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WHEN WOMEN ARE MORE DESERVING THAN MEN:
EQUITY, ATTRIBUTION, AND PERCEIVED SEX DIFFERENCES¹

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Recent claims of discrimination against women suggest the need to study systematically when, if, and how women are discriminated against. It seems likely that the problem involves not only overt discrimination, but also more subtle processes in evaluation of abilities, performance, and other attributes of men and women. Recent research in the area of perceived sex differences, while not wholly consistent, has nevertheless suggested that the abilities and performance of men and women may be differentially perceived. Men have been rated superior to women on a task involving ratings of professional journal articles (Goldberg, 1968). Men have been judged to be superior to women in the context of an art contest, but the difference has disappeared when an authoritative opinion (a judge's decision) has been passed announcing a winner of the contest (Pheterson, Kiesler, & Goldberg, 1971). Men have been judged superior to women in the context of applying for a study abroad program when the merits of each were high, but women were judged superior to men when the merits of each were low (Deaux & Taynor, 1971).

In part, the absence of any clear-cut trend in these cited findings may reflect a rather haphazard choice process in selecting situations for evaluation. While a choice based on the relevance of the situation to an actual applied setting is in some respects commendable, it seems more profitable at this point to select situations which also can clearly relate to existent social psychological theory with the hope of integrating the study of perceived sex differences with more established bodies of theory.

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In an effort to study the problem of perceived sex differences within a theoretical context, the equity model appears to be a likely candidate for the task. The equity model (Adams, 1965) states that members of a dyad will allocate rewards to self and other in proportion to the contributions of self and other. Person A will be motivated to attempt to make his own Outcomes and Inputs proportional to person B's Outcomes and Inputs. As conceptualized by Adams, outcomes are rewards that person A perceives that he and B are receiving in a specific situation. An example of this would be salary and status received in a job situation. Inputs are such things as level of performance, effort, age, sex, and a host of other personal attributes that are relevant to the particular exchange.

When a person is not an actual member of the exchange relationship, but is put in the situation of being able to allocate rewards to the members of the exchange, he will allocate rewards along the lines predicted by the equity model. Leventhal and Michaels (1971) asked subjects to rate the deservingness of reward of athletes who had different inputs. Inputs were divided into four components: performance, effort, training, and body height. Height was classified as a constraint over which the individual had no control (called nonvoluntary constraint). Effort was classified as a constraint over which the individual did have voluntary control (called voluntary constraint). The results of this study showed that subjects rated individuals who were operating under nonvoluntary constraints to be more deserving of reward than individuals not operating under nonvoluntary constraints.

Thus, the equity model predicts that an individual working under a nonvoluntary constraint will be perceived as more deserving of reward than someone not working under such a constraint. Extending this model to the

area of perceived sex differences, if being a woman can be assumed to be a constraint in some situations, then it follows that a woman would be rated as more deserving of reward than a man for a comparable performance in that situation.

If it is true that the woman would be assigned greater rewards in some situations, then equity theory would require that one or more of the input variables would have to be inflated in order to balance the increased outcome, i.e., deservingness of reward. While equity theory does not provide a specific indication of which variables would be so inflated, Weiner and Kukla (1970) have provided evidence that there is a linear relationship between performance and assigned rewards. As the most direct link, therefore, we would predict that greater deservingness of reward would be accompanied by an increased evaluation of performance. Other factors, specifically ability and effort, can be considered as internal loci of cause for a given performance, and in line with attribution theory, at least one of these factors should also be increased to explain the increased performance. There are at least two reasons to predict that in the present situation subjects would inflate the effort variable rather than the ability variable. First, Weiner and Kukla's data suggest that effort is a more salient determinant of reward than is ability. Secondly, in terms of the present situation in which a woman is performing well in a situation in which her capability is assumed to be lower, the more temporary attribute of effort would appear to be more susceptible to change than the stable attribute of ability.

In summary, it was hypothesized that when a man and a woman perform the same act in a masculine situation: (1) a woman would be perceived as more deserving of reward than an equally performing man; (2) a woman would

be perceived as performing better than the comparable man; and (3) a woman would be perceived as expending more effort than the comparable man.

In addition, two other variables were considered in terms of their possible influence on evaluative judgments. While equity theory has in general used a paradigm in which a comparison person is present, Pritchard (1969) has suggested that internal comparison others are always present and hence need not be presented by the experimenter. To determine the effect of the presence or absence of a comparison other, the male or female actor was described as being alone or in the company of an opposite-sexed other.

Further, it was considered desirable to consider individual difference variables which might differentiate subjects with varying dispositions toward women acting in unanticipated ways. Based upon the work of Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950), the F-scale was selected, as high scorers on this scale have been found to have more respect for authority and rules and to be less tolerant for those who do not follow prescribed rules of behavior.

Method

Summary of Design

A 2 X 2 X 2 analysis of variance factorial design was used in which sex of subject, sex of stimulus, and presence or absence of a non-acting opposite sex other were used as independent variables. Male and female subjects were presented a description of a stimulus man or stimulus woman performing well (in a desirable and appropriate manner) in a civic emergency situation in either a condition of the stimulus person's being alone while taking appropriate action or being with a non-acting member of the opposite

sex while taking appropriate action. A completely between-subjects design was used.

Subjects

Sixty-one male and 60 female introductory psychology students participated in this experiment as partial fulfillment of course requirements. Subjects were run in groups of approximately 30, with subjects randomized across conditions within groups. One male and one female experimenter were present during the entire experiment.

Procedure

Subjects were told that they were participating in a study designed to investigate why people do or do not respond in an emergency situation. They were told that they would be asked to evaluate the performance of individuals in a civic emergency situation. Subjects were then given the following written description of the stimulus person.

Bob Carter is 35 years old. He is the father of two children and resides with his children and wife in a large suburban development outside of one of the country's larger cities. Bob is thought of as a typical person and fairly representative of the community in which he lives. In interviewing Bob and some of his friends, we discovered that he and his friends generally agreed about the type of person he is. Bob and his friends generally agreed that Bob could be described by the following list of adjectives: likeable, mild-mannered, alert, masculine, and capable.

For the female stimulus condition a woman's name was used with appropriate substitution of pronouns. The adjective, feminine, was given in place of the adjective, masculine.

Subjects were then asked to rate the stimulus person on a series of 7-point bipolar adjective scales, including adjectives that relate to male-

female dimensions such as: dominant-submissive, strong-weak, and masculine-feminine.

After subjects had completed this rating, they read a description of the critical situation in which the condition of the non-acting opposite sex other was manipulated (the stimulus person being Alone or Together with a non-acting opposite sex other). In the Alone-Male condition, subjects saw the following description of the situation.

This is the situation in which Bob was involved. Bob was on his way to meet an old friend for lunch. He parked his car in a high-rise parking lot and boarded the elevator to get to the street level. The elevator descended two floors when a man entered. As soon as the elevator started again, this man pushed the "stop" button, pulled out a gun, and demanded Bob's money. When the elevator reached the street level, the gunman fled into the street, after threatening Bob's life if he left the elevator before the gunman was safely into the street.

Later that afternoon the gunman was apprehended. It was learned that this was one of a series of similar incidents, in one of which two of the victims of the crime had been killed.

In the Alone-Female condition the name Linda was substituted for Bob and pronouns were changed appropriately.

The alternative Together conditions were identical to the Alone conditions except that a member of the opposite sex also was present in the elevator and was also a victim of the holdup man. No further description was provided of either characteristics or behavior of the non-acting other.

Subjects then were asked in the Alone condition to predict how the stimulus person would behave. In the Together condition subjects predicted the behavior of both the stimulus person and the non-acting opposite sex

other person. These predictions were made on three dimensions: performance effort, and ability, each rated on an 11-point scale.

Following this prediction, subjects read a description of how the stimulus person actually behaved in the emergency situation. Pretesting had established that this behavior (described below) was considered to be more masculine than feminine, and highly desirable in nature. Subjects in both the Alone and Together condition read the following description (with appropriate sex of stimulus person).

It might be of interest to find out whether Bob did react in this civic emergency in an expected or unexpected manner.

From the police report it was learned that Bob handled himself very well. After the gunman had left, having threatened him with his life if he left the elevator before the gunman could blend into the pedestrians on the street, Bob had thought to close the elevator door and go up one floor where he would be safe from the gunman while he called the police. Upon leaving the elevator to call the police, Bob looked down over the railing of the parking lot, watched the gunman long enough to tell which way he was going, and was able to tell the police in which direction the gunman had gone. This quick action which alerted a passing patrol car enabled the police to catch up with the gunman before he had gone several blocks. Bob also had remembered very much about the gunman, including his looks, his dress, and his mannerisms.

The police told Bob that his quick thinking and coolheadedness had enabled them to catch the gunman and had probably saved the life of a future victim.

After reading this account of the stimulus person's behavior in the described emergency situation, subjects were then asked to rate the stimulus person on the following 11-point scales: deservingness of reward, performance, ability, effort, confidence of ratings, likelihood of a similar performance in the future, and deviation of performance from expectancy. In the Together condition both the stimulus person and the non-acting other were evaluated. Subjects then re-evaluated the stimulus person on the original adjective rating scale and completed a 22-item modification of the F-scale (Mitchell & Byrne, 1972).

Following this procedure, the experimenters discussed with the subjects the nature of the experiment and hypotheses being tested and answered any questions which arose.

Results

Effectiveness of the Manipulations

An overall main effect was seen for the masculine-feminine, dominance-submissive, and strong-weak dimensions on the original adjective rating scale which subjects completed prior to reading the situational description. The man was seen as more masculine ($p < .01$), more dominant ($p < .01$), and stronger than the woman ($p < .01$), indicating that the male and female stimulus persons were clearly distinguished.

Despite the fact that pretesting had shown the situation to be clearly a male-associated task, initial predictions of performance, ability, and effort did not differ significantly between the male and female stimulus persons. Significant differences were found on each of these measures, however, when the non-acting male is compared to the non-acting female. The non-acting male was predicted to perform better ($p < .0001$), to have more ability ($p < .0001$), and to exert greater effort ($p < .0001$) than the

parallel non-acting female. Furthermore, in each case in which both a male and a female were described as being present in the situation, the mean predicted values for the male were higher than for the female, regardless of which one was the more extensively-described stimulus person.

Evaluation of the Stimulus Person

Because of somewhat uneven distribution in cells when subjects are classified by scores on the F scale, the initial analyses were performed using a three-way analysis of variance without regard to F-scale scores.

The major prediction was that the female stimulus person would be seen as more deserving of reward than the male. As indicated in Tables 1 and 2, women were rated as significantly more deserving of reward than men ($p = .012$).

Insert Tables 1 and 2 about here

A significant Sex of Subject by Condition (Alone vs. Together) interaction results from the fact that women made higher ratings than men in the Together condition, independent of sex of stimulus person, while men were assigned higher ratings in the Alone condition.

Similarly, considering subjects' evaluations of the stimulus person's performance, the female stimulus person is again rated more highly than the male ($p = .015$).³ A significant Sex of Stimulus by Condition interaction ($p = .043$) was found, and simple effects analysis (Winer, 1971) indicates that while women were seen as performing significantly better than males in the Alone condition, there was no difference between them in the Together condition.

Analysis of variance of the effort measure showed the predicted difference between male and female stimulus persons, again favoring the female. Females were rated as trying significantly harder ($p = .014$). None of the

interactions were significant. Analysis showed no differences in ability ratings, with the means for male and female stimulus persons nearly identical on this measure.

Questions dealing with the deviation of performance from expectancy, the likelihood of a similar performance in the future, and confidence in overall ratings showed no differences among conditions.

Evaluation of Non-acting Other

In the Together conditions, the stimulus person was accompanied by a person of the opposite sex who took no action in the situation. Parallel ratings were obtained of these non-acting others, and a 2 X 2 analysis of variance (Sex of Subject X Sex of Non-acting Other) was performed on each of these response measures.

No differences were found between male and female non-acting persons on measures of deservingness of reward, likelihood of similar performance, performance, effort, or confidence in overall ratings. Two interesting differences did appear in these analyses, however. Despite the fact that neither person was depicted with any detail, subjects rated the male as having significantly more ability than the female ($F = 8.72$, $df = 1,58$, $p = .005$). In a similar vein, responses to the question dealing with deviation of the performance from expectancy showed that subjects found the female's lack of action to be significantly more similar to their expectations than was the male's ($F = 18.08$, $p = .0002$). There were no main effects of Sex of Subject nor any Sex of Subject by Sex of Stimulus interaction on either of these measures.

High Authoritarians vs. Low Authoritarians

The total distribution of scores on the F-scale was split in half (median = 66.3; mean = 65.9), and subjects were classified as high or low

authoritarians. A four-way analysis of variance was then performed on all response measures, with cell n's varying from 5 to 14. Analysis of variance indicated significant main effects for the authoritarianism variable on measures of predicted performance ($F = 7.34$, $p = .008$), predicted effort ($F = 4.50$, $p = .03$), and predicted ability ($F = 4.55$, $p = .03$), with high authoritarians making higher ratings in each instance, independent of sex of stimulus person. Also, high authoritarians were less likely to say that the behavior of the stimulus person differed from expectancy ($F = 7.08$, $p = .009$). Relatively few interactions between authoritarianism and the other variables were significant. The exception to this statement was the Sex of Stimulus X Condition X Authoritarianism interaction, which was significant for deservingness of reward ($F = 6.64$, $p = .011$), effort ($F = 6.84$, $p = .01$), and ability ($F = 21.998$, $p = .0001$). In each of these instances, the pattern of differences showed high authoritarians to rate the male stimulus person more favorably in the Alone condition as opposed to the Together condition, while tending to reverse this trend for females; low authoritarians, in contrast, consistently rated the male more favorably in the Together condition than in the Alone condition, while rating females more favorably in the Alone condition.

Additional differences were found for authoritarianism when the adjective ratings of the stimulus person are considered for differences between the first and second measures. A between-within analysis of variance, with repeated measures on the adjective ratings, showed significant three-way interactions between Sex of Stimulus, Authoritarianism, and Time of Measurement on measures of intelligence ($p = .04$), imaginativeness ($p = .007$), strength ($p = .03$), warmth ($p = .007$), and capability ($p = .01$). All interactions indicate that high authoritarians rated the stimulus man

increasing on these dimensions and the woman decreasing on the dimensions at the second measurement. Low authoritarians showed the reverse trend, rating males lower and females higher on the second measurement. No other pattern of change was evident from first to second adjective measurement for any of the other variables or interaction of variables.

Discussion

The results of this experiment demonstrate the applicability of the equity model to the study of perceived sex differences. The prediction from equity theory that a woman, presumably acting under nonvoluntary constraints by virtue of being a woman, would be perceived as being more deserving of reward in a masculine situation than an equally performing man was confirmed. The inflated measure of performance for the stimulus woman is consistent with the equity assumption that input and outcome must be balanced. The fact that the inflated performance of females was more pronounced in the Alone condition than in the Together condition may suggest that when the female stimulus person is alone in the elevator with the gunman, her helplessness is made more salient. Thus her femininity is more evident, increasing the magnitude of the constraint she is under and precipitating a higher rating of performance to compensate for the perceived constraint. Alternatively, the woman in the company of a male may be seen as under less constraint; further, her taking action when a man is present may be subject to negative evaluation by virtue of the fact that the male becomes less masculine in appearance.

Of specific relevance for the equity model is the fact that the deservingness of reward measure was evident in both the Alone and Together conditions. This finding suggests that a comparison other does not have to be present physically in all situations for the equity model to hold,

confirming the suggestion by Pritchard (1969) that a comparison other is internalized within an individual and is always available for comparison. These data provide support for this supposition and appear to extend the equity model.

Suggestive, if not conclusive, evidence is provided for the relevance of attributional hypotheses to the study of perceived sex differences. Although equity theory considers ability, effort, and performance as parallel types of input variables, an attributional analysis would look at ability and effort as two possible causal factors to be used in explaining a given performance. In the present situation it was predicted and found that effort, a less stable attribute, is preferred over ability in explaining the female's better performance and greater deservingness in a situation in which the woman would normally not be expected to do as well. An increase in effort is used to account for the woman's higher performance; correspondingly, as the man's performance was not rated as highly, he is evaluated as having exerted less effort, but his ability is not downgraded. If we consider the data for the non-acting other, it can be seen that ability as a stable attribute is again less susceptible to change. Subjects predicted, in advance of the description of outcome, that the non-acting male would perform better, would have more ability, and would exert more effort than the non-acting female. With evidence that the non-acting person was indeed non-acting, ratings of both performance and effort were altered to conform with the reality, but males were still seen as having greater ability than females. These results are consistent with the recent findings of Kepka and Brickman (1971), who showed that discrepancy between performance and ability will be explained by invoking motivational factors. Thus, in the present situation, the woman's better than expected performance

led to an attribution of increased effort, while the man's performing inferior to expectation altered effort attributions in a negative direction without affecting ability attributions.

Authoritarianism, which was included in the study to test its viability as a potential mediating variable in the evaluation of male and female performance, showed indications of some consistent relationships, although its effect was not unequivocal. Low authoritarians saw the female as being more intelligent, imaginative, stronger, warmer, and more capable after performing well in the situation, while high authoritarians downrated the woman on each of these measures following the successful performance. In reverse fashion, high authoritarians increased their ratings of men on these same measures, while low authoritarians tended to decrease their ratings of males. It is possible that these dimensions might be reflecting the subjects' liking of the stimulus person as well as reflecting simply dispositional ascriptions, which suggests that high authoritarians respond more negatively than low authoritarians to the female doing well in a somewhat out-of-role situation. The consistent tendency for high authoritarians to find the woman's performance more creditable in the Together condition than in the Alone condition, while low authoritarians rated the woman higher in the Alone condition than in the Together condition is not totally explainable, though it may relate to more structured role definitions on the part of high authoritarians. High authoritarians may view the woman's behavior in the Together condition as more acceptable by assuming that the male, though unstated, was in fact supporting or guiding the woman in her actions, and thus the woman's behavior was not terribly deviant; in the Alone condition, in contrast, the action clearly originated with the female, a situation which low authoritarians found more acceptable than did high authoritarians.

We might consider how prevalent the tendency to overrate the female performer in a more typically masculine situation is, particularly in view of studies by Goldberg (1968), Pheterson et al. (1971), and Deaux and Taynor (1971), all of which suggest that the male is more typically upgraded in comparison to the female. The present situation has at least two characteristics which are not found in the previously-cited experiments: first, the situation was transitory in nature, and does not imply a history of such action; and second, details of the performance, including the outcome of that performance, were explicit, thus minimizing additional assumptions on the part of the subjects. With reference to the first point, each of the previous experiments supplied evidence which would suggest a history of some accomplishment, in the form of professional journal writing, artistic endeavors, or evidence of high school and college accomplishments. In such situations subjects may be evaluating not only the evidence directly presented, but assumptions of long-term continuity which through actual frequency of encounter may favor the male. More specifically, there are more successful male artists, journal writers, and the like. In contrast, the present situation asked subjects only to evaluate a single incident that did not require implicit assumptions of continuity. As to the second point, subjects in the present experiment had more precise information about the behavior to be evaluated than did subjects in other cited experiments. They were clearly told that the stimulus person had performed successfully and that the police had commended him or her for actions taken, whereas subjects in other experiments were asked to judge the quality of a painting or of a professional journal article, tasks for which they presumably had little expertise. Thus, given uncertain performance and implied continuity of that performance, a bias in favor of males may result; given more specific

details of performance and no implied history of that performance, the female can be seen as more deserving of reward for an unexpectedly good performance. Consistent with this interpretation, Pheterson et al. (1971) did not find a male bias in the situation in which they gave clear evaluation of the performance, i.e., a judge's decision of award for the painting.

While additional research is needed to determine the validity of this interpretation, it is nonetheless clear that specific predictions can be made regarding the evaluation of male and female behavior which, in addition to being socially relevant, are also based on existent social psychological theory.

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Footnotes

1. This study represents work completed in partial fulfillment of the M. S. degree by the first author under the direction of the second author. The authors thank Richard Stotts for his assistance in conducting the experiment, and Donn Byrne and Richard Heslin for their helpful comments throughout the research. Portions of this paper were presented at the 1972 meetings of the Midwestern Psychological Association.

2. Requests for reprints should be sent to Kay Deaux, Department of Psychological Sciences, Purdue University, Lafayette, Indiana 47907.

3. Consideration was given to the possibility of computing change scores which would compare predicted performance, ability, and effort to the ratings obtained after subjects had read the description of the actual behavior. However, information obtained from subjects during debriefing indicated that many subjects made their predicted ratings on the basis of possible physical encounter with the gunman, whereas the actual behavior described involved behavior of a more cognitive nature. Thus, change scores computed from these two rather different conceptions did not appear to be a valid choice.

TABLE 1

Mean Ratings of Stimulus Person on Deservingness of Reward,
Performance, Effort, and Ability

		<u>Deservingness</u>	<u>Performance</u>	<u>Effort</u>	<u>Ability</u>
Male <u>Ss</u> :	Male Alone	7.60	7.60	7.80	7.53
	Male Together	7.00	7.95	7.47	7.63
	Female Alone	8.19	8.88	8.38	8.25
	Female Together	7.54	7.91	7.36	6.73
Female <u>Ss</u> :	Male Alone	6.36	7.71	7.36	7.78
	Male Together	7.85	8.54	8.00	7.54
	Female Alone	8.14	9.14	8.86	8.36
	Female Together	7.89	8.84	8.68	8.16

Summary of Analyses of Variance of Ratings of Deservingness of Reward, Performance, Effort, and Ability

	Deservingness		Performance		Effort		Ability	
	MS	F	MS	F	MS	F	MS	F
A (Sex of S)	.016	<1	6.666	2.50	6.526	3.14	5.283	2.46
B (Sex of Stimulus)	16.152	6.40**	16.170	6.06**	12.874	6.20**	1.846	<1
C (Alone-Together)	.000	<1	.017	<1	1.381	<1	6.422	1.62
A X B	.902	<1	.450	<1	5.422	2.61	3.486	2.99
A X C	11.309	4.48*	2.392	<1	5.994	2.89	1.755	<1
B X C	5.807	2.30	10.906	4.09*	4.132	1.99	4.539	2.11
A X B X C	5.271	2.09	.065	<1	.031	<1	5.110	2.38
Error	2.524		2.668		2.075		2.147	

Note: Degrees of freedom for all main effects and interactions are 1,113.
 * P < .05
 ** P < .025

