned instrumental behaviors in their social development. When these four classes of parent-model types are employed, the following prediction would follow from a modeling hypothesis of sex-role learning:

The greatest sex-role disparity between males and females, commonly identified with a single parent type, will be mediated by identification with (modeling after) the instrumental father. This parent, more than any other single type, is capable of providing an instrumental model for his son and an expressive model for his daughter.

Two logical assumptions implicit in this prediction should be emphasized. First, it is reasonable to maintain that a father's behavior is of a generally instrumental character even though he may behave expressively under special conditions, one such condition being interaction with a female child. Second, the parental behavior that is most likely to be modeled after by a child is the behavior that occurs in the context of the parent's interaction with him.

The first of these assumptions allows for the possibility that a girl whose father is legitimately classified as masculine based upon the preponderance of his behavior may still be directly exposed to an expressive model in his dealings with her. This avoids the seeming paradox of a finding that modeling after a masculine parent mediates feminine qualities in a girl. The second assumption is equally crucial to interpretation of father-daughter results. If the masculine father engages in expressive behaviors only in the ex-

CHILD DEVELOPMENT

ceptional circumstance of father-daughter interaction, it must be assumed that the father's behavior at these times has a greater potency to elicit modeling from the daughter than do the more frequently emitted instrumental behaviors that the daughter observes as a bystander and in direct dealings with the father. Since many of the father's expressive behaviors which occur in interaction with the daughter can be described as nurturant in character, the findings of Bandura and Huston (1961) strengthen the second assumption. They found that children imitate the behavior of more nurturant adult models more readily than they imitate that of their less nurturant counterparts. Thus, the instrumental father should be especially effective as a model when he directly interacts with the daughter.

METHOD

Subjects

A total of 279 undergraduates at the State University of Iowa, 139 males and 140 females, were employed in this study. These groups were further divided by the particular parent with whom they made their primary identification and the relative instrumental-expressive orientation of that parent. The resultant group sizes were: males identified with instrumental fathers ($N = 47$), with instrumental mothers ($N = 27$), with expressive fathers ($N = 20$), with expressive mothers ($N = 45$); females identified with instrumental fathers ($N = 42$), with instrumental mothers ($N = 31$), with expressive fathers ($N = 21$), with expressive mothers ($N = 46$).

Measures of Developmental Variables

The parental object of identification was indicated by a scale that reflects the relative similarity between the child and his two parents as perceived by the child. Norms for the identification scale have been developed for college students so that a score of $T = 50$ indicates the average similarity between the son or daughter and the same-sex parent along 15 personality dimensions (e.g. nurturance, dominance, aggression). A score of $T > 50$ was used to define identification with the same-sex parent, whereas $T \leq 50$ indicated a cross-sex identification. A detailed description and validity evidence pertaining to this scale are available elsewhere (Heilbrun, 1965).

Instrumental-expressive orientation of the parents was estimated from behavioral descriptions rated by the subjects and used as part of the identification measure. Each was asked to judge whether certain types of behaviors were descriptive more of his mother or of his father. Nine of the 15 behaviors so rated had been found to be sex-typed based upon the ratings of 400 college students (Heilbrun, in press). In this earlier study fathers were rated as more need-achieving, autonomous, and dominant and

as showing greater endurance; whereas mothers were judged to be more deferent, affiliative, succorant, abasing, and nurturant. The instrumental character of the "father" traits and the expressive nature of the "mother" traits are clearly evident. In the present study the appropriateness of the parents' sex roles was determined by counting the number of times the appropriate parent was rated as better described by the prescribed instrumental or expressive behavior. A score of 6 or greater was selected as a cutting point for defining instrumental fathers and expressive mothers; 5 or less defined the sex-role reversed expressive fathers and instrumental mothers. These particular cutting scores resulted in classifying about 66 per cent of the male Ss' parents and about 63 per cent of the female Ss' parents as appropriately instrumental or expressive in orientation.¹

The Personality Measure

The Adjective Check List (ACL) (Gough & Heilbrun, 1965) was used as the personality test in this study. Included in the ACL are 300 behavioral adjectives from which the person is asked to select those which are most self-characteristic. There are a large number of studies (see Gough & Heilbrun, 1965) that demonstrate that ACL self-descriptions obtained from normally functioning persons afford valid predictions of their actual social behaviors.

RESULTS

The ACL self-descriptions of the four sets of male and female comparison groups were analyzed by chi square procedures. Differential endorsement of any ACL adjective as self-descriptive was defined as $p < .05$. The 1,200 χ^2 values were obtained by computer analysis² which included Yates' correction for continuity.

Although the χ^2 analysis provided a basis for establishing patterns of behavior differences between sex groups, evaluation of whether these patterns reflect instrumental versus expressive orientation differences was still necessary. This was accomplished by using the judgments of four clinical psychologists at the University of California as the basis for defining ACL adjectives as instrumental (I) or expressive (E) in character. All discrim-

¹ We recognize that the measurement of instrumental or expressive character of parental behaviors employed here represents but one of many possible approaches and involves the same risks as any personal evaluation by a single, ego-involved judge. The congruence between ratings obtained in this fashion and expectancies based upon Parsons' theory, however, makes us confident that their use is justified.

² The investigator would like to extend his appreciation to members of the staff of the Computer Center, State University of Iowa, for their generous assistance in the analysis of the present data.

CHILD DEVELOPMENT

inating ACL adjectives were rated as I, E, or indeterminate based upon definitions provided by Johnson (1963). Interjudge agreement was high when only I and E ratings of the four judges are considered; some 93 per cent of these ratings were in accord. Final acceptance of an adjective as I or E required the agreement of at least two judges with no contrary (E or I) judgment ($N = 13$), the agreement of three judges as to I or E ($N = 15$), or the agreement of four judges ($N = 16$).

The test of the prediction that the clearest instrumental vs. expressive sex-role distinctions would be evidenced by males and females identified with instrumental fathers was based upon data presented in Tables 1 and 2. These four patterns of behavior differences provide rather striking support for the prediction. Comparison of male and female offspring who identified with instrumental fathers provided 35 differences in behavior, 29 of which were judged to be appropriately instrumental or expressive. This proportion for the remaining three conditions were: expressive-mother identified, 15 of 28; instrumental-mother identified, 7 of 17; and expressive-father identified, 6 of 16. Chi square comparison of these proportions (not considering "masculine," "feminine," and "effeminate")³ showed them to be significantly different ($\chi^2 = 13.34$ for 3 *df*; $p < .01$).

One inferential limitation of a χ^2 statistical analysis such as that reported above is that finding male and female offspring who describe themselves as more similar to instrumental fathers are most distinct in their instrumental and expressive role behaviors could be the result of comparing extremely masculine males with females who are not particularly feminine. That is, the distinct instrumental-expressive patterns could be accounted for by extreme instrumentality in the males without assuming expressive qualities in the females. One additional set of comparisons would allow greater clarity here. The ACL indorsement patterns of girls identified with instrumental fathers could be compared with those obtained from girls identified with expressive mothers; boys identified with these two types of models could similarly be compared. The extent and quality of difference patterns which emerged would tell us something of the deviance of instrumental-father identified females from what is presumably the most expressive group of girls and the deviance of expressive-mother identified boys from their highly instrumental counterparts, males identified with instrumental fathers. These comparisons (Table 3) indicate that relatively few differences appear between the two female groups. Those differences which were found suggest that instrumental-father identified females do not assume blatant instrumental qualities relative to very expressive females but rather maintain an expressive orientation which lacks the passive character of extreme expressiveness. The male pattern indicates that more extensive

³ The adjectives "masculine," "feminine," and "effeminate" were not rated because of their similarity in meaning to "instrumental" and "expressive."

TABLE 1

INSTRUMENTAL AND EXPRESSIVE BEHAVIOR DIFFERENCES BETWEEN MALES AND FEMALES WHO IDENTIFIED WITH SEX-ROLE APPROPRIATE PARENTS

INSTRUMENTAL FATHERS		EXPRESSIVE MOTHERS	
Males More:	Females More:	Males More:	Females More:
Aggressive ^a	Appreciative ^b	Aggressive ^a	Adaptable
Cruel ^a	Artistic ^b	Conservative	Attractive ^b
Enterprising ^a	Curious	Enterprising ^a	Contented ^b
Forceful ^a	Effeminate	Handsome	Fearful ^b
Foresighted ^a	Emotional ^b	Inventive ^a	Feminine
Frank ^a	Excitable ^b	Masculine	Flirtatious
Handsome	Fearful ^b	Quiet	Frivolous
Hardheaded ^a	Fickle	Shrewd ^a	Mannerly
Logical ^a	Reliable ^a	Strong ^a	Outgoing ^b
Masculine	Self-pitying ^b	Tough ^a	Pleasant ^b
Opportunistic ^a	Sentimental ^b		Poised
Progressive ^a	Sincere ^b		Praising ^b
Reckless ^a	Sympathetic ^b		Selfish
Sharp-witted ^a	Warm ^b		Sympathetic ^b
Shrewd ^a	Wholesome ^b		Talkative
Stern ^a			Unaffected ^a
Strong ^a			Understanding ^b
Tough ^a			Wholesome ^b
Unscrupulous ^a			
Vindictive ^a			

^aBehaviors judged to be instrumental.^bBehaviors judged to be expressive.

TABLE 2

INSTRUMENTAL AND EXPRESSIVE BEHAVIOR DIFFERENCES BETWEEN MALES AND FEMALES IDENTIFIED WITH SEX-ROLE INAPPROPRIATE PARENTS

EXPRESSIVE FATHERS		INSTRUMENTAL MOTHERS	
Identified Males More:	Identified Females More:	Identified Males More:	Identified Females More:
Aggressive ^a	Awkward	Calm	Feminine
Anxious	Confused	Insightful	Mischievous
Deliberate ^a	Feminine	Masculine	
Faultfinding ^a	Outgoing ^b	Mild	
Handsome	Selfish	Opportunistic ^a	
Masculine	Sympathetic ^b	Original	
Opportunistic ^a	Unaffected ^a	Peculiar	
Self-denying ^b		Relaxed ^b	
Self-punishing		Resourceful ^a	
		Robust ^a	
		Sharp-witted ^a	
		Shrewd ^a	
		Silent	
		Steady ^a	
		Tough ^a	

^aBehaviors judged to be instrumental.^bBehaviors judged to be expressive.

CHILD DEVELOPMENT

TABLE 3
BEHAVIOR DIFFERENCES BETWEEN INSTRUMENTAL-FATHER AND
EXPRESSIVE-MOTHER IDENTIFIED MALES AND FEMALES

MALES		FEMALES	
Instrumental-Father Identified More:*	Expressive-Mother Identified More:	Instrumental-Father Identified More:	Expressive-Mother Identified More:
Adaptable	Appreciative	Self-confident	Considerate
Assertive	Cautious		Fearful
Capable	Conservative		Gentle
Confident	Dependent		Obliging
Dominant	Excitable		Silent
Egotistical	Meek		Submissive
Forceful	Peaceable		Trusting
Frank	Quiet		
Hard-headed	Shy		
Opinionated	Slipshod		
Outgoing	Timid		
Outspoken			
Self-confident			
Self-seeking			

*All adjectives on this table discriminated at the $p < 0.05$ level.

personality differences appear as a function of the attributes of the primary parent model than is the case for females. The differentiating behaviors suggest both the strong instrumental qualities of a masculine-father identification and the passive-dependent expressiveness of a feminine-mother identification. Summarily, this additional analysis suggests that the distinct instrumental-expressive behavior differences found when instrumental-father identified males and females were compared can be attributed to the presence of both instrumental qualities in the sons and expressive (but not passive) qualities in the daughter.

DISCUSSION

Males and females who are identified in a modeling (similarity) sense with instrumental fathers show the most extensive and appropriate sex-role differences in personality. Sex-role differences for males and females identified with expressive mothers are somewhat less extensive and appropriate, while male and female differences under the condition of identification with a sex-role reversed instrumental mother or expressive father were restricted and even less appropriate to sex role. These empirical findings suggest that identification with (role-modeling after) the instrumental father is associated with enhanced masculinity in the son and femininity in the daughter, the same relationships predicted by Johnson (1963) from Parsons' reciprocal-role hypothesis.

Since the same sex-role outcomes are predictable from two apparently different hypotheses of sex-role "identification," one is led to wonder whether the differences are not semantic. The importance of reciprocal-role practice to the strengthening of sex-role behavior can be granted without abandoning modeling principles of identification-learning. Even though the expressive behaviors of the mother as a model may provide the initial opportunity and instigation for the girl to learn components of the expressive role, the amount of reinforced practice of these behaviors offered by the father or any other person should strengthen the expressive orientation of the girl. If the term "identification" were used to encompass any learning experience that contributed toward the sex-role adoption of the child, such sex-role practice would be legitimately included. However, to broaden the definition of identification to this extent would require inclusion of such divergent experiences as athletic activities and military service for males and dating behaviors and marriage for both sexes. It seems more useful to accept a more restricted conception of parental identification (i.e., as role-modeling behavior) but to consider it as but one contributor to the adult sex-role identity of the person.

It was noted earlier that fathers are presumed by Parsons to be more capable than are mothers of differentiating their sex role. That is, fathers are more capable of responding expressively than mothers are of acting instrumentally. It was also assumed that fathers systematically vary their sex role as they relate to male and female offspring. These suppositions bear considerable explanatory weight in interpreting the present results within the scope of a modeling theory, since the data suggest that employing the generally instrumental father as a model for identification mediates expressive behaviors in the daughter. Data collected from University of Iowa students for a previous study (Heilbrun, 1964) and some currently unpublished data obtained from males at the University of California allow some further light to be shed on these assumptions. Ratings of the degree of parental nurturance provided by instrumental and by expressive fathers were obtained from college males and females, and those data (Table 4) corroborate the proposed tendency of fathers to relate in an equally expressive manner toward daughters whether the father was regarded as more expressive or more instrumental in his general sex-role orientation. Thus, an instrumental father as a model does seem to provide expressive qualities for the daughter to emulate. The relationship of fathers to sons, as rated by the sons in both samples, demonstrates the expected difference between instrumental and expressive fathers. Instrumental fathers are, as a group, significantly less nurturant than are expressive fathers.

Since the present study provided identification and sex-role learning results which were interpreted as consonant with a modeling theory, a final point of discussion is called for. How can the trend of parental identification research findings (see Johnson, 1963, pp. 324-331) be accounted for

CHILD DEVELOPMENT

TABLE 4
PERCEIVED NURTURANCE OF INSTRUMENTAL AND EXPRESSIVE FATHERS

Sex of Child	Instrumental Fathers ^a			Expressive Fathers ^b			<i>t</i>
	<i>N</i>	Mean Nurturance	SD	<i>N</i>	Mean Nurturance	SD	
Male:							
Iowa.....	38	25.2	5.8	18	28.4	5.2	2.00*
California.....	46	25.1	6.5	18	28.4	6.7	1.79*
Female:							
Iowa.....	38	30.7	5.3	22	30.4	7.3	...

^aRatings on Parental Description Survey 6 or more.

^bRating on Parental Description Survey 5 or less.

**p* < .05 (one-tailed test).

within a modeling framework? Specifically, the trend suggests that father-son identification relationships are clearly established, with stronger father identification being associated with better adjustment and more masculine sex-role behavior of the son. In contrast, the female results are almost without exception more equivocal than those for males, (Sopchak, 1952; Helper, 1955; Johnson, 1955; Osgood, Suci, & Tannenbaum, 1957; Emmerich, 1959; Gray, 1959; Mussen & Distler, 1959), usually reported as "not significant but . . ."! Heilbrun has also reported a similar set of findings (1962); maladjusted males were significantly less identified with their fathers than were their adjusted counterparts, but two samples of maladjusted girls demonstrated less clear tendencies to be more identified with their mothers than did adjusted girls. The equivocal findings for females suggest that *additional* variables (perhaps of an interactive nature) must be considered before the relationships among the identification, sex-role, and adjustment variables for females will come into clearer focus. One such variable treated in the present study, but for some reason largely ignored in others, are individual differences in the sex-role behavior of the parents. Despite numerous investigations showing individual differences in sex-role adoption among children of the same biological sex, both fathers and mothers have usually been treated as homogeneous classes as far as their sex-role identity is concerned.

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