

INEQUITABLE PAY:
SOME POSSIBLE ANTECEDENTS
IN SEX-ROLE DEVELOPMENT

Dissertation for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
CHARLENE CALLAHAN LEVY
1975

LIBRARY
Michigan State
University

This is to certify that the

thesis entitled

INEQUITABLE PAY:

SOME POSSIBLE ANTECEDENTS IN SEX-ROLE DEVELOPMENT

presented by

Charleen Callahan Levy

has been accepted towards fulfillment
of the requirements for

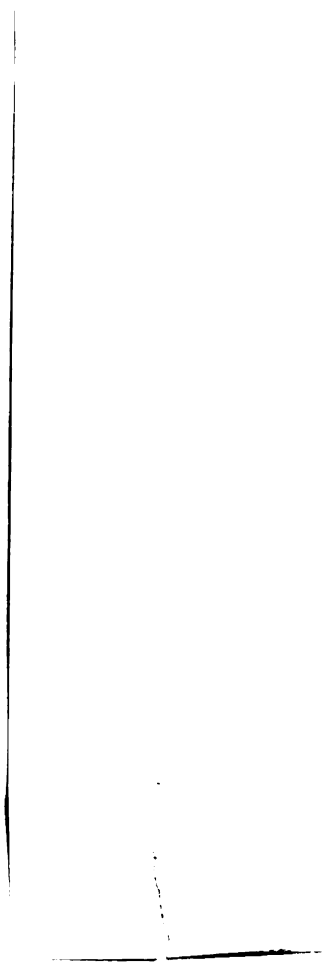
Ph.D. degree in Psychology

Lawrence A. Messer
Major professor

Date August 14, 1975

0-7639





tha

mal

mal

les

The

of

req

the

acc

far

as

beh

kno

enc

soc

sen

fer.

ABSTRACT

INEQUITABLE PAY:
SOME POSSIBLE ANTECEDENTS IN SEX-ROLE DEVELOPMENT

By

Charlene Callahan Levy

Results of past reward allocation research have shown that adult females tend to underreward themselves relative to males. The present research examined the hypothesis that females learn, through socialization processes, to perceive less of a connection between work and pay for themselves. The self-allocation behavior of females was compared to that of males in the first, fourth, seventh, and tenth grades. By requiring that the children in the present study pay only themselves, the possibility that females might be behaving accommodatively or concerning themselves with another's welfare was minimized. The major hypothesis was that differences as a function of sex would occur in some pattern in which the behaviors of the oldest group would most closely parallel known differences in adults.

In order to explore the possibility that these sex differences in allocation behavior, in fact, are related to learned social roles, sex-role preferences were measured in the present research. A secondary hypothesis was that the more feminine the sex-role preferences, the more likely a person

wo
si
th
al

th
th
co
mo
co
al
ex
mo
th
sh
in

ta
tr
pr
di
re
th
wa
th
to

would be to allocate reward to her-or himself in a manner similar to the behavior of adult females. In other words, the more feminine the sex-role preference, the less reward allocated to oneself, irrespective of age level.

In addition, the present study examined the hypothesis that if mothers serve as sex-role models for their daughters, then daughters of working mothers should make more of a connection between work and pay than girls whose mothers are more traditional housewives. Thus, assuming that this greater connection between work and pay would become evident in self-allocation behavior, the amount allocated by the children was examined as a function of the employment status of their mothers. A measure of locus of control also was included in the present study to explore the possibility of a relationship between the acquisition of appropriate sex-role behavior in self-allocation and causal attribution.

Subjects at the four grade levels completed an interview task which included the sex-role preference and locus of control measures. Upon completing this interview, subjects were presented with thirty reward units (candies in the first grade, dimes in the other grades), and asked to take the amount of reward they felt they had earned. After rewarding themselves, the children were also asked to indicate the amount they felt was "fair" pay for the work they had performed. Thus, both the amount they actually kept and the amount they considered to be "fair" were the dependent measures.

n

a

c

w

d

r

s

s

d

t

r

s

s

s

a

D

Contrary to expectations, the results revealed no significant relationship between working mothers and the self-allocation behavior of subjects. There also were nonsignificant findings when locus of control scores were correlated with self-allocation behavior. However, there was, as predicted, an overall relationship between scores on the sex-role preference scales and reward allocation behavior, as subjects with more feminine preferences tended to reward themselves less and regard less pay as "fair."

These results indicate, somewhat surprisingly, that sex differences in self-allocation start at a very young age, and tend to increase at adolescence. The relationship between sex-role preference and allocation behavior indicates that these sex differences are a function of socialized sex-role prescriptions, and that such differences might be better understood by identifying the mechanisms by which these roles are acquired and maintained.

Approved: *Lawrence A. Messé*
Date: *14 August 1975*

Dissertation Committee:

Lawrence A. Messé, Chairman

Eugene H. Jacobson

Barbara Riemer

Ellen Strommen

INEQUITABLE PAY:
SOME POSSIBLE ANTECEDENTS IN SEX-ROLE DEVELOPMENT

By

Charlene Callahan Levy

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Psychology

1975

Law

and

ing

who

gen

ser

and

vic

sha

for

fo

th

(a

to

to

fi

ACKNOWLEDGMENTS

I wish to express my sincere appreciation to my chairman, Lawrence A. Messé, for his valued guidance, encouragement, and friendship throughout my undergraduate and graduate training. It has been my good fortune to have worked with someone who is not only an excellent researcher and scholar, but a genuinely good person.

I would also like to thank the other members of my dissertation committee, Dr. Eugene Jacobson, Dr. Barbara Riemer, and Dr. Ellen Strommen, for their helpful and insightful advice during all stages of this research.

In addition, I owe special thanks to Bryan Coyle, for sharing his computer and statistical skills; to Neal Schmitt for his timely advice; to my undergraduate assistants (unfortunately too numerous to name here) for their help during the planning, interviewing, and coding stages of the research, (and for making the entire project an enjoyable experience); to the Holt School System, for their interest and cooperation; to Linda Bailey, for her excellent secretarial skills; and finally, to Paul Wiesbord, for keeping me informed.

LI

LI

CH

S

TABLE OF CONTENTS

	Page
LIST OF TABLES	v
LIST OF FIGURES	vi
CHAPTER	
I. INTRODUCTION	1
Sex Differences in Adult Reward Alloca-	
tion Behavior.....	2
Developmental Antecedents of Sex	
Differences	6
Reward Allocation Behavior in Children.....	8
Acquisition of Sex-Roles.....	12
Patterns of Role Acquisition	13
Modeling as a Socialization Mechanism.....	16
Locus of Control: A Possible Corre-	
late of Sex Differences in	
Allocation Behavior.....	18
Hypotheses	20
II. METHOD	22
Pilot Study.....	22
Reward Allocation Study.....	27
Recruitment of Subjects.....	27
Instruments.....	29
Variables and Experimental Design.....	32
Procedure.....	32
III. RESULTS	37
Self-Allocation Behavior.....	37
Hypothesis 1	37
Tests of Possible Correlates with Allo-	
cation Behavior	42
Hypothesis 2	42
Hypothesis 3	44

TAB

CHA

I

APP

REF

TABLE OF CONTENTS (cont'd.)

CHAPTER	Page
Locus of Control	48
Demographic Variables.....	49
IV. DISCUSSION.....	50
Sex Differences in Self-Allocation.....	50
Tests of Correlates with Allocation Behavior...	55
Working Mothers--Hypothesis 2.....	55
Sex-Role Preferences--Hypothesis 3.....	56
Locus of Control	57
Conclusions	58
APPENDICES	
A. Interview Protocol.....	61
Demographic-Biographic Questions.....	61
"Activities" Scale	62
"Vocation" Scale	63
Locus of Control Scale.....	64
Payment Instructions and Post- Allocation Questions.....	65
B. Demographic Correlates	66
REFERENCES.....	68

Tab

1

2

3

4

5

6

LIST OF TABLES

Table	Page
1. Ranks and Standard Deviations of Items in the "Activities" Scale.....	26
2. Ranks and Standard Deviations of Items in the "Vocation" Scale.....	27
3. Number of Females and Males at Each Grade Level..	28
4. Mean Number of Units Kept and Indicated as "Fair" Pay.....	37
5. Summary of the 2 (Sex of Subject) x 4 (Grade Level) x 2 (Actual vs. Fair) Repeated Measures.	38
6. Reflected Mean Scores for Females and Males on the "Activities" and "Vocation" Scales at Each Grade Level.....	46

Fig

1

2

LIST OF FIGURES

Figure	Page
1. Female and Male Self-Allocation Unit Scores as a Function of Grade Level (Averaged over Actual and "Fair").....	40
2. Mean Female "Proportion" Scores as a Function of Grade Level (Averaged over Actual and "Fair")	43

ar

ni

an

re

On

fe

Wo

me

de

Me

nu

(Le

fi

su

at

th

an

th

CHAPTER I

INTRODUCTION

The biological and social variables associated with sex are known to have important effects on many dimensions of cognitive processes and behavior, ranging from aggression, anxiety, and ego functioning to language capability and mathematical reasoning (see, e.g., Maccoby & Jacklin, 1974; Oetzel, 1966). One area of research that consistently has generated sex differences in adults deals with the distribution of rewards. Women differ from men in the way in which they allocate payments to themselves and others. This sex difference has been demonstrated a number of times (e.g., Leventhal & Lane, 1970; Messé & Lichtman, 1972; Mikula, 1974), and there have been numerous speculations offered to account for this phenomenon (Leventhal, 1973).

The following sections initially review some of these findings and their corresponding explanations, and introduces support for these explanations from the developmental literature. Next, the research dealing with sex differences in the allocation behavior of children is examined critically, and the necessity of further research is discussed. Finally, the relationship between the acquisition of sex-roles and

sex d

resea

role

that

adult

Lever

Calla

The t

two c

form

the g

self

1965

pers

ever

that

men.

selv

on t

selv

of t

stud

only

ject

sex differences in allocation behavior is examined and specific research questions relating to the processes involved in sex-role acquisition are introduced.

Sex Differences in Adult Reward Allocation Behavior

Sex differences have been reported in a number of studies that investigated the influence of the norm of equity on adults' reward allocation behavior (e.g., Lane & Messé, 1971; Leventhal & Lane, 1970; Messé & Callahan, 1975; Messé & Callahan-Levy, in press; Messé & Lichtman, 1972; Mikula, 1974). The typical procedure used in studies of this type places two or more group members in a situation in which they perform a specific task. Upon completion of the task, one of the group members is selected to allocate a reward to her/himself and one or more coworkers. Equity theory (e.g., Adams, 1965) predicts that the reward will be divided so that each person's outcome is proportional to her or his inputs. However, the results of much of the research in this area show that women tend to be less influenced by this norm than are men. For example, when asked to divide a reward between themselves and a same-sexed other person, women, who did better on the task than their partners, tend to take less for themselves than do men (Leventhal & Lane, 1970). In an extension of this work, Messé and Callahan-Levy (in press) conducted a study that included conditions in which subjects determined only their own payment or only that of another worker. Subjects, who were recruited for pay, completed a one hour

que

giv

ano

who

the

cat

fem

con

for

Vin

Vin

sit

rel

wit

Acc

aff

cer

fou

(19

tow

197

rel

Dwe

(19

int

gene

questionnaire task. Then, they were placed in separate rooms, given six dollars each and asked to pay either themselves or another worker whatever they felt was appropriate. Females who determined only their own pay took significantly less for themselves than did males; the amount of money females allocated to themselves also was less than the amount that both females and males awarded to other females in the other-pay conditions.

A number of explanations have been proposed to account for the findings of sex differences in allocation behavior. Vinacke and his collaborators (e.g., Uesugi & Vinacke, 1963; Vinacke, 1969), who investigated coalition formation in game situations, have suggested on the basis of their findings that, relative to males, females are more altruistic, more concerned with others' welfare, and generally more "accommodative." According to Bardwick (1971), women are more motivated by affiliative strivings than men, and therefore, are more concerned with the notion of social desirability. Kahn (1972) found women to be "anti-competitive," while Reitan and Shaw (1964) and Whittaker (1965) assert that there is a tendency towards acquiescence among females. Others (Mednick & Tangri, 1972; Messé & Callahan-Levy, in press) have speculated that relative to males, females perceive less of a connection between work and monetary rewards. Finally, Gruder and Cook (1970), in their study of sex differences in helping behavior, interpreted their findings as suggesting that persons, in general, are kinder to females.

adeq
side
of s
plan
in d
leve
tend
for
tive
sinc
thei
are
diff

adeq
(in
in. t
selv
ther
tho
acc
dep
soc
the
Tang
finc

While each of these assertions might provide a seemingly adequate explanation for specific findings, none, when considered alone, appears to account for all the varied evidence of sex differences in reward allocation; nor can any one explanation be considered to be the sole contributing factor in determining any of these specific findings. For example, Leventhal and Lane (1970) attribute their findings (that women tend to underpay themselves) to a greater concern in females for the welfare of others, and they cite Vinacke's "accommodative" explanation in support of their speculation. However, since Leventhal and Lane (1970) used only like-sexed pairs in their design, Gruder and Cook's (1970) findings that persons are kinder to females also might account for some of the differences.

Further, Vinacke's "accommodative" hypothesis does not adequately explain why women in the Messé and Callahan-Levy (in press) study underpaid themselves relative to males, since in this situation they were not dividing a reward between themselves and another--they were asked only to take an amount for themselves from a given sum of money. In this instance, although it could be that the female subjects were behaving accommodatively toward the experimenter and/or the psychology department, a more reasonable explanation is that females are socialized to perceive less of a connection than males between the work they perform and payment for that work (Mednick & Tangri, 1972). This explanation also can account for the findings that females paid other women more than they paid

them

pers

rath

wome

the

bers

(e.g

to h

by w

avai

can

the

more

poti

wea:

of :

Whi

wis

int

ten

spe

hav

how

stu

Par

themselves, since this weaker connection is thought to be a personal internal standard that many women appear to share rather than a general norm that would prescribe that all women as members of a status deserve less for their work.

This less of a connection hypothesis can be viewed within the perspective of equity theory (Adams, 1965; Walster, Berscheid & Walster, 1973). In one version of the theory (e.g., Lane & Messé, 1972; Weick, 1966) persons are assumed to have, among other criteria of equity, an internal standard by which they judge the adequacy of the compensation that is available for a given level of work inputs. This standard can be applied both to one's own rewards ("own equity") and the rewards of others ("other equity"). In these terms, the more tenuous connection between work and pay that is hypothesized to be found in females could be manifested in a weaker sense of "own equity."

Recent findings of sex differences in the distribution of rewards also support the position (Reitan & Shaw, 1964; Whittaker, 1965) that females are more acquiescent to the wishes, judgments, or expectations of persons with whom they interact. Messé and Callahan (1975) reasoned that if this tendency toward greater compliance in females, in fact, did operate, it would tend to influence the reward allocation behavior of women most when the expectations of the other somehow were made explicit. Male and female subjects in the study received a message, supposedly sent by a female or male partner, which asked that either a norm of equity or a norm

of equa

underre

to the

that w

selves

messag

were n

partne

H

escenc

flecti

what i

female

tise a

fore,

cited

adult

tion

(1964

femal

when

to wi

to fo

of equality be used to divide a reward. As usual, females underrewarded themselves relative to males. Of most interest to the question of acquiescence in females was the finding that women with superior inputs tended to take more for themselves--i.e., be more equitable--only when they received a message invoking equity that was sent by a male partner. Men were not influenced by the content of a message sent from partners of either sex.

Here again, the underlying causes of this apparent acquiescence to the wishes of a male partner might have been a reflection of a tendency towards accommodation or a concern with what is socially desirable. Or, as Crano (1971) suggests, females might have perceived males to possess greater expertise at this type of task (reward distribution), and therefore, might have been more willing to comply.

Developmental Antecedents of Sex Differences in Reward Allocation

There appears to be evidence that many of the processes cited above as explanations for the allocation behavior of adults begin to operate or have antecedents in the socialization of the child. For example, Vinacke and Gullickson (1964) provide developmental support for their assertion that females are more accommodative than males. They found that when playing a game that required the formation of coalitions to win, older females and younger children of both sexes tended to form coalitions in which they tried to come to terms that

were n

the o

(

search

hardw

more

males

age g

velop

in ad

conce

sitiv

girls

preoc

femal

when

Furth

with

who f

at a

inter

may b

the c

spec

are n

as fu

were mutually satisfactory to all members. Older boys, on the other hand, were much more exploitative and competitive.

Of particular interest to the present discussion is research conducted by Douvan (1960) which tends to support Bardwick's contention that females are more affiliative and more concerned with the social aspects of behavior than are males. Although Douvan's subjects were in the 14-16 year age group, her results have implications for both the development of sex-roles in children and sex-typed behaviors in adults. Douvan (1960) found adolescent girls to be less concerned with personal standards and values, and that sensitivity and skill in interpersonal relationships predicted girls' (but not boys') personal adjustment. This lack of preoccupation with internal standards may correspond to females' nonadherence to the norm of equity, particularly when they are determining their own outcomes ("own equity"). Further support for females' greater concern with interacting with others is provided in an early study by Campbell (1939), who found that girls were more advanced in social development at all ages.

Maccoby (1966) related evidence of sex differences in intellectual functioning to her observations that young girls may be more conforming, suggestible, and more dependent on the opinions of others. She cites Witkin, et al.'s (1962) speculation that women are more field dependent because they are more oriented toward stimuli emanating from other people as further evidence of these traits. These speculations

parall

observ

female

female

female

money

Hartl

males

havio

and w

the m

inter

condu

eleve

behav

signi

were

accou

and

ment.

hypo

limi

below

poth

parallel Reitan and Shaw's (1964) and Whittaker's (1965) observations regarding acquiescence and conformity in adult females.

Finally, Mednick and Tangri's (1972) suggestion that adult females may perceive less of a relationship between work and money than males also is supported by research with children. Hartley (1959) measured five-, eight-, and eleven-year-old males' and females' perceptions of appropriate sex-role behavior. Her subjects made clear distinctions regarding men's and women's work roles: Homemaking duties are the woman's; the money-making role is assigned to the man. Of particular interest to the focus of the present research is the study conducted by Hartley and Klein (1959) in which eight- and eleven-year-old boys and girls were asked to sex-type specific behaviors. Girls with mothers who worked tended to sex-type significantly less behaviors than did girls with mothers who were not in the labor force.

Reward Allocation Behavior in Children

There are a number of reasonable explanations that might account for the findings of sex differences in past research, and these explanations also receive support from developmental research. It will be necessary to test each of these hypotheses individually in order to determine the merits and limitations of each. To this end, for the reasons discussed below, the present research focuses primarily on one hypothesis--that females may perceive less of a connection

betwe

press

are t

or in

"seli

acqui

atten

male

rewa

male

pria

havi

tion

with

in t

apppr

1972

1972

in

no

ves

mak

between work and pay than males. Messé & Callahan-Levy (in press) speculated that these different sex-linked perceptions are the product of socialization processes, and are learned, or in any event, incorporated into the self-concept (e.g., "self-socialized," Kohlberg, 1966) in conjunction with the acquisition of appropriate sex-roles. This research is an attempt to explore the characteristics of the male and female sex-role and the relationship between these roles and reward allocation behavior at different ages.

Intuitively, it seems reasonable to assume that as females and males get older they learn and adopt more appropriate social roles--including sex-roles--and that their behavior at different ages should reflect this social maturation. Thus, some pattern of allocation behavior should emerge, with age being positively related to known sex differences in the reward distribution behavior of male and female adults.

Several investigators have applied a developmental approach to reward distribution research (e.g., Lane & Coon, 1972; Leventhal & Anderson, 1970; Lerner, 1974; Lichtman, 1973). However, the findings with regard to sex differences in this area have been varied and contradictory, and, as yet, no pattern can be discerned from the results of these investigations. A review of the relevant literature should make this conclusion obvious.

chil

pict

tain

With

selv

more

ther

rewa

repl

four

to t

(197

dict

equa

equa

tion

stu

(19

but

the

par

fem

toy

fou

Leventhal and Anderson (1970) concluded that kindergarten children, when given the power to divide rewards (colorful picture seals), are influenced jointly by the desire to maintain equity and a desire to protect their own self-interests. With regard to their findings that females took less for themselves in this situation, they suggested that girls may be more interested in maintaining harmonious relationships and therefore generally disinclined to take a larger share of the reward at another child's expense.

Lerner (1974) used a similar procedure in an attempt to replicate Leventhal and Anderson's (1970) basic findings and found the opposite results--that five-year-old girls tended to take a larger share for themselves than boys. Lerner (1974) suggests that the children in his study followed the dictates of two norms: The norm of parity, which dictates equal outcomes for each and ignores inputs; and the norm of equity, which requires that each person's share be proportional to her or his inputs.

Lane and Coon (1972) did not find sex differences in a study similar to Leventhal and Anderson's (1970) and Lerner's (1974). However, they did find that four-year-olds distribute rewards self-interestedly by taking more than half for themselves, while five-year-olds tend to follow the norm of parity in allocating rewards. Benton (1971) found that young females prefer to follow the norm of parity when dividing toys between themselves and friends, while Lichtman (1973) found that, although older children (aged 7, 9, and 11 years)

were

the

behav

diff

vari

poth

velo

prim

cedu

used

situ

were

pref

to c

expe

no e

cho

from

twe

inv

you

to

of

par

and

were more influenced by the norm of equity than five-year-olds, the sex of the allocator had no effect on reward allocation behavior.

Thus, it appears that the findings in the area of sex differences in reward distribution behavior in children are varied and highly discrepant, thus making many of the hypotheses discussed above difficult to examine from a developmental perspective. These discrepancies might be due primarily to differences in the various experimental procedures that were used in these investigations. Each study used a different task, reward, and rationale for the payment situation. In some instances (e.g., Benton, 1971) children were told they had done better at the task (a reading comprehension test) than their partner and were therefore allowed to divide toys between themselves and the other. In other experimental situations (e.g., Leventhal & Anderson, 1970), no explanations were provided as to why the child had been chosen to divide the reward, which varied across experiments from picture seals to ball point pens to actual money, between themselves and another. Also, none of these studies investigated directly the self-pay situation behavior of young girls and boys.

Thus, the major goal of the present research--in order to test the hypothesis that females "learn" to perceive less of a connection than males between work and pay--was to compare directly the self-reward allocation behavior of female and male children at various ages. The present research used

an experimental situation that was as similar as possible, in terms of experimental realism and salience of reward, to the previous research on self-allocation behavior that examined the actions of college students. It was thought that this simpler phenomenon--self-allocation rather than self-other reward distribution--would yield less equivocal results, and provide information interpretable in terms of past research with adults.

In summary, this research was designed to investigate directly sex differences in the self-allocation behavior of children at several age levels. Children's self-allocation behavior was chosen as the focus of this investigation in order to explore the hypothesis that past findings of sex differences in the behavior of adults might be due, in part, to the fact that males and females learn to place different emphasis on the importance of receiving a reward for their work efforts (i.e., females make less of a connection between work and pay). By requiring that the children pay only themselves, the possibility that females might be concerning themselves with another's welfare was minimized.

Acquisition of Sex-Roles

Implicit in a discussion of the developmental antecedents of sex differences in reward allocation is the assumption that the differences in females' and males' behavior are related directly to socialized sex-roles. Given this general premise, it is important to review the research

findings relevant to children's acquisition of these roles, and to determine the nature of any apparent patterns in the socialization processes. Thus, this section discusses three specific issues: (a) differences in the patterns of males' and females' role acquisition; (b) modeling as a socialization mechanism that might be involved in the learning of appropriate sex-roles; and (c) possible concomitant changes in locus of control during the socialization process.

Patterns of Role Acquisition

Gesell, et al. (1940) found that more than two-thirds of the three-year-olds tested in their study could answer correctly the question, "Are you a little girl or a little boy?" A majority of the two-and one-half-year-old children could not. It would appear then, that by the time children reach the age of three, or soon after, they are able to recognize their correct sex label. However, Kohlberg (1966) has demonstrated that young children are not certain of the constancy of sexual identity before the age of five or six. Kohlberg (1966) asked children aged four through eight whether a pictured girl could be a boy if she wanted to. Most four-year-old subjects said she could if she wore the appropriate haircut or clothes. By age six or seven, most children were certain that a girl could not change her sex. Kohlberg points out that this age of the onset of sex constancy corresponds to Piaget's cognitive-developmental notions of object constancy.

W
child
presen
which
identi
behavi
a posi
for ma
mascul
old.
girls
year-
age an
a cha
girls
any g
accor
feren
at th
prefe
stron
femin
tary
nific
and t
the d
appar

While it is important to note at what age or stage the child becomes aware of his own sex, of more importance to the present discussion of sex-role acquisition is the point at which young males and females internalize their own sexual identity and become sex-typed in their own preferences and behaviors. Brown (1957) and Hartup and Zook (1960) report a positive relationship between age and sex-role preferences for males--there appears to be a steady change towards greater masculinity during the period between three and eleven years old. Hartup and Zook (1960) also found that four-year-old girls made significantly more feminine choices than three-year-old girls. However, this linear relationship between age and femininity appears to cease, as Brown (1957) reports a change toward masculinity in older girls. Preschool-aged girls possessed the most feminine sex-role preferences of any group in the three- to ten-year-old period. Then, according to Brown (1957), a marked change in sex-role preference patterns occurs in girls in the fifth grade. Girls at this age (10-11 years old) appear to show much less preference for the masculine role and begin to express a stronger and increased preference for things that are feminine.

In their investigation of sex-role concepts among elementary school age girls, Hartley and Klein (1959) found no significant differences between girls who were eight years old and those who were eleven, but some evidence of a trend in the direction of more sex-typing by the eight-year-olds was apparent.

conse

tion

made

femal

patte

prisi

role

in ou

at mo

for a

a "si

males

the v

sex-r

femal

femal

at th

more

role

reast

soci

is a

sex-r

a mor

beha

Given the variability in findings and general lack of consensus regarding the specific course of sex-role socialization in females, there is only one generalization that can be made with any degree of confidence: Sex-role acquisition in females is a complex process, and appears to be less linearly patterned than it is in males. This does not seem too surprising, given the more ambiguous nature of the female sex-role at early ages; the sanctions against females who engage in out-of-role behaviors are much less severe than for males at most age levels. Thus, it is far more socially acceptable for a young girl to be a "tomboy" than for a young boy to be a "sissy." These negative sanctions that are present for males but not for females are most likely a reflection on the values contemporary society places on the respective sex-roles. Thus, the more erratic developmental pattern of female sex-role acquisition may also be a function of the female having to take on a role of lesser social value, while at the same time learning that the male role is considered more socially desirable.

Given this evidence for a more complex pattern of sex-role acquisition in females, it appears that a more direct measure of the relationship between role acquisition and social behavior is necessary, since the assumption that there is a simple, positive relationship between age and appropriate sex-role preference probably is not valid for females. Thus, a more valid test of the premise that sex-role and allocation behavior are related in females would be to measure role

pref

actu

clud

spec

a p

rol

she

to

the

a p

mar

I e

bi

th

ro

in

M

v

t

m

w

f

t

.

preference and determine whether it was correlated with actual behavior, within a number of age levels.

Thus, measures of sex-role preferences also were included in the present research in an attempt to explore a specific instance of the general hypothesis that the more a person shows a preference for enacting one of the sex-roles, irrespective of her or his biological sex, the more she or he will exhibit behaviors that appear to be related to that role. Specifically, I tested the hypothesis that the more feminine the sex-role preference, the more likely a person was to allocate a reward to her-or himself in a manner that was similar to the behavior of adult females. I expected that these measures would (a) relate to the biological sex of the respondents, and (b) correlate with the allocation behavior such that the more feminine the sex-role preference, the less the reward allocated to oneself, irrespective of age level.

Modeling as a Socialization Mechanism

As noted, one major premise underlying the present investigation is that differential socialization patterns lead to the acquisition of different social roles in females and males, and that the evidence of sex differences in adult reward allocation is one example, however minor, of the difference between these socialized roles. That is, it appears that one aspect of the socially accepted male sex-role is that it prescribes that a male earn a reward for effort that

he

le

ma

ma

wi

th

no

se

fe

in

pr

ta

in

le

em

no

ar

no

sh

of

re

no

th

wa

(1

ty

he expends. This is not to say that females do not also learn to expect a reward for their efforts. The difference may lie in the degree of importance of the reward per se for males and females, or, perhaps, in the type of reward that will be seen as satisfactory. That is, young girls may learn that they, as females, should not be concerned with being monetarily rewarded, or, it may be that as a number of researchers (e.g., Bardwick, 1973; Douvan, 1960) have speculated, females may be concerned more than males with the social and interpersonal aspects of behavior. Thus, whereas the male role prescribes monetary reward for work, females may learn to obtain satisfying rewards from such sources as the interpersonal interactions associated with the work, and may therefore place less importance on the monetary rewards available.

Moreover, if, on the other hand, females learn to de-emphasize reward directly from their role-models (e.g., their mother who does not receive rewards for her housework that are comparable to the father's for his work) then different models might produce different perceptions of the relationship between appropriate sex-role behavior and the importance of tangible rewards. One test of this hypothesized modeling mechanism would be a comparison of females who had employed mothers--mothers who earned a tangible monetary reward for their inputs--with females whose mother's sole "occupation" was that of housewife. As noted earlier, Hartley and Klein (1959) found evidence that daughters of working mothers sex-typed significantly less behaviors than daughters of

non-

for

ing

inve

rela

moth

that

fema

or v

tha

sea

les

acq

qui

the

dif

exp

mak

con

hav

Lo
in

it

Me

non-employed mothers. This finding provides some evidence for the existence of an effect of role-modeling on the learning of appropriate sex-roles. Thus, the present research investigated the possibility that there might be some direct relationship between the employment status of the female's mother and her self-allocation behavior. It was expected that if modeling is a strong factor in sex-role acquisition, females with employed mothers would make more of a connection, or would place more emphasis on obtaining the monetary reward than other females who had more traditional role models.

Thus, within the more general scope of the present research, it was reasoned that if, in fact, females "learn" less of a connection between work and pay as part of their acquiring an appropriate sex-role, and if this sex-role acquisition is a direct function of the behavior of role models, then different characteristics in role models should produce different characteristics in the female actor. Thus, it was expected that daughters of working mothers should learn to make more of a connection between work and pay, and that this connection should affect directly their self-allocation behavior.

Locus of Control: A Possible Correlate of Sex Differences in Allocation Behavior

Whatever the mechanism underlying sex-role socialization, it is clear from the findings of past research (e.g., Lane & Messé, 1971; Leventhal & Lane, 1970; Messé & Callahan, 1975;

Messé & Callahan-Levy, in press; Messé & Lichtman, 1972; Mikula, 1974) that adult females consistently demand less reward for their work than males. Another area where there is relatively consistent evidence of sex differences is in research dealing with causal attribution. Internal-external locus of control refers to the extent to which persons feel they have control over their own outcomes and environment. The findings of a number of studies (e.g., Feather, 1969; Simon & Feather, 1973; Deaux, 1974; Riemer, 1975) indicate that there is a greater tendency on the part of college-age women to attribute success and failure to external factors. This difference in causal attributions has been found in a wide variety of situations, ranging from performance on academic examinations (Feather, 1969) to perceptions of musical ability (Riemer, 1975).

If these sex differences in locus of control are also a reflection of differences in sex-role expectations, then it seems reasonable to assume that as the discrepancy between males' and females' self-allocation behavior becomes more evident, so should this difference in modes of causal attribution. That is, as the female or male learns to adopt appropriate role prescribed behaviors, the occurrence of behavioral differences related to these role prescriptions might be expected to be correlated. If these two differences in fact do occur concomitantly, then the next step in the research process might be to make and to test directly speculations regarding the actual relationship between the two behaviors.

For e
herse
envin
terme
relat
their

diff
appr
time
have
Mess
are
fema
incl
bili
pria
but.

fol
1.
spe
ano
mal
pay

For example, perhaps the female's tendency to underreward herself is related to her perceived lack of control over her environment. That is, behavioral evidence of what might be termed a weaker sense of "own equity" in females might be related to the evidence that females are less internal in their locus of control.

On the other hand, it also is possible that both of these differences in fact might be related to the acquisition of appropriate sex-roles and yet not become evident at the same time. In other words, although both of these differences have been found in college-age adults (e.g., Feather, 1969; Messé & Callahan-Levy, in press), it is possible that they are acquired at different ages or maturational levels in females and males. Thus, the design of the present research included a measure of locus of control to explore the possibility of a relationship between the acquisition of appropriate sex-role behavior in self-allocation and causal attribution.

Hypotheses

In the research to be described in the next chapter, the following hypotheses were tested:

1. Females and males "learn" or acquire a tendency, through specific role socialization, to be satisfied with different amounts or types of rewards. Thus, females should differ from males in the amount of reward they perceive to be sufficient payment for work performed. Although I reasoned that as

children adopt their appropriate sex-roles, they should also exhibit what has been found to be sex-typed behavior, evidence of the erratic developmental course of female sex-role identification makes it difficult to develop predictions regarding the exact pattern of sex differences in self-allocation at different age levels. Thus, the simplest and most straightforward prediction is that differences as a function of age will occur in some pattern in which the behaviors of the oldest group (early adolescence) will most closely parallel known differences in adults.

2. Based on a premise that modeling is important in sex-role acquisition, I predicted that daughters of working mothers should make more of a connection between work and pay and should therefore pay themselves more like males than would daughters of nonworking mothers.

3. I expected that scores on the sex-role preference measures indicating appropriate sex-role preference would correlate with known sex-typed allocation behavior. That is, the more feminine the preference, the less the reward that a person will allocate to her- or himself.

CHAPTER II

METHOD

This chapter presents the methodology and design that were used to test the hypotheses. A factorial design was used to determine sex and age differences in the self-allocation behavior of children. Subjects at four age levels were placed in a work setting, and upon completion of the task were asked to determine their own pay for their work. The amount of reward that the children actually kept and the amount that they considered to be "fair" pay were measured, compared between sexes and age levels, and correlated with scores on a locus of control measure, sex-role preference scales, and other demographic information.

Pilot Study

Female and male students from the first, fourth, and seventh grades (the tenth grade was not available for testing) took part in a pilot study. The purpose of this pilot study was three-fold.

First, it was necessary to obtain some approximate measure of what the subjects considered to be appropriate pay for their participation in an experiment of this type, so that an overpay condition similar to that used in Messé and

Callahan-Levy (in press) could be established and incorporated into the design of the present research. Thus, fourth and seventh graders completed a short questionnaire pertaining to their perceptions of activities and occupations (as described below) and were asked to indicate how much they thought persons their age should be paid for "work" similar to that which they had just completed. (It should be noted that the length of the "work" period in the pilot study was somewhat shorter than that which was used in the actual experiment. Thus, the amounts indicated as appropriate by subjects were considered to be somewhat smaller than what they might allocate in the actual situation.)

These responses were compiled, and the results indicated that fourth graders felt that, on the average, 70.3¢ was appropriate pay ($\bar{X}$ = 62.5¢ for 10 females; 80¢ for 8 males), while the seventh graders saw an average of 71.7¢ as appropriate ($\bar{X}$ = 76.7¢ for 12 females; 66.8¢ for 11 males). Thus, \$3.00 was eventually established as a comparable overpayment for the grade levels that were to be receiving cash as payment. (\$6.00 was used in the Messé & Callahan-Levy study.)

Secondly, there was some question as to the appropriateness and salience of money as a reward for the six-year-old first graders. Thus, first graders were asked to choose which they would prefer (in general, not as a reward for their work) from pictured nickels, dimes, quarters, and several combinations of each. Examination of their responses revealed that most of the first graders seemed to be confused

in t

cuss

clus

gra

sim

man

"wo

fro

\$7.

(It

ave

giv

al.

ca

st

ac

un

gr

an

(\$

pr

to

co

to

in their concepts of the values of coins, and further discussions with the first grade teachers supported this conclusion. Thus, anticipating these results, during the first grade pilot sessions, subjects also were asked, in a manner similar to that used with the fourth and seventh graders, how many Hershey Kisses they felt would be appropriate pay for "work" like they just had completed. Subjects could choose from one to ten kisses, and the average amount chosen was \$7.49 ($\bar{X}$ = 6.5 for the 11 females; 8.4 for the 14 males). (It was felt that this upper limit of ten may have kept the average lower than it might have been if subjects had been given a free choice.) It should also be noted that virtually all of the first graders in the pilot classroom liked the candies and considered them to be suitable reward for work.

Thus, it was decided that Hershey Kisses would be substituted for coins for the first graders in the subsequent actual data collection.¹ In order that an equal number of units of reward would be offered to each grade level, first graders were offered 30 Hershey Kisses, while fourth, seventh, and tenth graders were asked to pay themselves from 30 dimes (\$3.00).

¹This substitution did not affect the analysis or interpretation of the results, since the units (0 - 30) of the total reward kept were the basic dependent measure, and since comparisons between sexes within grade levels were deemed to be of most importance to test the hypotheses.

nea

exp

and

of

only

plot

pat

and

ity

each

act

gra

den

the

(or

star

10

var

The

(wh

cla

mas

tha

Thirdly, the pilot study data were used in devising the measures of sex-role preferences to be used in the actual experiment. The two scales were the "activities" scale, and the "vocations" scale (see Appendix A), which consisted of lists of ten activities or occupations, respectively.

These activities and occupations were chosen to be used only after a multistep process of elimination had been employed. First, two lists of over 30 activities and 30 occupations were distributed to approximately 70 undergraduate and graduate students to be ranked according to the masculinity and femininity of each stimulus. Those 20 items from each scale that best discriminated between male and female activities and occupations were then presented to the various grades of school children in the pilot sessions. The students were asked to indicate "whether a boy would most like the activity or whether a girl would most like the activity (or occupation)." The scores (number of B's or G's) and standard deviations of these items were then used to select 10 activities and occupations whose scores had the least variance and which fell at 10 approximately equal intervals. These ten items then were presented to 87 undergraduates (who volunteered for credit in their introductory psychology classes at Michigan State) to be ranked according to their masculinity or femininity. Their instructions indicated that the most masculine was to be ranked 10, the most

feminine 1, and so on.² These subjects were specifically instructed to indicate how they saw these activities or occupations in the real world, as they existed in today's society, not as the subjects might like them to be or how they thought they should be. The final rankings, as shown in Table 1 and Table 2 were surprisingly uniform and very similar to the original scores obtained from the school children.

Table 1.--Ranks and Standard Deviations of Items in the "Activities" Scale

	Ranking	Standard Deviation
PLAYING FOOTBALL	1	.402
SEWING OR KNITTING	10	.424
SHOVELING SNOW	2	.840
COOKING OR BAKING	9	1.050
GOING CAMPING	3	1.344
DANCING	8	.828
GOING BOWLING	4	1.296
SWIMMING	5	1.245
ICE SKATING	7	1.492
READING	6	1.362

Note. Numbers indicate reflected rankings, ranging from 1 = most masculine to 10 = most feminine.

²In order that the direction of the correlation coefficients be more clearly congruent with the hypothesis (since a negative correlation between feminine scores and reward allocation was predicted) in the analyses, these ranks were subsequently reflected, so that the most feminine rank became 10, the most masculine, 1. Thus, Tables 1 and 2 contain the reflected ranks of scale items.

Table 2.--Ranks and Standard Deviations of Items in the
"Vocation" Scale

	Ranking	Standard Deviation
FIREFIGHTER	2	.928
SECRETARY	10	.703
FOOTBALL PLAYER	1	.655
NURSE	9	.761
ASTRONAUT	3	1.807
TEACHER	8	.990
POLICE OFFICER	4	1.017
PARENT	7	1.400
DOCTOR	5	1.121
BAKER	6	1.173

Note. Numbers indicate reflected rankings, ranging from
1 = most masculine, to 10 = most feminine.

Reward Allocation Study

Recruitment of Subjects

The subjects were male and female students in the first, fourth, seventh, and tenth grades³ from schools in a lower-middle to middle-class suburb of Lansing, Michigan. Permission was obtained from the school administrators to test

³The first, fourth, seventh, and tenth grades were chosen for study for two reasons. First, the nature of the task and experimental manipulations were such that all grades received the same measures, and first grade appeared to be the minimum age at which subjects could comprehend the requirements of the experiment. Secondly, as noted, past research has shown the pattern of sex-role development for females to be non-linear, in that there is an increasing preference for the masculine role until the age of 10 or 11 (Brown, 1957). Thus, an effort was made to include the age groups that might reflect this pattern of development.

two classrooms of each grade level, and, in the first, fourth, and seventh grades, parents were notified of their child's possible participation and permission slips were returned by the subjects prior to the study. One classroom at each grade level provided subjects for the pilot study, while the second provided subjects for the actual data collection. The average age for each grade of subjects was 6.6 years for the first graders, 9.4 years for the fourth graders, 12.8 years for the seventh graders, and 15.9 for the tenth graders. Table 3 presents the number of males and females at each grade level who were examined.

Table 3.--Number of Female and Male Subjects at Each Grade Level

	Grade Level			
	1st	4th	7th	10th
Females	7	12	11	10
Males	14	9	7	10

The individual teachers at each grade level were consulted and agreed to introduce the experiment to the subjects very briefly, indicating that the experimenters were from Michigan State University and desired help with a project they were doing that dealt with (elementary, junior high, or senior high school) students. All subjects were asked whether they wanted to participate and were given ample opportunity

to refuse. Since the experiment was presented further as a "job" they would be performing and for which they would be paid, this option of "not working" seemed reasonable. Only one subject, a tenth grade female, declined to participate. She indicated that she would rather use the time to finish a homework assignment that was past due.

Instruments

The several instruments used in this study were contained in an interview protocol, and required approximately 25 minutes to complete and was the "task" for which subjects were to be paid. A female or male undergraduate experimenter (counter-balanced with male and female subjects) verbally administered the interview protocol individually to each subject at each grade level. A copy of this protocol is included in Appendix A.

The first sheet of the protocol contained a number of biographic-demographic questions. These questions pertained to the age of the subject, family size and composition, father's employment status, mother's employment status, subject's work history, and subject's future vocational and marriage plans.

Activities scale. Since previously used measures have been found to be unreliable, invalid, or were unsuited to the age range in the present study, the "activities" scale and the "vocational" scale were devised as a means of measuring subjects' sex-role preferences. The "activities" scale (as

described above and as shown in Appendix A) consisted of a list of ten activities in which young people may participate.

In the actual data collection, subjects were not asked to rank the items or to indicate whether each item was masculine or feminine. Rather, actual subjects were asked to indicate their own preferences for the activities. The experimenter read through the list twice, asking the subject to indicate her or his three most preferred items the second time through the list.

Vocation scale. As noted, the "vocation" scale was constructed in exactly the same manner as the "activities" scale. (They were ranked at the same time by all pre-test groups.) These ten items were presented to the actual subjects as part of the interview protocol in the same manner as the "activities" scale. Subjects were asked to choose their three most preferred occupations (what they would like to be when they "grow up") and indicate these to the interviewer.

The Bialer-Cromwell Children's Locus of Control Scale. This scale was designed to measure the extent to which a child characteristically construes events or outcomes (both positive and negative) as being contingent upon her or his own actions (i.e., internally controlled) rather than upon fate, chance, or other people (i.e., externally controlled). The scale originally consisted of 23 questions, verbally administered and worded so that a yes or no answer indicates internal or external control. It has been successfully used with normal children from the first to eighth grades (Bialer, 1960).

it

ob

ar

it

wo

Ap

vi

su

to

re

th

fa

pe

we

yo

je

on

of

je

un

yo

qu

"j

Ten items were chosen from the scale on the basis of their item-total scores point-biserial correlation coefficient obtained during the standardization of the scale (Bialer, 1960), and their nonredundancy. Thus, those items with the highest item-total coefficients were chosen and redundant questions were omitted. The selected questions are contained in Appendix A.

Post-allocation measures. The final page of the interview protocol (see Appendix A) contained instructions for the subjects' self-allocation and five brief questions related to the subjects' perception of their performance and chosen reward. The subjects were asked, "How well did you do at this 'job'?" and given the choice of responding "good job, fair job, or poor job." Two questions assessing the subjects' perception of their performance relative to females and males were also asked. These questions were worded: "Do you think you did better than most boys/girls your age would do?" Subjects were allowed to choose from three answers, "better, same, or worse." A fourth question dealt with the subjects' degree of satisfaction with the money they allocated themselves. Subjects were asked to choose from "very happy, satisfied, or unhappy" to answer the question, "Are you happy with the amount you were paid (paid yourself) for the job you did?" The fifth question asked what the subjects felt was fair pay for the "job" and subjects could indicate any amount.

Variables and Experimental Design

The design of the present research was both "experimental" and correlational. Sex of Subject and Grade Level were examined in a 2 x 4 (first, fourth, seventh, and tenth grades) factorial design. There were two dependent measures in this design: (a) the amount of reward subjects actually allocated to themselves, and (b) the amount of reward subjects indicated was "fair" pay on the post-allocation question.

In addition, these two measures (actual and "fair" allocation) were examined as a function of: (1) the employment status of the subject's mother (working or nonworking), (2) two measures of sex-role preferences (the "activities" scale and "vocation" scale scores), (3) scores on a locus of control measure, and (4) various demographic variables.

Procedure

A major goal in designing the present research was to replicate as closely as possible the design and procedure used in Messé and Callahan-Levy's (in press) study which dealt in part with the self-allocation behavior of college-age females and males. Thus, the basic designs and procedures in the two studies are very similar. However, the procedure followed in the present research does deviate somewhat from the former, and these deviations are related directly to differences in the nature of the subjects who took part in the two studies.

Messé and Callahan-Levy recruited college-age subjects for pay through an advertisement in the State News, the

campus newspaper. Although the subjects in the present research were essentially volunteers who were also recruited for pay, the act of volunteering required very little effort on their part. In fact, many of the elementary, junior, and senior high students appeared to welcome the opportunity to be excused from class for the time required by the study. Thus, one essential difference between the two studies is the motivation of subjects for the pay offered. It is not possible to determine the degree to which this difference might affect the interpretation of the results, but it is assumed that these differences in motivation would be uniform across sex, within grades.

As stated above, subjects who participated in the present research were given a brief introduction to the experiment by their classroom teacher during which they were given the opportunity to decline to take part. In fact, first, fourth, and seventh grade students were informed about the study more than a week in advance when they were given permission slips for their parents to sign. Most students, however, appeared to be very interested and anxious to take part in the research.

The experiment was conducted in classrooms of the elementary, junior high, and senior high schools. The experimenters arrived at the classroom at a prearranged time, and after the initial brief introduction by the teacher, one half of the classroom (approximately 10 students, both male and female) were

escorted to another large classroom containing tables and chairs. While still standing together in the group, the subjects were given additional information about the study. At this time they were told by one experimenter that they were about to complete a "job" for a class of students at M.S.U., which consisted of being interviewed for one half hour about the way they felt about certain things. The students were also told that they should take this "job" seriously and do their best to answer the questions honestly and accurately.

These initial instructions were very similar to those given to undergraduates in the Messé and Callahan-Levy study. However, the amount of time subjects spent working at the task was less than the one hour that subjects in the Messé and Callahan-Levy study worked. This was necessitated by limitations placed on the amount of time the younger students could be excused from their regular school work by the principals and teachers involved. This time limitation also was made necessary by the fact that the interview had to be administered verbally by individual experimenters (to assure uniformity at all grade/reading levels).

Next, the subjects were introduced individually to an experimenter who seated them at a table where the interview protocol and payment materials were located. Students were seated in such a manner that they faced the experimenter who had her or his back to a wall, so that no subject could see or communicate with the other subjects in the room. When

all the subjects had been seated, the experimenters began the interview protocol (see Appendix A) which required approximately 25 minutes to complete. The experimenters made it clear to the subjects that each portion of the interview was nonevaluative, and encouraged each subject to think about the questions before answering them.

Self-allocation. At the completion of the interview, subjects were given the opportunity to pay themselves. This portion of the experiment was conducted in the following manner. Subjects were told that their "job" was completed and that it was time to be paid. The rationale for self-payment was provided as follows:

"We have some money to pay you. The only problem is, we don't know what fair pay is for a "job" like this for someone like you. So we've decided to let each person take what they feel is a fair amount of money for their work. This means we want you to take what you feel you deserve."

It was also stressed that there was no "correct" amount, and that subjects would actually keep the amount they chose.

After the subjects received these instructions, the experimenter placed 30 dimes or 30 candies on a large cardboard and gave the subject a blank envelope and an envelope marked "leftover." Subjects were instructed to put what they wanted in the blank envelope, which they would keep,

and to put the remainder in the envelope marked "leftover."⁴ An important portion of the instructions stressed that the experimenter would turn around and not look, or, if possible, leave the room, so that no one would know how much money the subject actually kept. They were also told that any money leftover would be returned to M.S.U. to be used for other studies.

⁴For the first graders, the chocolates allocated by subjects were, as noted, placed in an envelope. However, since I was concerned with both the children's sense of what was fair (since the rewards varied) and with their appetites for lunch, the envelopes were marked with the child's name and given to the teacher for safe-keeping until after school was over for the day.

CHAPTER III

RESULTS

Self-Allocation Behavior

Hypothesis 1

There were two measures of allocation behavior in the present study: (1) the actual amount of money that subjects allocated as pay, and (2) the amount that subjects indicated that they felt was "fair" pay on a post-allocation question. Summary data for the self-allocation dependent measures are presented in Table 4, which presents the mean number of units (candy in the first grade, dimes in the fourth, seventh, and tenth grades) actually kept and indicated as "fair" pay by males and females at the four grade levels.

Table 4.--Mean Number of Units Kept and Indicated as "Fair" Pay

Grade Level	Males		Females	
	Actual	Fair	Actual	Fair
1	16.57	16.14	11.00	10.00
4	18.56	15.44	12.92	9.00
7	6.57	5.29	3.73	4.64
10	10.70	8.05	2.40	3.00

The amount of the reward subjects actually kept and the amount they indicated was "fair" pay on the relevant post-allocation question were subjected to a 2 (Sex of Subject) x 4 (Grade Level) x 2 (Reward, actual vs. appropriate; a repeated measure) unweighted means analysis of variance, which revealed three significant main effects. Table 5 presents a summary of this ANOVA.

Table 5.--Summary of the 2 (Sex of Subject) x 4 (Grade Level) x 2 (Actual vs. Fair) Repeated Measures ANOVA

Source	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Grade (A)	3	504569.76	168189.92	11.79**
Sex (B)	1	286202.81	286202.81	20.07**
A x B	3	27019.47	9006.49	.63
Error I	72	1026820.08	14261.39	
Reward (C)	1	14445.31	14445.31	4.39*
A x C	3	15869.16	5289.72	1.61
B x C	1	1204.32	1204.32	.38
A x B x C	3	5970.54	1990.18	.61
Error II	72	236799.99	3288.88	

* $p < .05$

** $p < .001$

As Hypothesis 1 predicted, and as Tables 4 and 5 indicate, there was a main effect for the sex of the subject, in that males tended to reward themselves more than females and felt that more pay was appropriate or "fair" over all grade levels. The results of planned comparisons performed

on the average of the two scores within each grade level revealed that males' allocation scores were significantly greater than females' in the first ($t = 2.12$, $p < .05$), fourth ($t = 2.30$, $p < .05$), and tenth ($t = 2.50$, $p < .025$) grades. Although, as Table 4 indicates, the mean scores for the seventh graders were in the predicted direction, the difference between male and female scores at this grade level was not significant ($t = .60$).

There also was a significant main effect for grade level, and an examination of Table 4 indicates that as the grade level increased the amount of reward that the subjects actually kept and the amount that they felt was fair pay tended to decrease. Comparisons performed on the average of the two scores between adjacent grade levels for both sexes indicated that there was a significant decrease in the amounts kept and thought to be fair only between the fourth and seventh grades ($F = 20.51$, $p < .001$). Figure 1 illustrates the overall pattern of self-allocation for females and males over grade levels.

An examination of the cell means relevant to the reward (actual or "fair") main effects indicates that, overall, subjects tended actually to keep more of the reward than they felt was fair pay. The absence of a significant Sex of Subject x Reward interaction indicates, however, that there were no significant differences between the behavior of females and males regarding this variable.

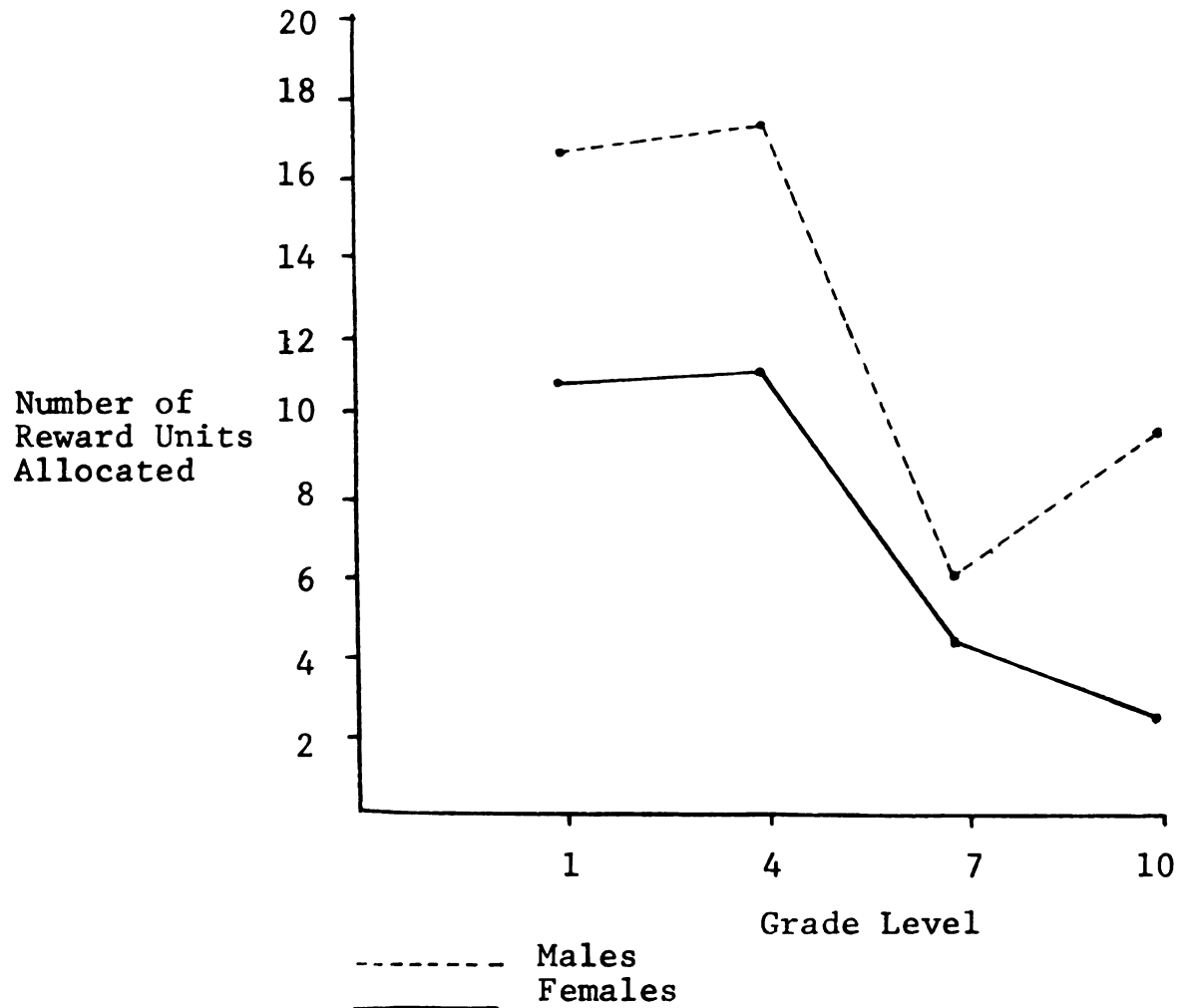


Figure 1. Female and Male Self-Allocation Unit Scores as a Function of Grade Level (Averaged over Actual and "Fair")

Given that the analysis of variance tests the significance of interval rather than ratio differences, and given that these interval differences tend to be constrained by the total score over the cells of a given comparison, it was thought appropriate to perform a secondary ANOVA on the proportion of the average male allocation within age group that each female allocated to herself. That is, a comparison of interest to Hypothesis 1 is the Grade Level x Sex Interaction (which was predicted, in that it would indicate that at some point females took less for themselves as they matured). The previous ANOVA performed on unit scores revealed that this interaction was not significant (Table 5). However, the main effect for Grade Level in the first ANOVA indicated that both male and female subjects took less as grade level increased, such that by the seventh grade, the mean allocation was only approximately 5 units, across sex. This increasingly small level of reward had the effect, as noted, of constraining the size of the interval differences between the conditions of sex within a grade, and therefore affected adversely the Sex x Grade Level interaction.

Therefore, in an attempt to examine Hypothesis 1 more validly, actual and "fair" female scores were transformed to "proportion" scores, which represented the female's proportion of the mean males' score at each grade level. For example, each first grade female's actual and "fair" scores were divided by the respective actual and "fair" means of

the first grade males' scores. In this way, an analysis could be performed on ratio scores, rather than the more constrained interval units.

These female "proportion" scores were subjected to a Grade Level x Reward (actual vs. "fair," a repeated measure) unweighted means analysis of variance. The means, averaged over actual and "fair," were 64.15 for the first grade, 63.92 for the fourth grade, 72.14 for the seventh grade, and 28.85 for the tenth grade. The pattern of the means across grade level is shown in Figure 2.

Planned comparisons (Winer, 1962, p. 208) performed between adjacent grade levels revealed that, as predicted by Hypothesis 1, the proportion scores for the tenth grade females were significantly less than the scores for seventh grade girls ($t = 2.33$, $p < .02$). Finally, as in the first analysis, the interaction of grade and reward was not significant ($F = 1.20$). Moreover, the main effect for reward also was not significant, indicating that "proportion" scores were not affected by the type of reward measure examined (although, as noted above, absolute units were).

Tests of Possible Correlates with Allocation Behavior

Hypothesis 2

Hypothesis 2 predicted that daughters of working mothers would take more of the reward for themselves than daughters of mothers who were not in the labor force. Thus, a 2 (Sex of Subject) x 4 (Grade Level) x 2 (Mother's Work Status)

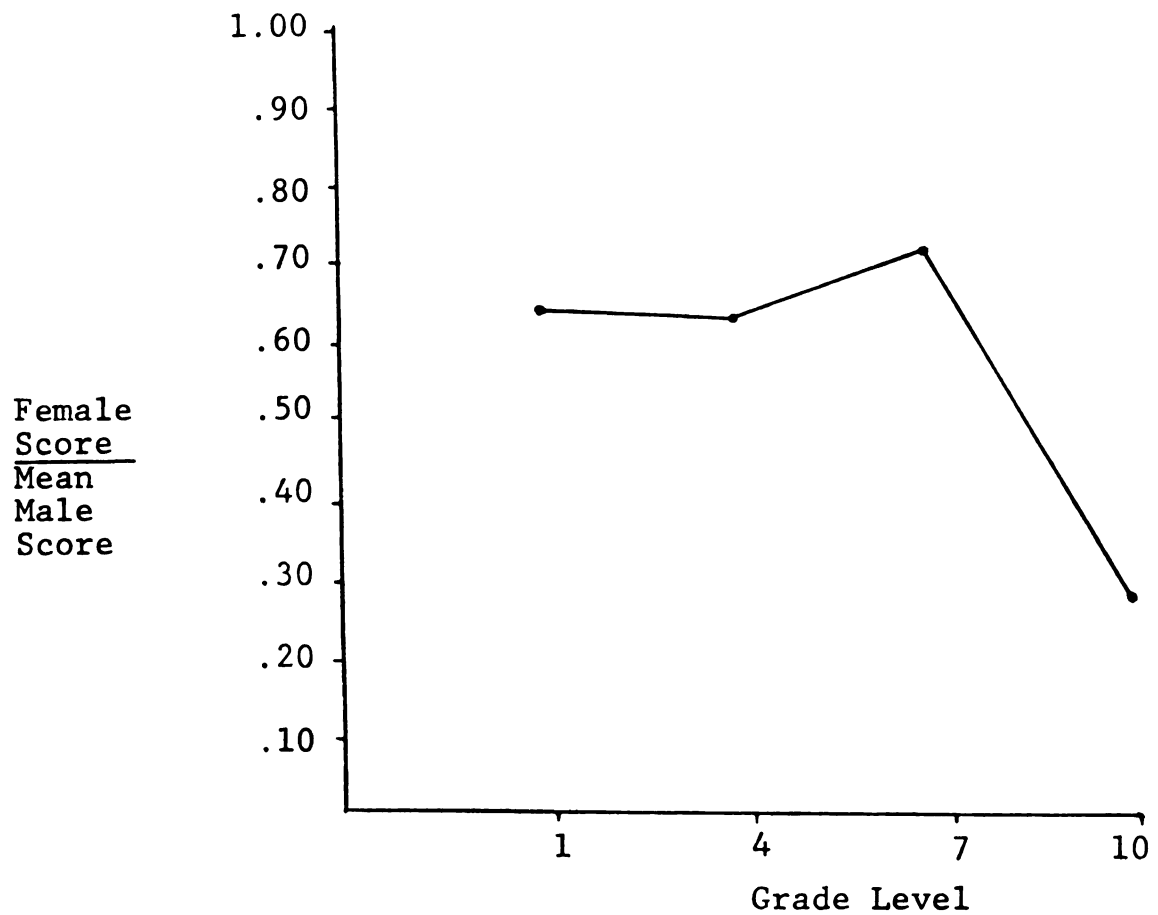


Figure 2. Mean Female "Proportion" Scores as a Function of Grade Level (Averaged over Actual and "Fair")

•

1

C

□

1

t

U

1

7

1

亡

r.

02

11

p

1

D.F.

g.

64

analysis of variance was performed on the amount of reward subjects actually kept. Contrary to expectations, this analysis revealed no significant relationship between working mothers and the self-allocation behavior of subjects, as neither the main effect for Work Status ($F = .30$) nor the Sex of Subject x Work Status interaction ($F = .42$) was significant.

Hypothesis 3

It was predicted that scores on the sex-role preference scales would correlate with self-allocation behavior. Before examining these correlations, however, it first was necessary to assess the reliability and validity of the two scales.

The design of these two scales made known direct tests of reliability inappropriate⁵, and, therefore, more indirect methods and measures were used as indicators of the overall reliability and validity of the scales. First of all, if these measures are in fact measuring appropriate sex-role preference, one would expect a strong relationship between reflected scale scores and the sex of the subject. As expected, t-tests computed for the "activities" scale (female

⁵Obviously, measures of internal consistency are unsuited to assessing the scale qualities of these measures. An alternative measure of reliability would be Guttman's Coefficient of Reproducibility. However, since subjects were not given a free choice of items in responding to the "activities" and "vocation" scales, but were asked to select the three most preferred, a basic and necessary characteristic of a Guttman-type scale was violated. Thus, Guttman's method also was deemed an inappropriate measure of reliability in this situation. Further, since these scales were administered once to each group of subjects, test-retest methods could not be used.

$\bar{X} = 5.15$, male $\bar{X} = 2.50$) and the "vocation" scale (female $\bar{X} = 7.02$, male $\bar{X} = 2.57$) with Sex of Subject were highly significant ($t = 8.35$ and 16.70 respectively, $p < .001$). Secondly, the two scales also should be significantly correlated with one another. This also was found to be true ($r = .65$, $p < .001$). Finally, the initial high agreement among subjects within and between test groups in the construction of the scales would appear to be further evidence to suggest that these scales are reasonably reliable and valid. It should be noted, however, that the mean scores for males across grade level did not follow the pattern that would be expected from previous findings (e.g., Brown, 1957, Hartup & Zook, 1960). Unlike past studies, the present research found that males' sex-role preferences did not increase linearly with age. As Table 6 illustrates, the reflected scores on the "activities" and "vocational" scales did not decrease (which would have been indicative of more masculine choices) as grade level increased. It appears, then, that there is very little change in sex-role preference scores as a function of grade level for either females or males.

Still further indirect evidence for the construct validity of the scales are the findings that, as predicted, there appears to be an overall relationship between scores on these two scales and reward allocation behavior. The scores of the median item were chosen by subjects on the "activities" and "vocation" scales were correlated (with the effects of grade level partialled out) with actual and "fair" reward measures.

Table 6.--Reflected Mean Scores for Females and Males on the
 "Activities" and "Vocation" Scales at Each Grade
 Level

"Activities" Scale				
Grade Level				
	1st	4th	7th	10th
Male	2.16	2.78	2.15	2.70
Female	5.86	5.00	4.55	5.50

"Vocation" Scale				
Grade Level				
	1st	4th	7th	10th
Male	2.31	2.22	2.86	3.20
Female	7.15	6.75	7.19	7.10

This analysis revealed that, as predicted, scores on the "activities" scale (the higher the reflected score, the more feminine the response set) correlated negatively with actual reward ($r = -.351$, $p < .001$) and with the "fair" measure ($r = -.19$, $p < .05$). Similarly, scores on the "vocation" scale were also negatively correlated with actual reward ($r = -.42$, $p < .001$) and with the amount deemed "fair," ($r = -.25$, $p < .01$).

The correlations between actual reward and the scale scores were also examined separately for males and females. Although these correlation coefficients were in the predicted direction, they were not significant. An examination of the scatterplots of the relationship between these measures and reward reveals that these nonsignificant separate coefficients for females and males might be due, in large part, to the limited range of the preference scale scores within each sex. That is, the regression line is almost halved by the division between sexes, and this, coupled with the variability of reward scores within sex, tended to reduce the statistical significance of the relationship between reward and preference scale scores within each sex.

In addition, correlation coefficients also were computed (partialled for the effects of grade level) for the relationship between the sex-role preference scales and the female "proportion" scores. This analysis revealed that scores on the "vocation" scale correlated negatively with the female "proportion" scores ($r = -.6562$, $p < .001$), indicating that

as females chose a greater proportion of what males chose as reward, they also selected more masculine occupations on the "vocation" scale. The correlation coefficient computed for the "activities" scale scores and female "proportion" scores was in the predicted direction, but did not reach significance ($r = -.1463$).

Locus of Control

As noted, a measure of locus of control was included in the design to examine the possible relationship between this construct and sex differences in self-allocation behavior. Correlation coefficients were computed for scores on the Bialer-Cromwell Children's Locus of Control Scale with actual and "fair" allocation measures.

Although there initially were unexpected significant negative correlations between these two measures and I.E. scores (indicating that the more external the response to the I.E. scale, the more reward allocated), there were also expected significant correlations between grade level and I.E. scores for both males ($r = .56$, $p < .001$) and females ($r = .39$, $p < .05$) which indicated that subjects gave more internal responses as grade level increased. Thus, given the tendency for subjects to allocate less to themselves as grade level increased, the correlations between I.E. scores and reward measures were recomputed, partialling for the effects of grade level. That is, it seemed reasonable to assume that these significant correlations between reward and I.E. scores

were due to the combined effects of the increase in internality with age and the decrease in amount of reward allocated with age, rather than any direct relationship between allocation behavior and locus of control. As expected, these partialled coefficients did not reach significance (actual reward with I.E. $r = -.008$; "fair" with I.E. $r = -.03$). Coefficients computed for the female "proportion" scores with I.E. scores with grade partialled also were nonsignificant.

One additional finding was that sex was related to I.E. scores ($t = 2.36$, $p < .02$), indicating that females scored higher (gave more internal responses) than males on this scale (the mean score for females was 7.10; for males, 6.33).

Demographic Variables

The biographical-demographic items which comprised the beginning of the interview and the items on the post-allocation section of the questionnaire also were included in the overall correlation matrix that was generated to test the specific hypotheses. There were no significant correlations between these variables and either type of reward measure. Although the relationships among these variables are somewhat peripheral to the focus of the present research, there were some significant correlations generated, and these relationships are presented in Appendix B.

CHAPTER IV

DISCUSSION

The major focus of this study was on the relationship between the acquisition of appropriate sex-roles and sex differences in self-allocation behavior. Several variables were examined within this context, and the present chapter presents a discussion of the results of the study and their implications for the understanding of these specific sex differences and the more general processes involved in sex-role socialization.

Sex Differences in Self-Allocation

In general, the results of this study tend to indicate that, as hypothesized, sex differences in self-allocation are somewhat a function of age. This hypothesis was based on the assumption that these differences are inherent in traditional sex-roles, and these roles are learned and adopted to a greater extent with age and social experience.

As noted, there were significant differences in the amount allocated between females and males in the first, fourth, and tenth grades. Although seventh grade boys took more for themselves than their female counterparts (the respective means were 6.6 and 3.7 units), the difference was not statistically significant. Careful examination of the relevant cell means tends to suggest that the behavior of the seventh grade boys was particularly uncharacteristic,

and, in fact, might account for the lack of significance in the difference between males' and females' allocations at this grade level. Prior to the experiment, several teachers and administrators that were contacted and interviewed found the prediction that males would pay themselves more than females surprising and suggested that this would not be true for the seventh grade boys. After obtaining the nonsignificant differences at this age level, further probing revealed that those who had most contact with the seventh graders felt the boys tended to lack self-confidence and firm self-concepts, while girls at this age appeared to be more self-assured in most respects.

There is evidence in the literature to support these observations. Maccoby and Jacklin (1975, p. 152) cite several investigations that found sex differences in self-esteem at this age level in which females rated themselves higher than did males. Bledsoe (1961) assessed the overall mental health of nine-to twelve-year-olds, and found that girls in this age group scored lower than boys on behavioral immaturity and feelings of inadequacy. Overall, girls' mental health scores were superior to those of boys. He also found in a later study (Bledsoe, 1967) that girls at this age have more positive self-concepts than boys. Coopersmith (1959, 1967) also found, as did the author, that teachers rated girls more favorably in terms of self-esteem than they did boys in this age group.

Figure 1 illustrates the similarity of self-allocation behavior in seventh grade males and females. Since there is significant sex difference in allocation behavior again in the tenth grade, it seems reasonable to attribute the seventh grade results to the pattern of self-esteem development in males rather than to an increase at this age in the self-concept of females. This speculation is supported further by the lack of consistent findings of sex differences in esteem levels in the 13-16 year age group (Maccoby & Jacklin, 1974).

As Figure 1 demonstrates, the seventh graders' behavior was unusual in yet another respect, in that there was an extremely large decrease from the first and fourth grades in the amount of reward kept for both females and males. This decrease continued in the tenth grade, and was greatest for seventh grade boys, who took even less than males in the tenth grade.

There are several explanations available for this seemingly unusual behavior on the part of the seventh and tenth grade allocators. For example, it could be that the students at these upper grade levels were more advanced in terms of the sequence of their moral development (e.g., Kohlberg, 1969). Kohlberg's cognitive approach to moral development assumes that the development of moral thought follows a sequence of distinct stages. Each stage represents a qualitatively different organization of thought, rather than a specific set of beliefs.

Kohlberg identifies three general levels of moral judgment, the stages within each level, and describes characteristics of each stage. For example, within the first, or preconventional level, there is the Physical Power stage, which is followed by the Instrumental Relativism stage, described as basically hedonistic and pragmatic. In contrast to these earlier developmental stages is the final stage within the postconventional level, the Universal Ethic stage, in which moral principles are abstract and ethical.

There is strong evidence that this sequence of moral development does in fact operate, even cross-culturally (Kohlberg & Turiel, 1971; Turiel, Kohlberg, & Edwards, 1972), and that these stages of moral development influence a wide range of judgments (e.g., senses of legality and justice, Tapp & Kohlberg, 1971). It seems reasonable to assume that the four grades of subjects in this study were at several different levels or stages of moral development, and that the differences in allocation behavior between the grade levels might be due, at least in part, to these differences in cognitive structure. That is, first and fourth graders who took the greatest amount of reward, may have been closer to the more self-centered and hedonistic Instrumental Relativism stage than the students in the seventh and tenth grades. It should also be noted that there is no evidence of sex differences in moral development.

In addition, the nature of the task itself may account, in part, for this decrease in the amount of reward kept and

deemed to be "fair" pay in both seventh and tenth grades. While it seems reasonable to expect that subjects might tend to increase their estimates of their worth as "workers" with age, it is also possible that the requirements of the task might have appeared less arduous, serious, or realistic to the older subjects in the present study. That is, while the first and fourth graders may have taken the task somewhat seriously, and been able to place themselves effectively in the role of a "worker," it appeared to several experimenters that the seventh and tenth graders tended to welcome the opportunity to "escape" from routine classwork, and saw themselves more as willing volunteers than "workers." Thus, they might have been satisfied with far less pay for their participation and saw less to be appropriate as "fair" pay.

Thus, subjects' perceptions of the task may have differed at the various age levels. Although this might be interpreted as a flaw in the research design, it is not serious, given the assumption that this task perception was constant within grade levels, across sex. That is, as noted, the comparisons of interest were between females and males within each age group. The design is still directly comparable to that of Messé and Callahan-Levy (in press) in that subjects worked for a period of time and were given the opportunity to pay themselves an actual reward.

The finding that subjects took more than they indicated they felt was "fair" pay is not surprising, given the results of past research (Messé & Callahan-Levy, in press) with

adults in which there was a large difference between the two measures. In fact, it seemed reasonable to expect an even greater difference between actual and "fair" than in previous research, given the age level of the subjects and their supposed lack of maturity or self-control. However, viewed from another perspective, it could be that these younger subjects may have been less likely to admit to an experimenter that they took a lot more than they thought was fair, and may have elevated their estimate of "fair" pay accordingly, or they might have taken less than they really wished. This possibility seems to be ruled out somewhat by the fact that there was a significant difference between the two measures.

Tests of Correlates with Allocation Behavior

Working Mothers--Hypothesis 2

The prediction that daughters of working mothers would pay themselves more than daughters of housewives was based on a strict social learning, modeling approach to socialization. Admittedly, this was a very simplistic notion, and the lack of significant results would indicate that it may have been far too simplistic in terms of predicting actual behavior.

Maccoby and Jacklin (1974, pp. 362-363) discuss the parents' role in the socialization of sex differences and conclude that direct "shaping" by parents does not, in most instances, account for the behavior that is acquired.

We suspect that others who do not know the child well as an individual are more likely to react to him according to their stereotyped views of what a child of a given sex is likely to be like. Although this conclusion runs counter to common sense, it appears possible that relative strangers exert more stereotyping pressure on children than their own parents do. In any case, we believe that socialization pressures, whether by parents or others, do not by any means tell the whole story of the origins of sex differences.

Perhaps the socialization process that may best account for the females' acquisition of the behaviors found in the present study is one discussed by Kohlberg (1966). He stresses that sex-typed behaviors are not acquired by imitating actions that the child has observed directly in same-sex adults. Rather, the child develops generalized concepts of "masculinity" and "femininity" and these concepts are limited by the level of cognitive skill she or he has developed. Thus, the child will incorporate these concepts into her or his own behavior according to the level of cognitive growth that has been attained. It appears, from the results of the present study, that the aspect of the feminine role that prescribes less pay for females does not require more advanced cognitive skills to be translated into actual behavior.

Sex-Role Preferences--Hypothesis 3

Given the nature of the construction and validation procedures used in devising the sex-role preference measures, the finding that these measures were significantly correlated with self-allocation behavior should be interpreted with

some degree of caution. These measures were constructed because previous measures lacked both reliability and validity, and it would be presumptuous to assume, on the basis of one test, that these specific scales work better than the others. However, as noted earlier, there is some evidence to suggest that the sex-role preference may be somewhat reliable and valid. Whatever the value of the scales, the overall correlations do indicate that, as subjects chose more masculine activities and occupations, they also tended to pay themselves more and indicated higher amounts as "fair" pay. This finding provides some support for the underlying assumption that the tendency to underreward, i.e., the less of a connection between work and pay, is one aspect of the feminine sex-role.

Locus of Control

Given the nonsignificant correlations between both measures of reward and the locus of control scale, it appears that there is no direct relationship between locus of control and self-allocation behavior. This lack of significance does not appear to be due to the properties of the scale itself, since results of the present study replicate findings of past research. That is, there is evidence that internality increases with age (MacDonald, 1973) and that females aged eleven to sixteen appear to attribute outcomes more to internal causes than do males (Maccoby & Jacklin, 1975). The reverse of this latter finding--that males are more internal

than females--is consistently evident only in college-age subjects.

It could be that locus of control does not directly relate to actual behavior, but may be more of a purely cognitive construct. That is, while it may influence a person's perceptions of the causality of past events, these perceptions may not strongly influence or be predictive of future behaviors. Or, it could be that self-allocation behavior is not directly influenced by locus of control, while other types of behavior are. The results of the present research suggest the former may be true, while the latter speculation requires further research.

Conclusions

In summary, the results of this research effort indicate, somewhat surprisingly, that sex differences in self-allocation start at a very young age, and as predicted, tend to increase somewhat over time. These results also indicate, as do those of Messé and Callahan-Levy (in press), that there is more than "accommodation" or altruism operating in determining the behavior of females over these age levels. Mednick and Tangri (1972) present the conditions that produce a "psychology of victimization"--low status, low prestige, and stigma--and compare these to the condition of being female in this society. While this may be a rather strong comparison, obviously being "female" does have some effect--what might be considered to be a negative effect--on learning

to cope and compete in this social environment. Whatever the specific mechanisms of socialization, the female subjects in this study, like those in past research, have shown that they not only will be satisfied with less reward, but actually will initiate their own underpayment.

These findings have implications that strike at the very basis of the movement for sexual equality. Although females publicly may demand equal pay and status with men, it has been shown that what probably constitutes the most enlightened stratum of women (females who are attending college) will underreward themselves when given the opportunity. It also appears that young females are adopting the same role and behaviors--even in this age of so-called liberal education.

Obviously, there is need for further research. The results of the present study were somewhat disappointing in that they did not succeed in adequately identifying antecedents or correlates of this behavior, other than a rather tentative measure of sex-role preference. Although the focus of this research has been primarily on the characteristics of the female, it should be noted that this evidence of "underpayment" on the part of females can be interpreted as such only relative to the behavior of males. This is necessarily the case in terms of social issues because males tend to represent the "standard" in this society. However, in the social-psychological laboratory, the antecedents of the behaviors of both sexes should be examined. Both

questions, "Why do females underreward themselves?" and "Why do males pay themselves more than females pay themselves?" should be asked and answered.

In essence, this research was exploratory, and the "discoveries" made during this exploration were startling. That naive six-year-old girls should exhibit the same, seemingly irrational behavior as college-age women is surprising, and, in terms of the prognosis for the evolvement of social change, disappointing. Hopefully, future explorations will "discover" more precise mechanisms by which females acquire and maintain the self-concept that leads to this set of behaviors. This may be a necessary requisite for real social change.

APPENDICES

APPENDIX A

Demographic-Biographic Questions

APPENDIX A

Demographic-Biographic Questions

RE: _____ Grade _____

M or F Date _____

Ask: What is your name? (Don't write it down.)

For the first part of this "job" I will ask you a few questions about yourself. I will write the answers that you give me on this form.

1. Age _____
2. Birthday _____
3. How many children are in your family? _____
of brothers older _____ younger _____
of sisters older _____ younger _____
4. Does your Father work at a job outside of the home?
Yes _____ No _____
5. Does your Mother work at a job outside of the home?
Yes _____ No _____
6. Have you ever earned money at a job before?
Yes _____ No _____
If Yes, what kind of job was it? _____
7. When you grow up (or finish school) what would you like to be? _____
8. Do you plan to get married (when you are ready)?
Yes _____ No _____

Activities Scale

OK, for the next part of your "job," I will ask you some questions about things you might like to do. I will read you a list of ten things that people like yourself might like to do. You are to pick out the three things you like to do best. I will let you look at the list and read along. It's important that you realize there are no "right" or "wrong" answers. We just want to know how you really feel, not how you think you should feel.

(Put an "X" next to the three chosen as most liked)

1. _____playing football
2. _____sewing or knitting
3. _____shoveling snow
4. _____cooking or baking
5. _____going camping
6. _____dancing
7. _____going bowling
8. _____reading
9. _____swimming
10. _____ice skating

Vocation Scale

This next part is just like the last, except this list contains ten things people like yourself might like to be when they "grow up" or finish their education. I will read the list of ten occupations to you, and you should pick out the three things you would most like to be. You may read along with me and pick out three from the list. Remember, there are no right or wrong answers. Pick the ones that you like the best.

(Put an "X" next to the three chosen as most liked)

1. _____firefighter
2. _____secretary
3. _____football player
4. _____nurse
5. _____astronaut
6. _____teacher
7. _____police officer
8. _____parent (mother or father)
9. _____doctor
10. _____baker

Locus of Control Scale

For the next part, I am going to ask you some questions to see how you feel about certain things. There are no right or wrong answers to these questions. Some people say "Yes" and some say "No." When I ask the question, if you think your answer should be yes, or mostly yes, say "Yes." If you think the answer should be no, or mostly no, say "No." Remember, different people give different answers and there is no right or wrong answer. Just say "Yes" or "No" depending on how you think the question should be answered. If you want me to repeat a question, ask me. Do you understand? All right, listen carefully, and answer Yes or No. Put a Y or N in the margin next to the number)

1. When somebody gets mad at you, do you usually feel there is nothing you can do about it?
2. Do you ever think that kids your age can change things that are happening in the world?
3. Can a person your age ever have his own way?
4. Is it hard for you to know why some people do certain things?
5. Can you ever try to be friends with another kid even if he doesn't want to?
6. Does it ever help any to think about what you will be when you grow up?
7. When someone gets mad at you, can you usually do something to make him happy again?
8. When nice things happen to you, is it only good luck?
9. Do you often feel you get punished when you don't deserve it?
10. When bad things happen to you, is it usually someone else's fault?

Payment Instructions and Post-Allocation Questions

Now, we are finished with your "job." The only thing left is your payment for the work you have done. We have some money to pay you. The only problem is, we don't know what is fair pay for a "job" like this one for someone like you. So we've decided to let each person take what they feel is a fair amount of money for their work. This means that we want you to take what you feel you deserve. Now, it's important that you understand that there is no right or wrong amount, and that you will actually get to keep what you think you deserve. I will put the money on this cardboard, and you can choose the amount you feel you have earned and put it in this "pay envelope." I will turn around so that you don't feel self-conscious about how much you pay yourself. Put the amount you want in the envelope and seal it. Tell me when you are finished.

After Ss have chosen reward:

Now I have a couple of extra questions to ask you:

1. How well do you feel you did at this "job"?
 Good job _____
 Fair job _____
 Poor job _____
2. Do you think you did better than most boys your age would do? Better _____
 Same _____
 Worse _____
3. Do you think you did better than most girls your age would do? Better _____
 Same _____
 Worse _____
4. Are you happy with the amount you were paid (paid yourself) for the job you did? Very happy _____
 Satisfied _____
 Unhappy _____
5. What do you think is a fair amount that people like yourself should be paid for doing this work?
 fair pay for this work is _____

Ok, we're finished. But before you go back to class, I'd like to ask you not to talk to anyone about this or tell anyone about the "job" until after everyone has talked to us. Thank you for helping us.

Comments:

APPENDIX B
Demographic Correlates

APPENDIX B

Demographic Correlates

For males, there was a significant correlation between their ratings of their performance on the task and the number of children in their family ($\underline{r} = -.31, p < .05$). The direction of this coefficient indicates that the boys felt they did less well on the task the more brothers and sisters they had. This relationship appears to be directly related to the finding that males' self-performance ratings dropped as the number of older sisters in the family increased ($\underline{r} = -.35, p < .05$). The number of older sisters in the family also appeared to affect the males' ratings of their performance when asked to compare themselves with girls. They felt they did worse, compared to girls, as the number of older sisters increased ($\underline{r} = -.36, p < .05$). These correlations also were significant when the effects of grade level were partialled.

There were somewhat similar findings for females, in that as the number of younger brothers increased, females rated themselves as performing less well when asked to compare their performance to that of boys ($\underline{r} = -.34, p < .05$). However, as the number of older sisters increased, so did the females' ratings of their performance compared to boys' ($\underline{r} = .32, p < .05$). Older sisters also appeared to affect females' I.E. scores, since a significant negative correlation between I.E. scale scores and number of older sisters

appears to indicate that females with older sisters responded more externally to the scale items ($\underline{r} = .32, p < .05$). The measure of locus of control appeared to be related to the females' future marriage plans, since, as females responded more internally to the scale items, they also showed a tendency to answer "no" to the question, "Do you plan to get married?" ($\underline{r} = .39, p < .05$). One additional and interesting finding that may be related to the finding that the number of older sisters affected females' responses to the I.E. scale was the significant negative correlation between sex of the experimenter and females' I.E. scores ($\underline{r} = -.32, p < .05$). The direction of this coefficient indicates that female experimenters tended to elicit more external responses from female subjects to items on the locus of control measure. As with males, these correlations were also significant when the effects of grade level were partialled.

LIST OF REFERENCES

LIST OF REFERENCES

- Adams, J. S. Inequity in social exchange. In L. Berkowitz, (Ed.), Advances in experimental social psychology, Vol. 2. New York: Academic Press, 1965.
- Bardwick, J. M. Psychology of Women. New York: Harper & Row, 1971.
- Barrows, G. A., & Zuckerman, M. Construct validity of three masculinity-femininity tests. Journal of Consulting Psychology, 1960, 24, 441-445.
- Benton, A. A. Productivity, distributive justice, and bargaining among children. Journal of Personality and Social Psychology, 1971, 18, 68-79.
- Bialer, I. Conceptualization of success and failure in mentally retarded and normal children. Journal of Personality, 1961, 29, 303-320.
- Bledsoe, J. C. Sex differences in mental health analyses scores of elementary pupils. Journal of Consulting Psychology, 1961, 25, 364-365.
- Bledsoe, J. C. Self-concepts of children and their intelligence, achievement, interests, and anxiety. Childhood Education, 1967, 43, 436-438.
- Brown, D. G. Masculinity-femininity development in children. Journal of Consulting Psychology, 1957, 21, 197-202.
- Campbell, E. H. The social sex development of children. Genetic Psychological Monographs, 1939, 21, #4.
- Coopersmith, S. A method for determining two types of self-esteem. Journal of Abnormal and Social Psychology, 1959, 59, 87-94.
- Coopersmith, S. The Antecedents of Self-Esteem. San Francisco: W.H. Freeman & Co., 1967.
- Crano, W. D. Effects of sex, expertise, and response order in conformity: A dispositional approach. Sociometry, 1970, 33, 239-252.

- Deaux, K. Colloquium given at M.S.U., March, 1974.
- Douvan, E. Sex differences in adolescent character processes. Merrill-Palmer Quarterly, 1960, 6, 203-211.
- Feather, N. T. Attribution of responsibility and valence of success and failure in relation to initial confidence and task performance. Journal of Personality and Social Psychology, 1969, 13, 129-144.
- Gesell, A. The First Five Years of Life: A Guide to the Study of the Preschool Child. New York: Harper, 1940.
- Gruder, C. L., & Cook, T. D. Sex, dependency, and helping. Journal of Personality and Social Psychology, 1971, 19, 290-294.
- Hartley, R. E. Children's concepts of male and female roles. Merrill-Palmer Quarterly, 1960, 6, 84-91.
- Hartley, R. E., & Klein, A. Sex-role concepts among elementary school age girls. Marriage and Family Living, 1959, 21, 59-64.
- Hartup, W. W., & Zook, E. A. Sex-role preferences in three-year-old and four-year-old children. Journal of Consulting Psychology, 1960, 24, 420-426.
- Kahn, A. Reaction to generosity or stinginess from an intelligent or stupid partner: A test of equity theory in a direct exchange relationship. Journal of Personality and Social Psychology, 1972, 116-123.
- Kohlberg, L. Stages in the development of children's conceptions of physical objects in the years four to eight. Unpublished (cited in Maccoby, 1966).
- Kohlberg, L. Stage and sequence: The cognitive-developmental approach to socialization. In D. Goslin (Ed.), Handbook of socialization theory and research, Chicago: Rand-McNally, 1969.
- Kohlberg, L., & Turiel, E. Moral development and moral education. In G. Lesser, (Ed.), Psychology and educational practice. Chicago: Scott, Foresman, 1971.
- Lane, I. M., & Coon, R. C. Reward allocation in preschool children. Child Development, 1972, 43, 1382-1389.
- Lane, I. M., & Messé, L. A. Equity and the distribution of rewards. Journal of Personality and Social Psychology, 1971, 20, 1-17.

- Lerner, M. J. The justice motive: "Equity" and "parity" among children. Journal of Personality and Social Psychology, 1974, 29, 539-550.
- Leventhal, G. S. Reward Allocation by Males and Females. Presented at the Meeting of the American Psychological Association, Montreal, Canada, September, 1973.
- Leventhal, G. S., & Anderson, D. Self-interest and the maintenance of equity. Journal of Personality and Social Psychology, 1970, 15, 57-62.
- Leventhal, G. S., & Lane, D. W. Sex, age, and equity behavior. Journal of Personality and Social Psychology, 1970, 15, 312-316.
- Lichtman, R. J. A Cross Sectional Study of the Development of the Norm of Equity in Children. Unpublished M.A. thesis, Louisiana State University, 1973.
- Long, G. T., & Lerner, M. J. Deserving, the "personal contract," and altruistic behavior by children. Journal of Personality and Social Psychology, 1974, 29, 551-556.
- Maccoby, E. E. Sex differences in intellectual functioning. In E.E. Maccoby (Ed.), The development of sex differences. Stanford, Calif.: Stanford University Press, 1966.
- Maccoby, E. E., & Jacklin, C. N. The Psychology of Sex Differences. Stanford, Calif.: Stanford University Press, 1974.
- MacDonald, A. P. Internal-external locus of control. In J.P. Robinson & P. Shaver (Eds.), Measures of social psychological attitudes. Ann Arbor: Survey Research Center, Institute for Social Research, 1973.
- Mednick, M. S., & Tangri, S. S. New social psychological perspectives on women. Journal of Social Issues, 1972, 28, 1-16.
- Messé, L. A., & Callahan, C. M. Sex and Message Effects in Reward Allocation Behavior. To be presented at the Meetings of the American Psychological Association, Chicago, 1975.
- Messé, L. A., & Callahan-Levy, C. Sex differences in the allocation of pay. In press.
- Messé, L. A., & Lichtman, R. J. Motivation for Money as a Mediator of the Extent to which Quality and Duration of Work are Inputs Relevant to the Distribution of Rewards. Paper presented at the Meetings of the Southeastern Psychological Association, Atlanta, 1972.

- Mikula, G. Nationality, performance, and sex as determinants of reward allocation. Journal of Personality and Social Psychology, 1974, 29, 435-440.
- Morgan, W. R., & Sawyer, J. Bargaining, expectations, and the preferences for equity over equality. Journal of Personality and Social Psychology, 1967, 6, 139-149.
- Oetzel, R. M. Annotated bibliography. In E.E. Maccoby (Ed.), The development of sex differences. Stanford, Calif.: Stanford University Press, 1966.
- Piaget, J. The Psychology of Intelligence. London: Routledge, Kegan Paul, 1947.
- Reitan, H. T., & Shaw, M. E. Group membership, sex-composition, and conformity behavior. Journal of Personality and Social Psychology, 1964, 65, 45-51.
- Riemer, B. The influence of causal beliefs on achievement behavior. Journal of Personality and Social Psychology, in press.
- Simon, J. G., & Feather, N. T. Causal attributions for success or failure at university examinations. Journal of Educational Psychology, 1973, 64, 46-56.
- Tapp, J. L., & Kohlberg, L. Developing senses of law and legal justice. Journal of Social Issues, 1971, 27, 65-92.
- Turiel, E., Kohlberg, L., & Edwards, C. P. Development of moral judgment in turkish village and urban children. In L. Kohlberg & E. Turiel (Eds.), Research in moralization: The cognitive developmental approach. New York: Holt, Rinehart & Winston, 1972.
- Uesugi, T. K., & Vinacke, W. E. Strategy in a feminine game. Sociometry, 1963, 26, 75-88.
- Vinacke, W. E. Sex-roles in a three person game. Sociometry, 1959, 22, 343-360.
- Vinacke, W. E., & Gullickson, G. R. Age and sex differences in the formation of coalitions. Child Development, 1964, 35, 1217-1231.
- Walster, E., Berscheid, E., & Walster, G. W. New directions in equity research. Journal of Personality and Social Psychology, 1973, 25, 151-176.

Weick, K. E. The concept of equity in the perception of pay. Administrative Science Quarterly, 1966, 11, 414-439.

Whittaker, J. O. Sex differences and susceptibility to interpersonal persuasion. Journal of Social Psychology, 1965, 91-94.

Winer, B. J. Statistical Principle in Experimental Design. New York: McGraw-Hill, 1962.

Witkin, H. A., Dyk, R. B., Faterson, H. F., Goodenough, D. R., & Karp, S. A. Psychological Differentiation. New York: John Wiley & Sons, 1962.

MICHIGAN STATE UNIVERSITY LIBRARIES



3 1293 03145 4238