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Sex Differences in Reward Distribution:
The Influence of Social Expectations

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# SEX DIFFERENCES IN REWARD DISTRIBUTION: THE INFLUENCE OF SOCIAL EXPECTATIONS

By

Barbara Lynn Watts

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ABSTRACT

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The phenomenon of an apparent weaker sense of own equity in females was explored in two studies. The first examined estimations of allocations to self or to another to determine if females are more inaccurate judges of their own pay. Females' estimations differed little in variability or accuracy from males', but the study failed to replicate previous research. There was some evidence that situational factors impinge more on females' allocations than on males'. The second study measured evaluations of allocators as a function of the allocator's sex, inputs, allocation decision, and allocation context. When the allocator's inputs were superior to a coworker's and $100 was evenly divided between them, the female allocator was rated higher in commonsense than the male allocator. When the allocator's inputs were superior and the allocator kept $67 of $100, the male allocator was rated higher in commonsense.

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# INTRODUCTION

Research on reward distribution has tended to uncover sex differences in allocation decisions. This research was designed to explore one explanation for these fairly consistent differences: Callahan-Levy and Messé's (1979) hypothesis that females do not tend to connect their own work inputs with their financial outcomes as strongly as males do, and, thus, females have a weaker internal standard of what constitutes fair pay for themselves. Is this an actual less of a connection, or only a manifestation of social expectations for females' allocation behaviors and the consequent negative evaluations if those norms are violated? The two studies reported here attempted to answer this question. The first study examined estimations of allocations to self or another to determine if females are more inaccurate than males in judging how much they will be paid for their work. The second study measured people's evaluations of allocators to determine if the allocators' sex and the way they distributed money mediate judgments about the allocator. Equity theory predictions, which deal with concepts of justice in social exchange, are relevant to both studies.

Equity theory assumes that people are rational, self-interested creatures. Walster, Berscheid, and Walster (1976) list as their first proposition of equity theory the contention that individuals try to maximize their outcomes. According to the equity model, justice occurs when allocations of rewards are made in proportion to individuals' inputs. This allocation pattern is said to permit the maximization of rewards over time. In general, research has supported this view--for males. When females allocate rewards, however, they often tend to take less for themselves than equity theory predicts.

Leventhal and Lane (1970), for example, had males and females work with a same-sex partner for 10 minutes on multiplication problems. Males who were told that they had 37 of 50 problems correct and that their partner had 22 correct answers tended to give themselves 61% of the dyad's reward. When males were told it was their performance that was inferior (22 problems correct), they tended to take 42% of the reward. Females who had 37 problems correct, however, tended to keep half (53%) of the reward; females with inferior performance tended to keep only 34% of the reward.

Females have also been shown to make fewer financially self-maximizing allocations with male as well as female partners. Lane and Messé (1971) had subjects choose among various reward distribution possibilities and found that females made significantly fewer self-interested

responses irrespective of the sex of the person with whom they shared the reward.

It could be that both males and females are actually using allocations as a means to different, rational, self-interested ends. It could be that males tend to divide money equitably because they are primarily concerned with money as an indicator of successful performance and superior inputs; females, on the other hand, may tend to minimize their own financial outcomes because they are rewarded for doing so by a sense of interpersonal harmony. There are a number of reasons to believe that this speculation is valid: under conditions that make interpersonal harmony concerns salient, male allocation patterns tend to resemble those of females; females are socialized into noneconomic, other-oriented roles; and women are not supposed to be motivated by money, particularly when others will not also benefit from their earnings.

Kahn, Lamm, and Kurlewitz (Note 1) explain the pattern of sex differences in reward allocation in terms of males' greater concern with competitive success and females' greater concern with social success. Indirect support for this contention comes from studies that have found that when interpersonal harmony is a salient concern, males tend to allocate rewards equally to inferior performers. Mikula (1974) found that when males feel a strong sense of solidarity with their partners, they tend to divide rewards equally. Shapiro (1975) found that superior performing

males divided rewards equally with partner when interaction with their partner was anticipated. Austin and McGinn (1977) found no sex differences when males and females divided money between two same-sex workers and interaction with either the superior or inferior performer was anticipated. Equity was used when a meeting with the high-input person was expected, equality when a meeting with the low-input person was expected. In a study that did not look for possible sex effects, 87 males and 21 females distributed rewards equitably by giving superior performers highest rewards, but subjects who were specifically told to prevent interpersonal conflict were apt to increase the worst performer's pay at the expense of the highest performer (Leventhal, Michaels, & Sanford, 1972).

After an extensive review of the literature on sex differences, Maccoby and Jacklin (1974) conclude that girls are no more social than are boys. They did find some evidence, however, that girls are the more compliant and nurturant sex, boys the more competitive and dominant sex. Certainly stereotypic femininity connotes compassion, sympathy, warmth, understanding, affection, and yielding (Bem, 1974; Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Chafetz, 1974; Jenkins & Vroegh, 1969). The presence of such communal, expressive characteristics tends to minimize the desire to do better than others and thus risk hurting them (Spence & Helmrich, 1978). Conversely, stereotypic masculinity connotes being competitive and impersonal

and emphasizes task achievement and the suppression of emotions (Bem, 1974; Pleck, 1976; Tresemer, 1975).

"Males are trained to play important economic roles and are socialized in the kinds of personal orientation that such roles are deemed to require: agency, equity, competitiveness. Females have been socialized into noneconomic, more familial roles and therefore into the kinds of personal orientation that these roles are deemed to require: communion, cooperation, equality" (Sampson, 1975, pp. 57-58). In Women, Money, & Power (Chesler & Goodman, 1976), a psychologist and an attorney carefully explore historical and current trends in the economic subjegation of women. They conclude that women must understand the present system, which promotes male self-interest, in order to change it, not join it. They advocate humanistic equality. "Having a woman president of General Motors earning $50,000 a year wouldn't be doing much for the woman making $100 a week cleaning General Motors' offices after midnight" (p. 282). Thus, both traditional and nontraditional forces exist that socialize women to accept communal economic attitudes, ones that emphasize the importance of others' outcomes and minimize females' own outcomes if their outcomes are accompanied by others' loss.

Despite socialization experiences that seem to emphasize equality, females tend to distribute rewards equitably when it is to another's advantage. They tend to distribute rewards equitably (i.e., they give themselves less than

50%) when they are the inferior performer (Leventhal & Lane, 1970). They also tend to distribute rewards equitably among two workers when they believe that they will be interacting later with the high-input worker, and they tend to compromise between equity and equality of payments when no interaction is anticipated (Austin & McGinn, 1977). When a male coworker asks females to distribute rewards equitably--and, thus, increase their own reward at his expense--they are apt to do so (Messé & Callahan-Levy, Note 2).

Thus, it seems females divide rewards as they do because they value interpersonal harmony. Direct tests, however, have not tended consistently to confirm this hypothesis.

If females are primarily concerned with their partner's welfare, then they should be accommodative to the recipients' expressed desires. Messé and Callahan-Levy (Note 2) found, however, that when female subjects performed almost twice as well as their partner, they took an equitable amount of money for themselves only when their coworker was a male who had sent a message requesting that the division be equitable. When a female requested equity, female allocators tended to divide the reward equally.

If the male sex role encompasses competitiveness and the maximizing of economic interests, then masculinity should be positively correlated with amount of self-pay. Watts (1977), however, found that high masculinity in males, as measured by the Bem Sex-Role Inventory, was related to

lower self-allocation. There was a slight (and not statistically significant) positive relationship between masculinity and amount of self-pay for females.

Doughty (1978) measured affiliative and achievement concerns using Rokeach's Value Survey and a coding of subject-generated lists of their hopes for the future. She then examined allocations made by males and females selected to yield factorial combinations (i.e., high-high, high-low, etc.) of these two personality variables. Contrary to prediction, she found no main effect for either affiliation or achievement. Achievement was only marginally correlated with amount of self-pay ($r$ = .15) and affiliation was totally unrelated to self-pay.

In a similar study, Watts, Messé, and Vallacher (Note 3) selected subjects on the basis of their sex and their communal and agentic values so that all combinations of sex, high and low communion, and high and low agency scores were represented in the sample. They found that communal and agentic preferences affected allocation decisions, but so did sex, irrespective of agency or communion level. Males kept more of their partnerships' reward for themselves than did females. Moreover, communal and agentic values had more of an effect on what subjects considered to be fair pay than on their actual allocation.

Blumstein and Weinstein (1969) found that when victimized by an experimental confederate's inequitable claim to a large share of a reward, females, males scoring

high on Machiavellianism, and males high on Need for Approval did not tend to restore equity when given the opportunity to do so in a subsequent allocation. Females, whatever their Machiavellianism and Need for Approval scores, actually tended to reward the confederate after they had been victimized by him (the confederate was a male in all of the conditions).

Correlations between personality variables and actual behavior are notoriously low (see Bem & Allen, 1974), so it should not be surprising that no strong relationship between personality variables and reward allocation decisions have been found. Personality, role, and situation interact with one another to produce complex sets of outcomes.

Situational factors themselves also can be rather intricate. There are a number of influences in the typical allocation-experiment situation that affect the manner in which resources are divided. Fullerton (1978), for example, found that males and females weigh a variety of norms and inputs in making their allocations, not just the inputs that the experimenter traditionally has defined as relevant. Thus, it is not unusual for researchers to conclude that equity models and the distribution of rewards are more complex than originally thought (see, for example, Messé & Callahan-Levy, Note 2; Messé and Lichtman, Note 4).

Subjects probably also weigh the expectations of the experimenters and the recipients. Most subjects in

psychological research want to confirm what they perceive to be the experimenters' hypotheses and to be evaluated favorably by them (Adair, 1973). Lerner (1974) has suggested that differences in children's reward allocations can be explained, at least in part, by the sex of the experimenter. The Messé and Callahan-Levy study of message effects (Note 2) demonstrated that subjects are affected by the expressed expectations of their coworkers, although not necessarily in the requested direction. Reis and Gruzen (1976) demonstrated that self-presentation mediates the distribution of rewards according to equity, equality, and self-interest. They found that when experimenters were informed of allocation decisions, equitable payments prevailed; when coworkers were informed of the decisions, equality predominated; and when privacy was assured, the greatest amount was kept by the allocator. (Their subjects all were male.)

Kidder, Bellettirie, and Cohn (1977) found complete reversals in sex differences in nonmonetary reward allocations as a function of whether the allocation decision was public or private. Male and female introductory psychology students were asked to hypothetically allocate research credit to themselves and their partner. The subjects were told to imagine that they had worked for about 25 minutes and their partner had worked for about 5 minutes. The males' allocation of research credit tended to be equal when the allocation decision was secret. They tended to

allocate more credit to themselves than their partner when the allocation was public. This pattern was exactly reversed for females, and the authors suggested that privacy relieved the subjects of the burden of their sex role. Whether this hypothesized relief in the privacy conditions was due to the inability of the experimenter to make personal judgments about the subject or the inability of the partner to make such judgments was not explored.

As detailed earlier, the feminine sex role emphasizes communion, cooperation, and equality; the masculine sex role emphasizes agency, competitiveness, and equity. If subjects are, for the most part, trying to do what is expected of them, it should not be surprising that stereotypic sex-role behavior is exhibited, even if it is financially disadvantageous and not necessarily personally endorsed.

Callahan-Levy and Messé (1979) found that females paid themselves less for writing essays than they paid other females for doing the same work and less than males paid themselves. This relative underpayment occurred despite the fact that females thought that their performance on the essay-writing task was superior to the performance of other females. The researchers concluded that relative overpayment of female partners and the relative underpayment of females to themselves demonstrated that females have a weaker sense of "own equity"; that is, females do not tend to judge what constitutes a just reward allocation to

themselves according to a stable internal standard of a fair outcome. Apparently the previously discussed traditional and nontraditional norms for women have combined with a long history of inequitable pay (see, for example, Kreps, 1971) and unpaid work in the home (Chesler & Goodman, 1976) to de-emphasize the connection between females' own inputs and their monetary outcomes.

The hypothesized minimization by females of the connection between own work inputs and monetary outcomes may be due to an inability to connect these inputs and outcomes or due to a role expectation that women should not appear to connect them. Women and men may, in fact, be concerned equally about fair pay for their work, but women may also feel that they are expected not to display financially self-interested behavior. Thus, men and women may have similar standards of own equity, but their behaviors in laboratory research may tend to reflect sex-role appropriate behavior rather than personal standards of behavior.

In study 1 of the present research, allocators paid either themselves or their partner. The partners were asked how much money they expected to be allocated. If choice of allocation norms is dependent upon what the subjects perceive to be expected behavior, then anticipated allocation patterns should match actual allocation patterns. If, however, the Callahan-Levy and Messé (1979) less-of-a-connection hypothesis is correct, females' estimation of

what they would receive should be more variable than other estimations.

Additional evidence to support the hypothesis that sex differences in reward allocation can be explained by the expectations and reactions of others was predicted to come from an exploration of responses to sex-role incongruent allocation. Cross-sex behavior is apt to be associated with negative outcomes. "There is evidence that parents encourage their children to develop sex-typed interests . . . . Even more strongly, they discourage their children . . . from engaging in activities they consider to be appropriate only for the opposite sex" (Maccoby & Jacklin, 1974, p. 339). Deaux (1976) concludes that "while male-associated traits are often viewed as preferable, both men and women may be negatively evaluated when they deviate from the expectations for their sex" (p. 15).

If this pattern of evaluation applies to reward allocation behavior, then females who allocate money equitably when they have superior inputs should be evaluated more negatively than males in the same situation who allocate money in the same manner and more negatively than females who allocate the money equally. Similarly, males who divide the money when they have superior inputs should be evaluated more negatively than females in the same situation who allocate money in the same manner and more negatively than males who divide the money equitably. Such results would indicate that people may allocate rewards in

distributive justice experiments so that they will not be negatively evaluated by others.

In a second study of the present research, subjects were asked to read three stories and evaluate the character in each who was identified as the decision maker. The first story that was presented involved a decision about the distribution of a reward. There were 16 versions of the same basic allocation story. The allocator was either a male or a female who divided the reward equally or gave him or herself greater reward, worked a longer or the same period of time, and had superior or the same performance as the partner in the story. Four allocation stories (two for each of two situational contexts) were used in order to test the generalizability of the results across situations.

## Hypotheses

The basic purpose of this research was to explore the nature of an apparent weaker sense of own equity in females. It was hypothesized that females, because of sex-role socialization, may display behaviors that only appear to indicate that they do not connect in their minds their work-related inputs and their financial outcomes; instead, they behave in such a manner to avoid negative evaluations. In other words, females may, in fact, connect inputs and outcomes and, thus, not differ from males in their application of internal standards of own equity but they may differ from males in feeling constrained by sex-role

expectations to not express overtly their sense of what would be fair pay for themselves.

If males and females accurately estimate the amount of money that allocators pay to themselves or to their partner, it would support the hypothesis that allocators do what is expected of them. If, however, females are less accurate than are males in their estimates of how much they will be paid, the less-of-a-connection hypothesis will be supported.

Previous research indicates that females will pay themselves less than males pay themselves and less than others pay females. This result was expected because it would replicate the work of Callahan-Levy and Messé (1979).

In the second study, it was predicted that a male who does not allocate rewards according to the norm of equity--when he allocates rewards equally under conditions in which his inputs are superior to those of his coworker--he will be evaluated more negatively than a female who also does not adhere to the norm of equity. It was similarly predicted that a female who allocates more rewards to herself than her coworker will be evaluated more unfavorably than a male who also has made that allocation decision when their inputs exceed those of the coworker.

## STUDY 1

### Method

Overview. All of the subjects worked in individual cubicles for 30 minutes filling out an opinion questionnaire and a general knowledge test. Those subjects located in cubicles on one side of the room were randomly selected to be the allocators. In half of the sessions, allocators paid themselves; in the other sessions, allocators paid their partner. The partners estimated the amount of money that the allocator they were paired with was allocating. Each subject also completed a final questionnaire, which included items about what they considered to be fair pay in each situation, about how comfortable they felt about performing their allocation task, performance ratings, and a mood adjective check list.

Subjects. Subjects were recruited from psychology courses at Michigan State University. They were offered pay for participation; no course credit was offered. A total of 120 students participated; there were 53 allocator-estimator dyads and 14 subjects who were paired with a confederate because their scheduled partner failed to arrive.

Design. To test the major hypothesis that allocators do what is expected of them, the dyad was used as the unit of analysis. A task in dyad (allocation or estimation) x sex of allocator (male or female) x sex of estimator (male or female) x target of allocation (allocator or estimator) design was used. To compare the amount of money allocated and amount of money considered to be fair with the results of the Callahan-Levy and Messé study (1979), data were cast into the sex of target (male or female) x sex of nontarget (same or opposite that of the target) x target of allocation (allocator or estimator) design that they had employed.

The major dependent measure was the amount of money (actual or expected) that was allocated. Also measured were amount considered to be fair pay, comfort with the allocation task, and performance ratings on the questionnaire for the subject, the partner, men, and women. Self-descriptions of mood were also obtained.

Instruments. The subjects' task was to work for 30 minutes on a multiple-choice questionnaire. The first 70 questions comprised "Section 1: Personal Attitude Questionnaire." These were, for the most part, items taken from Christie, Friedman, and Ross' "New Left Scale" (Robinson & Shaver, 1973). Some modifications of the items were done for clarity. For example, "The structure of our society is such that self-alienation is inevitable" became "The

structure of our society is such that most people become alienated from their true selves." Items such as "Organized religions play a large part in maintaining peace in the world" were added to the 62 items of the "New Left Scale." Subjects were asked to rate their agreement with each of the 70 items on a 7-point scale that ranged from "strongly agree" to "strongly disagree."

There were 60 items in "Section 2: General Knowledge Questionnaire." These tapped respondents' knowledge of history, current events, geography, and political and economic issues. Most of the items' source was The World Almanac and Book of Facts: 1979; the rest came from current news stories. Each item had a four-answer alternative format.

There were two forms of a final questionnaire, completed by subjects after the money had been allocated. Allocators were asked the amount they actually allocated and the amount they thought was fair for their participation and their partner's participation in this research. They rated, on 7-point scales, how comfortable they felt about allocating the money and how they felt and how they thought their partner, most men, most freshmen, and most upperclassmen felt about their performance on Sections 1 and 2 of the first questionnaire. Nowlis and Green's 30-item mood adjective checklist (Walster, Walster, & Berscheid, 1978) was also included in the final questionnaire.

The estimators' final questionnaire described the allocation situation and asked the respondent to guess how

much would be allocated. There were four forms: female allocator pays self; female allocator pays partner; male allocator pays self; and male allocator pays partner. Estimators were asked what they considered to be fair pay, and they responded on 7-point scales to items assessing their confidence in their accuracy of estimation, task comfort, and the various performance ratings. They were also asked to complete the mood adjective checklist.

The questionnaires can be found in Appendix A.

Procedure. A procedure similar to that used by Callahan-Levy and Messé (1979) was used. Allocators paid either themselves or their coworker. In addition, however, estimators were asked to guess the amount of money the allocators paid themselves or their partner.

Subjects were seated together in a room and briefed about their participation in this research. They were told that they would work for 30 minutes on a series of questions designed to explore what college students think and feel about a variety of social issues as well as to establish performance norms for college students on a general knowledge questionnaire. It was stressed that for the opinion section of the questionnaire there were no right or wrong answers, that no one was expected to know all or even most of the answers to the general knowledge questions, and that completion of all of the items was also not expected. To further increase the likelihood that any sense of poor

performance would be attributed to the questionnaire rather than to personal failure, subjects were told, "In a sense, this is more a test of a questionnaire than a test of individuals." Complete instructions to subjects can be found in Appendix B.

At the end of 30 minutes' work on the questionnaire, subjects were informed that time was up and again assured that they were not to worry if they had not finished all of the questions. One of the experimenters (every session was conducted by a male and a female to reduce the possibility of sex-of-experimenter effects) explained that we were also interested in learning what students consider to be fair pay for their participation in research. An experimenter explained that they would be paired anonymously with one of the people sitting on the opposite side of the room. When mixed-sex groups were run, each sex was always working in cubicles on one side of the room. Pairing was determined by a coin toss. One of the pair was randomly assigned to be the allocator. Everyone was told that the other of the pair would work on a "separate, brief task."

Allocation instructions were read aloud to those selected to be the allocators. All of the participants heard these instructions. Instructions to the estimators were presented in written form so that allocators would be unaware that their partner was trying to guess what they would be doing. The sex of the partner was explicitly stated to both allocators and estimators.

An envelope containing two single dollar bills, four quarters, and ten dimes and an empty envelope with "MY PAY," "HIS PAY," or "HER PAY" written on it was given to each allocator. Depending upon the experimental condition, the allocator was instructed to pay either himself (or herself) or his (or her) partner. Any remaining money was to be placed in the original envelope; allocators were told that the remainder would be returned to "the general research fund."

While allocators were making the payment, estimators guessed how much was being paid. They were informed that they would be paid a bonus for accuracy. An accurate estimation was rewarded by paying the estimator $1.00. For every cent that the estimation differed from the actual allocation, a cent was deducted from the bonus money. Estimators in the appropriate conditions actually were given (in addition to any bonus that they had earned) the amount of money that the person with whom they were paired had allocated as their pay. When subjects self-allocated, estimators received that amount plus any bonus they may have earned (or $1.00, whichever was greater). For example, if a male allocator paid himself $3.00 and his female partner guessed he would pay himself $2.25, she received $3.25 for her participation.

Allocators who paid their partner received $3.00 for their participation. They were told that their pay was predetermined and would not be affected in any way by what

they paid their partner. They did not learn that their pay was $3.00 until after the experimental session was completed.

After the final questionnaires had been filled out and each subject had been paid, the subjects were thanked for their participation, told how to obtain details about this study, and asked to refrain from discussing the research with anyone for the remainder of the academic term.

Attempts were made to have four subjects participate in each session. When subjects did not arrive at their scheduled time, however, undergraduate assistants pretended to be subjects. In the first sessions the confederates were always estimators; later on, confederates were also nominally allocators and average allocations for that condition were used to compute estimators' pay.

## Results

Estimators' within cell variances in their estimations of allocations as a function of their sex, the sex of the allocator, and the target of the allocation were examined to determine if female subjects do not cognitively connect their inputs with their financial outcomes. If female estimators' guesses had significantly higher variances when they were being paid than the variances in all other conditions, it would indicate that females are relatively uncertain about how much they were being paid, and

this finding would reflect an unstable internal standard of self-pay.

The means and variances of these estimations are presented in Table 1. It is apparent from inspecting this table that females' estimations were not more variable than were males'. When female estimators were being paid by males, the variance of their estimation was smaller than was male estimators' variance when they were being paid by the other sex. When females were being paid by females, the variance of their estimations was higher than the equivalent value for males who were being paid by other males, but this difference was not significant, $F(1, 59) = 1.38$, $p < .25$.

Table 1

Means and Variances of Allocation Estimations

| Sex of Allocator | Target | Sex of Estimator | |
|---|---|---|---|
| | | Male | Female |
| | | Mean-variance | Mean-variance |
| Male | Allocator | \$2.71-.4881 | \$2.28-.2265 |
| | Estimator | \$2.94-.6062 | \$2.87-.2878 |
| Female | Allocator | \$2.27-.1667 | \$2.19-.1384 |
| | Estimator | \$2.46-.3423 | \$2.82-.8340 |

A 2 (money task--allocation or estimation) x 2 (sex of allocator) x 2 (sex of estimator) x 2 (target of allocation--allocator or estimator) unweighted means analysis of variance was performed on the amount of pay (allocated or estimated) using the dyad (the allocator-estimator pair) to determine if the independent variables had any significant effects on allocations or estimations. There was a significant main effect for target of allocation, $F(1, 105) = 12.91$, $p = .001$. Actual and expected allocations to others tended to be greater (mean equalled $2.93) than actual or expected self-allocations (mean equalled $2.37). There were no other significant effects. The cell means for amount of pay are presented in Table 2.

There is no evidence from these results that females tended to take less reward for themselves than did males because they did not connect in their minds their own work inputs with their own financial outcomes. Indeed, these data did not yield the significant sex of target x target of allocation interaction that Callahan-Levy and Messé (1979) found. A 2 (sex of target) x 2 (target of allocation) ANOVA was performed on actual amount paid by allocators to facilitate comparison of these results with those of Callahan-Levy and Messé. In this case the F value for the interaction was minimal, $F(1, 59) = .02$, $p = .89$. Males paid themselves an average of $2.33 (58.25% of the amount they were given) and females paid themselves an average of $2.39 (59.75% of the amount they were given).

Table 2

Mean Amount of Pay Allocated or Expected

| Pay Condition | Sex of Allocator | Sex of Estimator | Target of Allocation: Allocator | Target of Allocation: Estimator |
|---|---|---|---|---|
| Actual | Male | Male | $2.45 | $3.23 |
| | | Female | $2.38 | $3.11 |
| | Female | Male | $2.16 | $3.02 |
| | | Female | $2.56 | $3.12 |
| Estimated | Male | Male | $2.80 | $2.77 |
| | | Female | $2.16 | $2.81 |
| | Female | Male | $2.27 | $2.54 |
| | | Female | $2.21 | $2.83 |

NOTE: These figures differ from the equivalent values in Table 1 because they are for allocator-estimator dyads; the figures in Table 1 were calculated from all estimators' data.

In the Callahan-Levy and Messé study, males took 76.66% of the total and females took 57.50%.

Allocators thought more money was fair pay for their partner than themselves, $F(1, 57) = 5.59$, $p = .02$; the means were \$3.08 and \$2.57, respectively. Estimators, however, although they expected to be paid more than the allocator, did not tend to feel that they deserved significantly more, $F(1, 59) = 1.3$, $p = .26$. The sex of the target x target of allocation means for amount of pay considered to be fair by the estimator are presented in Table 3. Although male estimators seemed to think they deserved more than did the female estimators, a sex of estimator one-way ANOVA on estimators' fair pay for self did not yield a significant effect.

Table 3

Mean Amount Considered to be Fair Pay by Estimators

| Sex of Target | Target of Allocation | |
|---|---|---|
| | Allocator | Estimator |
| Male | \$2.35 | \$2.78 |
| Female | \$2.36 | \$2.45 |

A 2 (allocator or estimator) x 2 (sex of allocator) x 2 (sex of estimator) x 2 (target of allocation) ANOVA using subjects as the unit of analysis was performed on responses to "How do you feel about your performance on

Sections 1 and 2 of the questionnaire?" The scale ranged from 1 for "very bad" to 7 for "very good." The money task (allocation or estimation) x sex of allocator interaction was significant, $F(1, 108) = 4.6$, $p = .035$. Tests of simple effects (Winer, 1962) indicated that for allocators, self-performance rating was a function of the sex of the allocator, $F(1, 108) = 4.05$, $p < .05$. The mean for male allocators was 4.69; for female allocators it was 3.88--male allocators felt better about their performance on the task than did female allocators. For estimators, there were no differences in self-performance ratings.

The correlation between amount allocated to self and own performance rating was .14 for male allocators ($p = .318$) and -.11 for female allocators ($p = .344$). There was a very slight tendency for males to pay themselves more the better they felt about their performance, and a very slight tendency for females to pay themselves less the better they felt about their performance. The low values of these correlations indicate that neither sex connects their performance inputs with their financial outcomes in a simple, linear fashion. This does not, of course, imply that the subjects would not have paid themselves relatively more for a task on which they felt they had performed well than they would have paid themselves for a poorly-performed task.

In rating partner's performance ("How do you think your partner feels about his or her performance?"), the

money task x sex of allocator interaction was marginally significant, $F(1, 108) = 3.65$, $p = .059$. A test of simple effects indicated that for allocators there was a simple effect for sex, $F(1, 108) = 5.42$, $p < .05$; male allocators thought that partners of either sex felt better about their performances than female allocators thought their partners felt. The means were 4.81 and 4.00, respectively. Male and female estimators did not vary in their ratings of how they thought their partners felt about their performance.

There were no effects for any of the independent variables in responses to "How do you think most women in this research feel about their performance?" and "How do you think most men in this research feel about their performance?" The mean response to the former question was 4.35; to the latter it was 4.50. A paired comparison of these responses, however, indicated that the means differ significantly, $t$ (117) = -2.37, $p = .019$--the subjects tended to think that men felt better about their performance than women.

Analysis of ratings of how comfortable allocators and estimators were with their money task yielded a significant sex of allocator x sex of estimator x target of allocation interaction, $F(1, 108) = 18.07$, $p = .038$. However, further analysis indicated that no simple effect was significant. The cell means for this interaction are presented in Table 4.

Table 4

Comfort Rating of Money Task[a]

| Sex of Allocator | Sex of Estimator | Target of Allocation | |
|---|---|---|---|
| | | Allocator | Estimator |
| Male | Male | 3.58 | 5.42 |
| | Female | 4.23 | 4.14 |
| Female | Male | 4.50 | 4.61 |
| | Female | 3.73 | 4.50 |

[a]Ratings ranged from 1 for "very uncomfortable" to 7 for "very comfortable."

Allocators and estimators felt most uncomfortable when the allocator was paying him or herself and the estimator was of the same sex. Male dyads whose target of allocation was the estimator felt the most comfortable.

The correlation between amount allocated to self and comfort rating was -.09 ($p$ = .388) for male allocators, but it was .41 ($p$ = .065) for female allocators. The more comfortable the females felt about paying themselves, the more they did pay themselves.

An analysis of mood score (the sum of the positive mood adjectives minus the sum of the negative mood adjectives) yielded no significant effects.

## Discussion

The absence of highly variable estimates of what females thought they would be paid suggests, but of course cannot prove, that females do not differ from males in their ability to connect their work inputs with the money they are paid for doing that work. It must be emphasized that this study failed to replicate the Callahan-Levy and Messé (1979) study, in which females paid themselves significantly less than both sexes paid other females. On the contrary, females did not differ significantly from males in their allocations and even tended to take slightly more even though they evaluated their own performance less positively than did males. Both males and females paid partners of both sexes more than allocators paid themselves, and allocators of both sexes felt more pay to their partner was fair.

There was some very weak evidence to support the less-of-a-connection hypothesis, however. Female allocators felt significantly worse about their performance than did males, but their payments to themselves were no different. Males demonstrated an equity-theory congruent (although surprisingly weak) positive relationship between how they felt about their performance and their pay. Females, in contrast, had a slight, statistically insignificant tendency to take less for themselves the better they felt about their performance.

It is interesting to note that the more uncomfortable the female subjects felt about paying themselves, the less they took. No such relationship between comfort and self-pay existed for the male allocators. It is the norm for females not to appear financially self-interested; it would be expected that the more uncomfortable they felt in the allocation situation (and economic tasks are stereotypically in the male domain), the more normative their behavior would be despite its cost.

Thus, this study did not unequivocally resolve the issue of the nature of an apparent less of a connection between work and pay in women. The female subjects in this study were no less variable or accurate in their estimations of how much they would be paid than were male subjects; such a result would have indicated that females do not tend to cognitively connect their inputs with their outcomes as strongly as do males. Also indicative of an explanation based on social expectations is the positive correlation between self-pay and comfort with allocation found for the female subjects.

On the other hand, the negative correlation (albeit very small and statistically insignificant) between ratings of performance and self-pay suggests the cognitive less-of-a-connection hypothesis may be valid. The fact that women felt worse about their performance but paid themselves the same amount does not reveal which sex is overpaying or underpaying itself in relationship to perceived performance

inputs, but this finding is also suggestive of the less-of-a-connection explanation.

The failure to replicate the Callahan-Levy and Messé results, of course, is a major deterrent to resolving the validity of the hypothesized lesser sense of own equity in females. Their conclusion that females have a weaker sense of own equity was based on the fact that in their study female allocators took significantly less than did male allocators and less than both males and females paid other females. In this study, there were no sex differences.

The procedure of this study differed from that of Callahan-Levy and Messé in three basic ways: a multiple-answer questionnaire was used rather than essay questions; $4.00 for a 30-minute task was used rather than $6.00 for a 50-minute task; allocators were paired with another subject even when they paid themselves. There is evidence that the amount of money to be divided with a partner affects the proportional division of that amount with a partner for male subjects but not female subjects (Katz & Messé, Note 5). Thus, the results of this study may be a function of the lower amount given to the allocator. Also, some allocators who were instructed to pay themselves expressed confusion over the fact that they were paired with another subject. Despite assurances that their partner would not be receiving the amount that remained after they paid themselves, subjects' lack of clarity about why they were paired with another (a lack necessary to prevent

second-guessing what the estimator would anticipate) may have reduced self-allocations.

Therefore, another study was conducted in which allocators, who were not paired with anyone, paid only themselves. They were given either $4.00 or $8.00 for working on the same multiple-choice questionnaire for 30 minutes. Males tended to take the same amount whether they were given $4.00 (mean equalled $3.40) or given $8.00 (mean equalled $3.50). Females, in contrast, took an average of $3.06 when they were given $4.00 and an average of $5.00 when they were given $8.00. These results indicate that the lack of a sex difference in self-allocations in the main study was due, at least in part, to the amount that was distributed. A different amount probably would have produced different results.

The intriguing fact remains that females paid themselves either what males paid themselves or more--not, as expected from previous research, less. Although no precise statement can be made at this point about the nature of the less-of-a-connection phenomenon, it can be concluded that females do not simply fail to relate their own inputs to their own outcomes. Rather, self-allocation seems to be a complex task in which situational factors may impinge more on the female than the male.

## STUDY 2

### Method

Overview. Subjects read three stories and evaluated the decision maker in each. The first story was concerned with reward distribution; the other two were not and were included to mask the exact purpose of the research. The 64 forms of the allocation story permitted examination of differences in evaluations as a function of the sex of the allocator, input conditions, allocation patterns, and story contexts. Sex differences in responses to the allocators were also explored.

Subjects. Subjects were 453 introductory psychology students at Michigan State University. A total of 251 females and 202 males participated for course credit.

Design and Procedure. A 2 x 2 x 2 x 2 x 2 x 2 x 2 factorial design was used, with 2 to 7 subjects per cell (mean number of subjects in each cell was 3.32). The independent variables were sex of respondents, sex of allocator in the story, type of story (business or personal story context), two versions, nested within each story type, allocator's time inputs (equal or superior to those of the

coworker), allocator's performance inputs (equal or superior), and self-allocation (equal or superior to that paid to the coworker). The dependent variables were ratings of the allocator on 7-point scales. The subscales from Byrne's (1971) interpersonal attraction scale ("Personal Feelings" and "Working Together") were used, with the phrase "in an experiment" omitted from the "Working Together" items. A 64-item bipolar adjective scale was used to measure further the subjects' responses to the allocator.

The story booklets were randomly distributed in large groups by a male and a female experimenter. A copy of instructions read to subjects is presented in Appendix C.

Instruments. There were 64 forms of a paragraph describing an allocation decision made by one person that affected him or her and a coworker. All possible combinations of sex of the allocator, superior or equal allocator time inputs, superior or equal allocator performance inputs, and superior or equal self-allocation were presented. In all of the paragraphs the decision maker was either called Gary or Gail, worked twice as long or equally as long as the coworker, performed twice as well or equally as well as the coworker, and divided $100 by paying himself or herself

$67 or $50 (the remainder of the $100 always went to the coworker). The sex of the coworker was never defined.[1]

Four story versions were used, two business and two personal. In one business situation, the allocator and the coworker worker worked in a factory; in the other, the allocator owned a small clothing store and the coworker was the employee. In one of the personal situations, two neighbors pooled their efforts in an attempt to win a sweepstakes' prize; in the other, two cousins worked together in preparing the allocator's dogs for show.

The allocation paragraph and rating scales were followed by two paragraphs included to mask the experimental hypotheses. The second paragraph described a social worker's marriage counseling decision, and the third described a college student's decision about studying or partying. All respondents rated the social worker and the student on the same scales that they rated the allocator. A sample of the allocation paragraphs, the other paragraphs, and the rating scales are presented in Appendix D.

## Results

A principal-component factor analysis, with varimax rotation for factors having Eigenvalues greater than 1.00, was performed on the 64 7-point bipolar adjective scales.

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[1]Chi-square tests on the question "What do you think was the sex of the coworker?" indicated that same-sex pairs were often assumed and that the version of the story also affected the perceived sex of the coworker.

Four factors emerged, and coefficient alphas were computed for each.

For the first factor, alpha equalled .97. The 31 items that comprise this dependent variable are related to a social good-bad evaluative dimension--for example, admirable-not admirable, good-bad, and compassionate-not compassionate. A complete list of the items that make up the four factors used in the analysis can be found in Appendix E.

Coefficient alpha for the second factor equalled .88. This factor seems to tap an agentic dimension; items such as active-passive, assertive-unassertive, and competitive-not competitive loaded on this factor.

Coefficient alpha for the third factor equalled .81. Six competency-related items, such as capable-incapable, and dependable-not dependable, comprise this variable.

The fourth factor seems to measure a commonsense dimension. The three items that constitute this scale are: practical-impractical, rational-irrational, and wise-unwise. Coefficient alpha for this scale equalled .77.

2 x 2 x 2 x 2 x 2 x 2 x 2 unweighted means analyses of variance and planned comparisons were performed on six measures. The dependent variables were ratings on (a) Byrne's Personal Feelings scale, (b) the modified Byrne's Working Together scale, and (c) the four factor scales described above. No subject failed to respond to half or more of the items comprising any factor scale, so

for each subject the factor scale score was derived by calculating the sum of the items divided by the number of factor scale items answered. All variables were coded so that a score of "7" represents possession of the characteristic (social good, agency, competence, or commonsense), liking very much, or enjoying working with. A score of "1" represents the opposite.

Planned Comparisons

I had hypothesized that when the allocator's inputs were twice as great as those of the coworker, the male allocator would be evaluated more favorably than the female allocator when the allocator was described as having kept two-thirds of the reward. When the allocator kept half of the reward and the inputs were superior, it was predicted that the female would be evaluated more favorably than the male allocator. To test these hypotheses, comparisons as a function of the sex of the allocator, using the within-cell pooled error estimates (Winer, 1962), were performed on the six dependent variables for superior input-equal pay and superior input-equitable pay conditions.

Ratings of Gary and Gail, the allocators, differed on the "commonsense" measure. When performance and self-pay were superior, Gary was considered to have more commonsense than Gail, $F(1, 452) = 4.67$, $p < .05$. Although it did not reach significance, the rating of Gary was higher than Gail when the allocator's time inputs and self-pay were

superior. When there was superior time and equal pay, Gail was considered to have more commonsense than Gary, $F(1, 452) = 4.54$, $p < .05$. Likewise, when there was superior performance and equal pay, Gail's rating of commonsense was higher than Gary's, $F(1, 452) = 4.84$, $p < .05$. Means for these comparisons are found in Table 5.

Table 5

Mean Commonsense Ratings of Gary and Gail with Superior Inputs

| Allocator | Superior Pay | | Equal Pay | |
|---|---|---|---|---|
| | Time | Performance[a] | Time[a] | Performance[a] |
| Gary | 5.03 | 5.21 | 4.71 | 4.80 |
| Gail | 4.80 | 4.83 | 5.14 | 5.30 |

[a]Means differ significantly, $p < .05$.

Other Major Findings

A number of significant effects emerged from the 2 x 2 x 2 x 2 x 2 x 2 x 2 unweighted means ANOVAs performed on the six dependent variables. Overall, they revealed that equal pay allocation resulted in more favorable evaluations than unequal pay allocation. Ratings of the female allocator tended to be more complex than ratings of the male allocator. It was also generally found, as equity theory predicts, that superior self-pay in the absence of superior inputs results in the most unfavorable evaluations.

Commonsense. Sex of the allocator interacted with allocation condition for the measure of perceived commonsense, $F(1, 452) = 6.28$, $p = .013$. Irrespective of input conditions, Gail was considered to have more commonsense (mean rating was 5.29 on the 7-point scale) than Gary (mean rating was 5.0), $F(1, 452) = 3.96$, $p < .05$, when they divided the money equally. When the allocator kept more than he or she gave to the coworker, Gary was rated as higher in commonsense (4.82) than Gail (4.70), $F(1, 452) = 4.15$, $p < .05$.

Gail was considered to have more commonsense when she divided the allocation equally (mean equalled 5.27) than when she divided it so that her share was twice that of her coworker (mean equalled 4.62), $F(1, 452) = 26.10$, $p < .001$. For Gary, the difference in ratings of commonsense as a function of self-pay was not significant. The mean equalled 5.00 for equal pay and 4.89 for superior self-pay.

Agency. There was a significant sex of subject x sex of allocator x time inputs x allocation interaction for the agency variable, $F(1, 452) = 5.06$, $p = .025$. Male subjects thought superior self-pay allocators were more agentic (mean equalled 5.25) than equal pay allocators (mean equalled 4.95), $F(1, 452) = 6.60$, $p < .025$. Females who read descriptions of Gail in an equal time-input situation thought she was more agentic (mean equalled 5.42) when she

paid herself more than when she divided the money in half (mean equalled 5.06), $F(1, 452) = 4.22$, $p < .05$. Female subjects' ratings on the agency variable did not differ as a function of Gary's allocation decision when his time inputs equalled those of his coworker, and there were no superior time-inputs or superior self-pay simple effects for Gary or Gail when they were rated on the agency dimension by females.

Competence. There was a significant type of story x time inputs x allocation interaction, $F(1, 452) = 5.58$, $p = .019$. For the business situation, there was a simple interaction between time and pay, $F(1, 452) = 13.3$, $p < .001$. Both when pay was equal and when it was unequal, there were simple, simple effects for time, $F(1, 452) = 4.75$, $p < .05$ and $F(1, 452) = 8.79$, $p < .01$. When pay was equal, the equal-time allocator was rated as more competent than the superior-time allocator. When pay was unequal, the unequal-time allocator was rated as more competent. These findings are congruent with equity theory predictions. In the business situations, there was a simple, simple effect for pay when time inputs were equal, $F(1, 452) = 28.56$, $p < .001$. Equal pay produced higher competency ratings than superior self-pay when time inputs were equal. When the allocator's time inputs were superior, however, there was no significant simple, simple effect for pay on the competency variable.

For the personal situations, there was a simple effect for pay, $F(1, 452) = 5.00$, $p < .05$. Equal pay allocators were rated as more competent than superior-pay allocators. The mean competency ratings for the story type x time inputs x allocation interaction are presented in Table 6.

Table 6

Mean Competency Ratings for the Story Type x Time Inputs x Pay Interaction

| Type | Time | Self-Pay | |
|---|---|---|---|
| | | Equal | Superior |
| Business | Equal | 5.85 | 4.80 |
| | Superior | 5.49 | 5.45 |
| Personal | Equal | 5.31 | 5.09 |
| | Superior | 5.35 | 5.22 |

There was also a performance x allocation interaction on the competency measure, $F(1, 452) = 7.5$, $p = .007$. When performances were equal, there was a simple effect for pay, $F(1, 452) = 28.10$, $p < .001$. Equal performance and equal pay yielded higher competency ratings than equal performance, superior self-pay. When performances were unequal, there was no effect for pay. The means for this performance x allocation interaction are presented in Table 7.

Table 7

Mean Competency Ratings for the Performance Inputs x Pay Interaction

| Performance Inputs | Self-Pay | |
|---|---|---|
| | Equal | Superior |
| Equal | 5.50 | 4.87 |
| Superior | 5.42 | 5.41 |

Personal Feelings. The results suggest that liking, as measured by Byrne's Personal Feelings scale, is a complex variable that is even more complex for the female allocator than for the male allocator. There was a significant sex of allocator x time inputs x allocation interaction, $F(1, 452) = 6.8$, $p = .01$. Tests of simple effects revealed a simple effect for time, $F(1, 452) = 17.11$, $p < .001$, and a simple effect for pay, $F(1, 452) = 45.55$, $p < .001$, for the male allocator, and a time x allocation interaction, $F(1, 452) = 14.84$, $p < .001$ for the female allocator. For Gail with both equal and superior time inputs, there were significant effects for pay, $F(1, 452) = 77.53$, $p < .001$ and $F(1, 452) = 9.80$, $p < .01$, respectively, indicating that regardless of time inputs, she was liked better when she paid according to the norm of equality (as was Gary). Time inputs, however, affected liking of Gail only when she paid herself more than she paid her coworker, $F(1, 452) = 20.40$, $p < .001$. Superior time-inputs yielded greater

liking than equal time inputs when her self-allocation was superior. The means for the sex of allocator x time inputs x pay interaction are found in Table 8.

Table 8

Liking of Gary and Gail as a Function of Time Inputs and Pay

| Allocator | Time Inputs | Self-Pay | |
|---|---|---|---|
| | | Equal | Superior |
| Gary | Equal | 5.67 | 4.54 |
| | Superior | 6.24 | 5.32 |
| Gail | Equal | 6.12 | 4.15 |
| | Superior | 5.88 | 5.31 |

Under conditions of equal pay, there was a significant simple sex of allocator x time inputs interaction, $F(1, 452) = 5.42$, $p < .05$, analysis of which yielded no significant simple, simple effect for sex of allocator. Under conditions of superior self-pay, there was a simple effect for time, $F(1, 452) = 15.05$, $p < .001$, but no sex of allocator simple effect. Under conditions of superior time and both pay conditions, there were no simple, simple sex of allocator effects.

There was also a significant sex of allocator x type of story x time inputs x performance inputs interaction, $F(1, 452) = 5.31$, $p = .025$. For the male allocator,

there were simple effects for story type, $F(1, 452) = 5.55$, $p < .05$, and for time inputs, $F(1, 452) = 19.13$, $p < .001$. Gary was liked better in the personal situations than in the business situations, and he was liked better when he worked longer than his coworker.

For Gail, the female decision maker in the allocation paragraphs, a significant story type x time x performance simple interaction, $F(1, 452) = 4.62$, $p < .05$, indicated that the ratings of the female were more complex than those of the male allocator. For Gail in the personal situations, there were no significant effects. For Gail in the business situations, there was a simple effect for time, $F(1, 452) = 6.96$, $p < .05$. Gail was liked better in the business situations when she had superior time inputs than when she had equal time inputs.

Further analysis of simple effects yielded no differences in liking in personal situations as a function of the allocator's sex. Liking in such a situation was a function of time inputs. In business situations, there was a significant sex of allocator x time x performance interaction. Longer-working allocators were liked better both when performance was equal and when performance was superior. In business situations with equal time inputs, there were no significant sex or performance effects, but with superior time inputs, the sex of the allocator x performance interaction was significant, $F(1, 452) = 5.29$, $p < .025$. Gary in a business situation was liked better

when he worked longer and had equal performance inputs; Gail in a business situation was liked better when she had both superior time and superior performance inputs than when her time inputs were superior and her performance inputs were equal.

Social good-bad. For the social good-bad factor variable, there was a significant sex of subject x allocation interaction, $F(1, 452) = 5.46$, $p = .02$. When payments were equal, there was a simple effect for sex, $F(1, 452) = 5.01$, $p < .05$--females subjects rated the equal-pay allocator more favorably than did the male subjects. When their payments were unequal, there was no sex of subject effect, and both male and female subjects rated equal-pay allocators as higher in social good, $F(1, 452) = 81.40$, $p < .001$ and $F(1, 452) = 176.60$, $p < .001$, respectively. The means for the interaction are presented in Table 9.

Table 9

Mean Social Good-Bad Ratings as a Function of Subject Sex and Allocator Pay

| Sex of Subject | Self-Pay | |
|---|---|---|
| | Equal | Superior |
| Male | 5.57 | 4.40 |
| Female | 5.85 | 4.26 |

## Other Results

Commonsense. In addition to the significant sex of allocator x allocation interaction discussed earlier, there was a type of story x time inputs x allocation interaction, $F(1, 452) = 9.83$, $p = .009$, and a performance inputs x allocation interaction, $F(1, 452) = 11.29$, $p < .001$, for the commonsense evaluation.

Tests of simple effects revealed a time x allocation interaction for the business situations, $F(1, 452) = 17.60$, $p < .001$. There was a simple, simple effect for pay when time inputs were equal in the business situations, $F(1, 452) = 31.22$, $p < .001$, but no effect for pay when time inputs were superior. There was a simple, simple effect for time inputs both when pay was equal, $F(1, 452) = 10.15$, $p < .01$, and when pay was unequal, $F(1, 452) = 9.30$, $p < .01$. Subjects thought allocators who worked longer than their coworker in a business situation had more commonsense than allocators who worked the same length of time, regardless of the allocation decision. When time inputs were equal, the allocator who paid equally was rated as having more commonsense than the allocator who kept more than she or he paid to the coworker.

For the personal situations, there was a simple effect for pay, $F(1, 452) = 4.30$, $p < .05$. In those situations, equal-pay allocators were rated higher than superior self-pay allocators regardless of time inputs.

Simple effects tests of the performance x allocation interaction indicated that when performance inputs were equal, equal pay yielded higher ratings of commonsense, $F(1, 452) = 26.10$, $p < .001$. When performance inputs were superior, commonsense ratings did not vary significantly as a function of pay.

Agency. There was a significant sex of allocator x type of story x story/story type x time x performance x allocation interaction, $F(2,452) = 3.28$, $p = .039$.

For the first story version, the 4-way simple interaction between allocator's sex, time, performance, and allocation was significant, $F(1, 452) = 7.97$, $p < .01$. Tests of simple effects revealed that when the male allocator was rated, there was a simple, simple effect for pay, $F(1, 452) = 7.10$, $p < .01$. When Gary paid himself $67, he was considered to be more agentic than when he paid himself $50.

When the female allocator was rated, there was a simple, simple 3-way interaction between time, performance, and pay, $F(1, 452) = 5.25$, $p < .05$. When Gail's time inputs equalled those of her factory coworker and her performance was superior, she was thought to be more agentic when she divided the money unequally than when she divided it equally. When Gail had superior time inputs in this story version, she was considered to be more agentic when she divided the money unequally than when she divided it equally.

There was a simple interaction between time, performance, and allocation for (business) version 2, $F(1, 452) = 7.52$, $p < .01$. When pay was equal, there was a simple, simple interaction between time and performance, $F(1, 452) = 4.33$, $p < .05$. With superior performance and equal pay, there were no effects for time, but with equal performance and equal pay, equal time inputs were considered to be more agentic. When self-pay was superior, there was a simple, simple effect for performance, $F(1, 452) = 3.68$, $p < .05$. Under conditions of superior performance and superior self-pay the allocator's rating was more agentic than under conditions of equal performance and superior self-pay.

Analysis of simple effects for the personal situation that described neighbors entering a sweepstakes contest yielded a simple effect for sex of allocator, $F(1, 452) = 4.35$, $p < .05$. Gail was rated as significantly less agentic than Gary even though their behaviors were identical.

A sex of allocator x allocation interaction was found significant for (personal) version 4, the paragraph that described cousins raising dogs as an avocation, $F(1, 452) = 4.85$, $p < .05$. The simple, simple sex of allocator effect, however, was not significant. Gary's mean agency rating when he allocated equally was 5.02; for Gail it was 4.79. When they paid themselves more than they paid their coworker, Gail's rating was 5.48 and Gary's was 5.14.

There was also a significant sex of subject x sex of allocator x time x performance interaction for the

agency variable, $F(1, 452) = 11.08$, $p = .001$. Females thought equal-time allocators were more agentic than superior-time allocators, $F(1, 452) = 4.30$, $p < .05$. For male subjects, the simple effects analysis for the 4-way interaction revealed an interaction between the sex of the allocator, time, and performance, $F(1, 452) = 4.90$, $p < .05$. There were, however, no significant simple, simple, simple, simple effects under the differing conditions of time, performance, or sex of the allocator. Gary was considered to be somewhat more agentic than Gail both when time and performance inputs were equal and when time and performance inputs were superior; when one input was equal, the other superior, Gail was the more agentic allocator in the male subjects' ratings. Why females thought equal time was more agentic than superior time inputs but performance did not affect their agency ratings and why males' ratings varied as a function of time and performance inputs as they did is not clear.

Competence. On the competence factor scale, sex of the allocator interacted with type of situation, $F(1, 452) = 4.74$, $p = .03$. Gail was considered to be more competent when she was described in the business situations than in the personal situations, $F(1, 452) = 8.60$, $p < .01$. Gary, on the other hand, was thought to be no more competent in one type of situation than the other. Gail was rated as significantly more competent than Gary in the business

situations, $F(1, 452) = 8.79$, $p < .01$. The mean competency rating did not significantly differ for the two in the personal situations.

There was also a sex of subject x type of story x story/story type interaction, $F(2, 452) = 3.37$, $p = .036$. For (business) version 1, there was a simple effect for sex of subject, $F(1, 452) = 4.24$, $p < .05$. Female subjects thought the allocator was more competent than did the males. For (business) version 2 and (personal) version 3, there were no simple sex of subject effects. For (personal) version 4, the effect was significant, $F(1, 452) = 6.18$, $p < .025$. Again, the female subjects rated the allocator as more competent than did male subjects.

Social good-bad. There was a type of story x story/story type x time x performance interaction on the social good-bad factor, $F(2, 452) = 3.74$, $p = .025$. Subjects thought superior-time allocators were socially better in both business versions and thought superior-performance allocators were socially better in both personal versions. F values ranged from 4.56 to 7.08.

There was also an interaction between type of story, time inputs, and allocation for the social good-bad variable, $F(1, 452) = 6.04$, $p = .015$. In the business situations, subjects rated equal time, superior pay more negatively than superior time, superior pay, and there was no simple, simple effect for time when pay was equal. In

the personal situations, there was a simple effect for pay. Subjects who read about allocations in a personal situation tended to rate the allocator more favorably in terms of liking if she or he divided the money equally rather than keeping more for her or himself.

Analysis of the performance x pay interaction, $F(1, 452) = 7.89$, $p = .005$, yielded a simple effect for pay both when performance inputs were equal, $F(1, 452) = 177.30$, $p < .001$, and when performance inputs were superior, $F(1, 452) = 85.80$, $p < .001$. The difference on ratings was not significant under conditions of equal pay but was under conditions of superior pay. Equal performance and superior self-pay produced a significantly more negative rating on the social good-bad measure, $F(1, 452) = 21.38$, $p < .001$.

Personal Feelings. There was a significant type of story x story/story type x sex of subject x time inputs interaction, $F(2, 452) = 3.37$, $p = .036$ for ratings of how much the subject thought he or she would like the allocator. For both business versions and one of the personal versions, there was a simple effect for time--superior time-inputs allocators were liked better than equal time-inputs allocators. F values ranged from 4.38 to 11.84. For the other personal situation version of the allocation story, male subjects liked superior time-inputs allocators better than equal time-inputs allocators, $F(1, 452) = 3.49$, $p < .10$,

while females' liking of the allocator did not differ as a function of time inputs.

There was also a significant performance x allocation interaction for the personal feelings measure, $F(1, 452) = 7.95$, $p = .005$. Equal pay allocators were liked better regardless of performance inputs; liking was stronger for superior performance-inputs allocators than equal performance allocators under conditions of superior self-pay.

The story/story type interacted significantly with allocation, $F(2, 452) = 7.49$, $p < .001$. Over all versions, there was a consistent preference for equal-pay allocators. There was little difference in liking with equal pay conditions between versions, but differences in liking varied considerably between versions with superior self-pay.

There was a story/story type x performance interaction, $F(2, 452) = 3.30$, $p = .038$. In version 1, superior performance resulted in greater liking than equal performance. In versions 2, 3, and 4, there were no such simple effects for performance.

Working Together. Analysis of the data for the modified version of Byrne's "Working Together" variable yielded a significant story type x story/story type x time x performance x allocation interaction, $F(2, 452) = 3.80$, $p = .023$. Subjects who read version 1 thought they would rather work with superior-inputs allocators than with equal-inputs allocators when the allocator's

self-payment was superior to the coworker's payment. Subjects who read version 2 thought they would rather work with the equal-performance than the superior-performance allocator when pay was equally divided and with the superior-time allocator than the equal-time allocator when pay was not equally divided.

For version 3, a personal situation, subjects thought they would like working with the superior-performing allocator more than the equal-performing allocator, and the equal-paying allocator more than the unequal-paying allocator. For version 4, the other personal situation, equal-pay allocators were preferred as work partners rather than unequal-pay allocators.

## Discussion

I had hypothesized that, because there are societal pressures for females to assume a communal, egalitarian role, they are expected to adhere to the norm of equality and thus are evaluated more negatively than males when they allocate more rewards to themselves than to their coworker. Similarly, I hypothesized that, because there are societal pressures for males to assume an agentic, self-interested role, they are expected to adhere to the norm of equity and thus are evaluated more negatively than males when they allocate rewards equally under conditions in which their own inputs are superior to those of their coworker.

The results supported these hypotheses. Gail, the female allocator described in the relevant paragraph, was rated as less wise, less rational, and less practical (the "commonsense" items) than Gary, the male allocator, when they were described as having paid themselves $67 of a $100 reward. Gary was rated as having less commonsense than Gail when they divided the $100 equally with their coworker. When the allocator's time and performance inputs were superior to those of the coworker and the allocation was evenly divided, Gail was considered to have more commonsense than Gary. When inputs were superior and the allocation was divided equitably, Gary was considered to have more commonsense than Gail.

Gail, however, was not seen as less "nice" (on the social good-bad scale) than Gary when she paid herself equitably for superior inputs. Nor was she seen as less competent or less enjoyable to work with as a function of her sex and her allocation decisions. These reactions to Gail indicate that she was not judged harshly or generally disliked for paying herself more than she paid her coworker, but she was considered to be not very wise when she did so.

It is interesting to note that although the sex of the allocator did not significantly affect ratings on the social good-bad dimension, female subjects rated the equal-pay allocator more favorably than did the male subjects. Everyone thought equal pay was more socially good than

superior self-pay, but women favored equal pay even more strongly than did men.

Liking turned out to be a complex variable that was even more complex when the female allocator was being rated. Gary was liked better in personal situations, liked better when he worked longer, and liked better when he divided the money equally. Liking of Gail, in contrast, was a function of an interaction between situation, time, and performance, and an interaction between time and pay. Gail was liked better for superior time inputs than for equal time inputs when she paid herself $67, but when she divided the reward equally ($50 to herself), her time inputs did not make a difference in liking. Regardless of their time inputs, both of the allocators were liked better when they divided the money equally rather than taking more for themselves.

When the allocators paid themselves more than they paid the coworker, differences in liking varied according to the situation. In the situation in which there would be the least pressure to divide the money--one in which the reward could be thought of as won by chance by the allocator rather than earned by joint effort--liking was greater than in the other versions for the superior-pay allocator. When equality of status of the workers could be assumed, as in version 1, superior self-pay produced the most dislike. When the relationship was one in which the allocator had more invested in the situation (the employer as owner of the clothing store and the biology teacher as owner of the

show dogs), dislike was comparatively moderate for superior self-pay.

Overall, the results suggest that if people are motivated to establish and maintain good interpersonal relationships--being liked, having others want to work with them, being thought of as socially good--they will be most apt to obtain their goals by dividing a reward equally and, in many cases, working longer and harder.

If the individuals' goals involve being thought of as agentic, the evidence suggests that males tend to think of superior self-pay as more appropriate. For females the situation is more complex. The results indicate that when the allocator's time inputs are superior, females will not perceive any differences in agency as a result of equal or superior self-allocation. When time inputs are equal, however, they will tend to perceive a female allocator as more agentic when she takes more for herself, but females will not perceive differences in agentic tendencies for a male allocator in the same situation. The complexity suggests that a strong agentic rating on this measure may be seen as a negative evaluation of the female allocator by female subjects--a description of an inequitable behavior (superior self-pay for working an equal length of time) as aggressive, competitive, domineering (as well, of course, as strong, assertive, active, ambitious, confident, energetic, outgoing, and leader-oriented). These are all stereotypically masculine traits--things that a woman is not "supposed" to have.

Females thought equity (equal time/equal pay and superior time/superior pay) to be more agentic than inequity (equal time/superior pay and superior time/equal pay) only for Gary. Equity theory predicts such a finding for all (c.f., Leventhal's (1976) assertion that equitable allocations help foster high levels of task performance). But females thought inequity was more agentic when the allocator was female. The male subjects, on the other hand, were not significantly affected by the sex of the allocator or time inputs; they simply rated the allocator as more agentic when he or she took more for him or herself than when he or she divided the money equally.

Thus, allocation decisions apparently are relatively simple for the male. If he wants to maximize interpersonal outcomes, he is probably most successful if he works long, hard, and well for relatively little financial gain. If he wants to appear wise and/or agentic, he will maximize his own financial outcomes. Allocation decisions for the female are apparently far more complex. She, too, will maximize interpersonal outcomes if she divides the reward equally, but there are more contingencies relevant to her allocation decision. If she wants to be thought of as wise, she will also be more apt to obtain her goal if she divides the reward equally. If she wants to be thought of as agentic in a positive sense, she may perceive that neither $67 nor $50 of a $100 reward is an appropriate self-allocation, whatever her inputs in the situation. Given the constraints

of this study, it seems that wanting to appear favorably agentic may be seen by females as a no-win situation for females and an easy situation for males--all he has to do is keep more of the allocation for himself than he gives to his coworker when his inputs are superior and divide the allocation evenly when his inputs are equal.

Ratings of perceived competency were dependent upon the equity of the allocation when the context was a business situation and time inputs varied, but superior time-inputs did not result in higher competency ratings with superior self-pay than with equal pay. Similarly, in both business and personal situations, equitable payments produced higher ratings of competency when performance inputs were equal, but equal pay and equitable pay did not produce significant differences in competency ratings when the allocator's performance inputs were superior. Thus, superior-input allocators have a choice between equity and equality--if their performance inputs are greater than those of a coworker or if their time inputs are greater in a business situation, equal and equitable allocations will result in similar evaluations concerning the allocator's competency.

Most reward distribution studies have either been conducted using business employees or research settings that stress business contexts (e.g., laboratory instructions often state that the research was intended to simulate an industrial-organizational setting). In such situations, the superior-input allocator is apt to be evaluated as

equally competent for even and equitable reward distributions. This study suggests that if male subjects choose to divide the reward equitably, they will be perceived as agentic and having commonsense. If they choose to sacrifice financial gains by dividing the reward equally, they can increase their interpersonal outcomes. If female subjects choose to allocate rewards equally despite superior inputs, they will be considered to possess commonsense as well as increase their interpersonal outcomes. If females choose equity when their inputs are superior, they may, under some complex circumstances, be evaluated as agentic, but the evidence suggests strongly that they will not be considered to be very wise for having done so.

# CONCLUSION

It seems reasonable to conclude that research has often shown that females tend to take less pay for their work than males because there are many more complex factors that affect females' allocation decisions than affect males', not because they simply do not cognitively connect their work-related inputs to their financial outcomes. Thus, situational factors may have more impact on female self-allocations. Any apparent lesser sense of own equity in females may actually be a reflection of a labyrinth of psychological variables that lead up to and result from her allocation decision.

The psychological variables for males seem to be relatively straightforward. When males' basic motivation is self-interest and maximization of outcomes over time, when they take more for themselves than they give to another, they are considered to be wise, rational, practical and agentic. When interpersonal outcomes are foremost, and individual differences are correspondingly minimized, equal divisions of money are more appropriate.

These findings are congruent with those of Mikula (1974), Shapiro (1975), and Austin and McGinn (1977),

discussed earlier, that showed that males allocated equal rewards to an inferior-performing worker when interpersonal relationships were a salient concern. Shapiro showed that higher-input males tended to keep more for themselves only when they did not believe they would be meeting their partner. Similarly, Austin and McGinn showed that male allocators tend to pay others equitably in all situations except when they think they will be meeting the inferior performer.

Previous research has shown, and these studies confirmed, that females' allocation patterns are less consistent. Contrary to equity-theory predictions, they often take less for themselves than their inputs seemingly would entitle them to receive, but sometimes they take more than they seem to deserve. They seem to fluctuate between adherence to the norm of equality, the norm of equity, and a compromise between the two. Sometimes they take more than men do, sometimes the same amount, and sometimes less. In the Austin and McGinn study, females tended to give more to a superior performer, and therefore less to an inferior performer, when they expected to meet the superior performer. They tended to divide the reward equally between the two when they expected to meet the inferior performer. These responses did not differ from those of the male subjects. When a meeting was not anticipated, however, males paid according to equity, and females compromised between equity and equality.

Females seem to be responding to conflicting norms. Like the double-standard for mental health--one standard for healthy adults and males, another for females (Broverman, et al., 1972)--there are general social norms that emphasize in business situations that work inputs should be suitably rewarded and sex-role norms that females in all situations should be other-oriented.

Piaget (1965) has noted that the valuing of equality of outcomes develops and grows more acute with age and then evolves into a preference for equity around the age of 12 years. There is evidence that equitable distributions appear at even younger ages and develop earlier in girls than in boys (Larwood & Moely, 1979; Lerner, 1974).[1] Social forces are at odds with this cognitive-developmental sequence as women learn they are expected to be communal and favor equality of outcomes except when equality would benefit them at another's expense. Also, their long history of inequitable pay undoubtedly has acted to shift females' sense of what is just away from the concept of equity. Larwood and Moely (1979) report that the literature indicates that salaried employees, because their pay is more apt to reflect the success of the organization rather than individual inputs, tend to favor equality over equity. Likewise, females' standard of living traditionally has been

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[1]There is some evidence, however, that boys' use of the equity norm appears earlier than girls' (Leventhal & Anderson, 1970).

more apt to reflect the success of their husbands than their own inputs.

It can therefore be concluded that the lesser sense of own equity hypothesized by Callahan-Levy and Messé (1979) is not necessarily manifested in lower female self-allocations nor necessarily due to a failure to connect own inputs with own financial outcomes. The results of the studies presented here indicate that a weaker sense of own equity does exist for women, but that it is manifested in variability of allocation patterns and is due to greater complexity and greater conflict inherent in their allocation decisions as well as in the psychological outcomes resulting from these decisions.

# APPENDICES

# APPENDIX A

# QUESTIONNAIRES FOR STUDY 1

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## QUESTIONNAIRES FOR STUDY 1

### Section 1

### Personal Attitude Questionnaire

For each of the following items, mark the number on the answer sheet that represents how you feel about that item. If you strongly agree with a statement, mark the 1. If you agree with a statement, mark the 2. If you slightly agree with a statement, mark the 3. If you are neutral or undecided, mark the 4. The number 5 represents slight disagreement, 6 represents disagreement, and you would mark the 7 if you strongly disagree with a statement.

1. "The Establishment" unfairly controls every aspect of our lives; we can never be free until we are rid of it.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

2. You should always be candid with your friends even though you may hurt their feelings.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

3. You can never achieve freedom within the framework of contemporary American society.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

4. The only way to combat violence is to use violent means.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

5. The United States government's existing decision-making bodies must become more democratic.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

6. The United States needs a complete restructuring of its basic institutions.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

7. A political party that advocates revolution should be created.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

8. A liberal society is more apt to result in revolutionary change than is a fascist one.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

9. Authorities must be put in an intolerable position so they will be forced to respond with repression and thus show their illegitimacy.

   strongly agree 1 2 3 4 5 6 7 strongly disagree

10. Provocation of the police should only be a by-product, not a goal, of mass action.

    strongly agree 1 2 3 4 5 6 7 strongly disagree

11. The solutions for contemporary problems lie in striking at their roots, no matter how the destruction might occur.

    strongly agree 1 2 3 4 5 6 7 strongly disagree

12. Freedom of expression should be denied to racist and fascist movements.

    strongly agree 1 2 3 4 5 6 7 strongly disagree

13. Dialogue is preferable to disruption for changing our society.

    strongly agree 1 2 3 4 5 6 7 strongly disagree

14. A group without a clear-cut pattern of leadership cannot function effectively.

    strongly agree 1 2 3 4 5 6 7 strongly disagree

15. Even though institutions have worked well in the past, they must be destroyed if they are not effective now.

    strongly agree 1 2 3 4 5 6 7 strongly disagree

16. One's personal life should be kept separate from one's political life.

strongly agree 1 2 3 4 5 6 7 strongly disagree

17. The structure of our society is such that most people become alienated from their true selves.

strongly agree 1 2 3 4 5 6 7 strongly disagree

18. Commitment to a meaningful career is a very important part of a person's life.

strongly agree 1 2 3 4 5 6 7 strongly disagree

19. Sexual behavior should be bound by mutual feelings, not by formal and legal ties.

strongly agree 1 2 3 4 5 6 7 strongly disagree

20. A commitment to action is more socially relevant than a commitment to any specific belief.

strongly agree 1 2 3 4 5 6 7 strongly disagree

21. A problem with most older people is that they have learned to accept society as it is, not as it should be.

strongly agree 1 2 3 4 5 6 7 strongly disagree

22. It is more important that people be involved in the present rather than concerned with the past or the future.

strongly agree 1 2 3 4 5 6 7 strongly disagree

23. The bureaucracy of American society makes it impossible to live and work spontaneously.

strongly agree 1 2 3 4 5 6 7 strongly disagree

24. Political factions cannot cooperate with each other without sacrificing their integrity.

strongly agree 1 2 3 4 5 6 7 strongly disagree

25. Radicals of the left are as much a threat to the rights of the individual as are radicals of the right.

strongly agree 1 2 3 4 5 6 7 strongly disagree

26. Being put in positions of leadership brings out the best in people.

strongly agree 1 2 3 4 5 6 7 strongly disagree

27. While people have a great potential for good, society brings out the worst in them.

strongly agree 1 2 3 4 5 6 7 strongly disagree

28. An individual can find his or her true identity only by detaching himself or herself from formal beliefs and ideologies.

strongly agree 1 2 3 4 5 6 7 strongly disagree

29. The processes of rebuilding society are of less immediate importance than the processes of destroying it.

strongly agree 1 2 3 4 5 6 7 strongly disagree

30. Spontaneity is often an excuse for irresponsibility.

strongly agree 1 2 3 4 5 6 7 strongly disagree

31. The political structure of the Soviet Union is more like that of the United States than that of Red China.

strongly agree 1 2 3 4 5 6 7 strongly disagree

32. A minority must never be allowed to impose its will on the majority.

strongly agree 1 2 3 4 5 6 7 strongly disagree

33. The streets are a more appropriate medium for change in our society than the printed word.

strongly agree 1 2 3 4 5 6 7 strongly disagree

34. Change in our society should be based primarily on popular elections.

strongly agree 1 2 3 4 5 6 7 strongly disagree

35. Competition encourages excellence.

strongly agree 1 2 3 4 5 6 7 strongly disagree

36. Educational institutions should be politically involved.

strongly agree 1 2 3 4 5 6 7 strongly disagree

37. Marriage unfairly restricts one's personal freedom.

strongly agree 1 2 3 4 5 6 7 strongly disagree

38. Although people are intrinsically good, they have developed institutions which force them to act in opposition to their basic nature.

strongly agree 1 2 3 4 5 6 7 strongly disagree

39. The right to private property is sacred.

strongly agree 1 2 3 4 5 6 7 strongly disagree

40. It is possible to modify our institutions so that blacks can be incorporated on an equal basis into our contemporary society.

strongly agree 1 2 3 4 5 6 7 strongly disagree

41. No one should be punished for violating a law which he or she feels is immoral.

strongly agree 1 2 3 4 5 6 7 strongly disagree

42. Anyone who violates the law for reasons of conscience should be willing to accept the legal consequences.

strongly agree 1 2 3 4 5 6 7 strongly disagree

43. The courts are a useful vehicle for responsible change.

strongly agree 1 2 3 4 5 6 7 strongly disagree

44. Voting should be a practical rather than moral decision.

strongly agree 1 2 3 4 5 6 7 strongly disagree

45. There are legitimate channels for reform which must be exhausted before attempting disruption.

strongly agree 1 2 3 4 5 6 7 strongly disagree

46. Extensive reform in society only serves to perpetuate the evils; it will never solve problems.

strongly agree 1 2 3 4 5 6 7 strongly disagree

47. You learn more from ten minutes in a political protest than ten hours of research in a library.

strongly agree 1 2 3 4 5 6 7 strongly disagree

48. Compromise is essential for progress.

strongly agree 1 2 3 4 5 6 7 strongly disagree

49. Although our society has to be changed, violence is not a justified means.

strongly agree 1 2 3 4 5 6 7 strongly disagree

50. The distinction between public and private life is unnecessary.

strongly agree 1 2 3 4 5 6 7 strongly disagree

51. Society needs some legally based authority in order to prevent chaos.

strongly agree 1 2 3 4 5 6 7 strongly disagree

52. If the structure of society becomes nonrepressive, people will be happy.

strongly agree 1 2 3 4 5 6 7 strongly disagree

53. Representative democracy can respond effectively to the needs of the people.

strongly agree 1 2 3 4 5 6 7 strongly disagree

54. The very existence of our long-standing social norms and customs demonstrates their value.

strongly agree 1 2 3 4 5 6 7 strongly disagree

55. Police should not hesitate to use force to maintain order.

strongly agree 1 2 3 4 5 6 7 strongly disagree

56. Traditions serve a useful function by providing stability and continuity.

strongly agree 1 2 3 4 5 6 7 strongly disagree

57. Real participatory democracy should be the basis for a new society.

strongly agree 1 2 3 4 5 6 7 strongly disagree

58. Abrupt reforms in society usually lead to such a severe backlash that they are self-defeating.

strongly agree 1 2 3 4 5 6 7 strongly disagree

59. If people work hard at their jobs, they reap the full benefits of our society.

strongly agree 1 2 3 4 5 6 7 strongly disagree

60. People should not do research which can be used in ways that are contrary to the social good.

strongly agree 1 2 3 4 5 6 7 strongly disagree

61. Groups with a formal structure tend to stifle creativity among their members.

strongly agree 1 2 3 4 5 6 7 strongly disagree

62. A social scientist should not separate his or her political responsibilities from his or her professional role.

strongly agree 1 2 3 4 5 6 7 strongly disagree

63. It is extremely unlikely that there will ever be a nuclear war.

strongly agree 1 2 3 4 5 6 7 strongly disagree

64. Most people in government are honest and primarily concerned with the public good.

strongly agree 1 2 3 4 5 6 7 strongly disagree

65. People who sell marajuana should be severely punished.

strongly agree 1 2 3 4 5 6 7 strongly disagree

66. Abortions are an acceptable form of birth control.

strongly agree 1 2 3 4 5 6 7 strongly disagree

67. Information that the government declares is secret should never be revealed by the media.

strongly agree 1 2 3 4 5 6 7 strongly disagree

68. Most criminals had a very unhappy childhood.

strongly agree 1 2 3 4 5 6 7 strongly disagree

69. The major television networks' news shows are accurate and unbiased.

strongly agree 1 2 3 4 5 6 7 strongly disagree

70. Organized religions play a large part in maintaining peace in the world.

strongly agree 1 2 3 4 5 6 7 strongly disagree

## Section 2

### General Knowledge Questionnaire

Mark on the answer sheet the number of the answer you believe to be the correct choice. We are attempting to establish norms for college students to compare with other subpopulations; therefore, you should WORK AS QUICKLY AND ACCURATELY AS POSSIBLE, but you are NOT EXPECTED TO KNOW ALL OF THE ANSWERS and you are NOT EXPECTED TO COMPLETE ALL OF THE QUESTIONS.

1. The third president of the United States was

   1. Jefferson  2. Madison
   3. Adams  4. Monroe

2. The first vice-president of the United States was

   1. Jefferson  2. Madison
   3. Adams  4. Monroe

3. The man who integrated the state university at Oxford, Mississippi in 1962 was

   1. James Meredity  2. James Baldwin
   3. Lew Alcindor  4. Orville Freeman

4. Freedom of the press is guaranteed by which constitutional amendment?

   1. 1  2. 2
   3. 3  4. 4

5. The current Secretary of Health, Education, and Welfare is

   1. Griffin Bell  2. W. Michael Blumenthal
   3. Cyrus Vance  4. Joseph Califano

6. The family that has controlled Nicaragua since 1936 is

   1. Sanchez  2. Somoza
   3. la Guardia  4. Sandinista

7. Fidel Castro took over the Cuban government in

   1. 1959  2. 1965
   3. 1968  4. 1971

8. The initials "ICBM" stand for

   1. international computing and business machines
   2. internal control-basic mobilization
   3. intercoastal bomb maintenance
   4. intercontinental ballistic missile

9. What percentage of Mexican-Americans living in the United States are farm workers?

   1. 93%
   2. 60.5%
   3. 34%
   4. 8.5%

10. The first black woman to run for President of the United States was

    1. Coretta King
    2. Shirley Chisolm
    3. Barbara Jordan
    4. Bella Abzug

11. The approximate population of the United States today is

    1. 100 million
    2. 155 million
    3. 220 million
    4. 500 million

12. The approximate population of the People's Republic of China today is

    1. 100 million
    2. 250 million
    3. 600 million
    4. 900 million

13. The President of Egypt is

    1. Anwar Sadat
    2. Abu Dhabi
    3. Ahmad Yamani
    4. Menachem Begin

14. The budget of the United States government for fiscal year 1978 was approximately

    1. $450 billion
    2. $30 billion
    3. $450 million
    4. $30 million

15. The Berlin Wall was erected in

    1. 1927
    2. 1944
    3. 1961
    4. 1973

16. The minimum voting age in the United States is

    1. 17
    2. 18
    3. 19
    4. 21

17. Blacks comprise approximately _____ percentage of the population of the United States.

1. 1 2. 10
3. 40 4. 60

18. One of the winners of the 1978 Nobel Peace Prize was

1. Begin 2. Carter
3. Kissinger 4. Vance

19. The 1978 Supreme Court case that led to the ruling that rigid quota systems may not be used to correct racial imbalances is known as the _____ case.

1. Equal Rights 2. Davis
3. Humphrey 4. Bakke

20. The Panama Canal will be turned over to full Panamanian control in

1. 1980 2. 2100
3. 1999 4. never

21. There are currently _____ United States senators.

1. 50 2. 100
3. 150 4. 435

22. The mayor of Lansing, Michigan is

1. Graves 2. Smith
3. Hamilton 4. Johnston

23. There are _____ nuclear power reactors in the United States.

1. 2 2. 14
3. 513 4. 83

24. The first person in space was

1. Gagarin 2. Shepard
3. Glenn 4. Popovich

25. _____ deaths were caused by automobile emissions in the U.S. in 1978.

1. 0 2. 120
3. 4,000 4. 100,000

26. In 1976, about _____ percent of the United States population lived in poverty.

1. 2
2. 12
3. 24
4. 39

27. The author of The Feminine Mystique was

1. Betty Friedan
2. Katharine Graham
3. Phyllis Schlafly
4. Patricia Harris

28. The Republican vice-presidential nominee in 1972 was

1. Dole
2. Shriver
3. Ford
4. Agnew

29. The last United States troops left Vietnam in

1. 1968
2. 1970
3. 1973
4. 1977

30. In 1977, Proctor & Gamble spent _____ million dollars to advertise their soaps and cleansers.

1. 460
2. 130
3. 3
4. 1/2

31. World War II ended in

1. 1940
2. 1945
3. 1949
4. 1953

32. President Nixon resigned in

1. 1974
2. 1972
3. 1976
4. 1978

33. The president of Chile who was overthrown in 1973 was

1. Ugarte
2. Batista
3. Allende
4. Santago

34. The current FBI Director is

1. Kelley
2. Hoover
3. Bell
4. Webster

35. Che Guevara was killed in

1. Cuba
2. the United States
3. Bolivia
4. Haiti

36. Which of the following U.S. magazines has the largest circulation?

1. Time
2. Playboy
3. TV Guide
4. Reader's Digest

37. The current governor of the state of New York is

1. Rockefeller
2. Javits
3. Koch
4. Carey

38. Which of the following is a U.S. Senator from Michigan?

1. Levin
2. Griffin
3. Wolpe
4. Carr

39. According to an act of Congress, the mandatory retirement age for most employees is

1. 65
2. 70
3. 72
4. 75

40. The state that allocates the least amount of money for educating children in public and secondary schools is

1. Florida
2. Nevada
3. Utah
4. Mississippi

41. More people in the world speak _____ than any other language.

1. English
2. Arabic
3. Mandarin Chinese
4. Spanish

42. White families in the United States had a median income of $_____ in 1976.

1. 14,960
2. 23,310
3. 3,100
4. 20,500

43. Black families in the United States had a median income of $_____ in 1976.

1. 9,240
2. 17,000
2. 1,500
4. 20,500

44. The President of the USSR is

1. Kerensky
2. Brezhnev
3. Kosygin
4. Malenkov

45. The capital of Bangladesh is

1. Ganges
2. Bengali
3. Urdu
4. Dacca

46. The capital of the Socialist Republic of Vietnam is

1. Saigon
2. Danang
3. Hanoi
4. Haiphong

47. In fiscal year 1978, the federal budget for the Defense Department was

1. $104.5 billion
2. $10.5 billion
3. $4.5 billion
4. $104.5 million

48. In fiscal year 1978, the federal budget for the Department of Health, Education & Welfare was

1. $163.3 billion
2. $16.3 billion
3. $1.6 billion
4. $16.3 million

49. South Africa's policy of segregation of the races is known as

1. apartheid
2. anglice
3. caesura
4. dissociation

50. The GNP is the nation's

1. general need profile
2. gained net profit
3. government net productivity
4. gross national product

51. What is the approximate proportion of all U.S. high school graduates who go on to college?

1. one-fourth
2. one-third
3. one-half
4. three-fourths

52. Commander Bucher became well known in 1968 because he

1. walked on the moon
2. was captured by North Korea
3. escaped from North Vietnam
4. rescued a disabled submarine

53. The supersonic transport developed jointly by Britain and France is called the

1. BOAC
2. Concorde
3. F-111
4. Superjet

54. Admiral Stanfield Turner is head of

1. the Defense Department
2. NATO
3. the State Department
4. the CIA

55. Cyprus has long been claimed by both

1. Egyptians and Irraelis
2. Greeks and Turks
3. British and Spanish
4. Palestinians and Israelis

56. J. Paul Getty's fortune was based on

1. automobiles
2. railroads
3. shipping
4. oil

57. The first nonelected vice-president of the U.S. was

1. Andrew Johnson
2. Harry Truman
3. Nelson Rockefeller
4. Gerald Ford

58. Idi Amin Dada is president of

1. Kenya
2. Nigeria
3. Uganda
4. Angola

59. At the present rate, the world's population will double in _____ years.

1. 10
2. 35
3. 70
4. 150

60. Surinam is located in

1. South America
2. Africa
3. Asia
4. The Middle East

How much of the $4.00 did you allocate? $_____

What do you think is fair pay for your participation in this research? $_____

What do you think is fair pay for your partner's participation in this research? $_____

How comfortable do you feel about allocating the money? (check one)

____ very uncomfortable

____ somewhat uncomfortable

____ slightly uncomfortable

____ neutral

____ slightly comfortable

____ somewhat comfortable

____ very comfortable

On the following page is a list of words that describe people's moods and feelings. Indicate how well each word describes the way you feel RIGHT NOW by placing a 1, 2, 3, or 4 in the blank before each word.

Your partner was randomly selected to be the allocator for your partnership. She is being given an envelope that contains $4.00 (2 single dollar bills, 4 quarters, and 10 dimes). You will hear her being instructed to use the contents of the envelope to pay herself what she considers to be fair pay for her participation in this research. We want you to estimate how much she is paying herself. You will be paid according to how accurately you can guess how much of the $4.00 she is paying herself. You will be paid whatever amount she pays herself PLUS a bonus for accuracy. If your estimation exactly matches what she pays herself, you will receive an extra $1.00. For every cent that your estimation is away from the actual amount that he pays herself, a cent will be deducted from the bonus money. For example, if your estimation is 50¢ more than the actual pay, you will receive the pay plus a bonus of 50¢. If your estimation is more than $1.00 off, you will receive whatever your partner paid to herself.

Because it is important that the allocator is not influenced by your involvement in this particular part of the research, please put any questions you may have in writing. One of the researchers will collect this brief questionnaire in about 5 minutes. It will then take a few moments to compute your earnings.

How much of the $4.00 do you think your partner will pay herself? $_____

What do you think is fair pay for her participation in this research? $_____

What do you think is fair pay for your participation? $_____

Your partner was randomly selected to be the allocator for your partnership. He is being given an envelope that contains $4.00 (2 single dollar bills, 4 quarters, and 10 dimes). You will hear him being instructed to use the contents of that envelope to pay you for your participation in this research. We want you to estimate how much you are being paid. You will actually be paid according to how accurately you can guess how much of the $4.00 you will receive. You will be given what your partner paid to you PLUS a bonus for accuracy. If your estimation exactly matches what he pays you, you will receive an extra $1.00. For every cent your estimation is away from the actual amount he pays you, a cent will be deducted from the bonus money. For example, if your estimation is 50¢ more than the actual pay, you will receive your pay plus a bonus of 50¢. If your estimation is more than $1.00 off, you will receive whatever your partner paid to you.

Because it is important that the allocator is not influenced by your involvement in this particular part of the research, please put any questions you may have in writing. One of the researchers will collect this brief questionnaire in about 5 minutes. It will then take a few moments to compute your earnings.

How much of the $4.00 do you think your partner will pay you? $_____

What do you think is fair pay for your participation in this research? $_____

What do you think is fair pay for your partner's participation? $_____

How confident do you feel that your estimation is accurate? (check one)

_____ very unconfident
_____ somewhat unconfident
_____ slightly unconfident
_____ neutral
_____ slightly confident
_____ somewhat confident
_____ very confident

How comfortable do you feel about estimating your partner's allocation?

_____ very uncomfortable
_____ somewhat uncomfortable
_____ slightly uncomfortable
_____ neutral
_____ slightly comfortable
_____ somewhat comfortable
_____ very comfortable

How comfortable do you think your partner feels about allocating the money?

_____ very uncomfortable
_____ somewhat uncomfortable
_____ slightly uncomfortable
_____ neutral
_____ slightly comfortable
_____ somewhat comfortable
_____ very comfortable

How comfortable do you think you would have felt if you had been selected to allocate the money?

_____ very uncomfortable
_____ somewhat uncomfortable
_____ slightly uncomfortable
_____ neutral
_____ slightly comfortable
_____ somewhat comfortable
_____ very comfortable

On the following page is a list of words that describe people's moods and feelings. Indicate how well each word describes the way you feel RIGHT NOW by placing a 1, 2, 3, or 4 in the blank before each word.

1 = not at all  2 = a little  3 = somewhat  4 = very much

| | | |
|---|---|---|
| ___pleased | ___elated | ___cooperative |
| ___happy | ___fed-up | ___annoyed |
| ___lively | ___helpless | ___upset |
| ___trustful | ___energetic | ___satisfied |
| ___downhearted | ___active | ___joyous |
| ___shocked | ___friendly | ___frustrated |
| ___vigorous | ___alert | ___blue |
| ___sad | ___angry | ___hostile |
| ___guilty | ___vulnerable | ___irritated |
| ___startled | ___forgiving | ___kindly |

Use the following scale to answer the remaining questions.

1 = very bad
2 = somewhat bad
3 = slightly bad
4 = neutral
5 = slightly good
6 = somewhat good
7 = very good

How do you feel about your performance on sections 1 and 2 of the questionnaire? _____

How do you think your partner feels about his or her performance? _____

How do you think most women in this research feel about their performance? _____

How do you think most men in this research feel about their performance? _____

How do you think most freshmen feel about their performance? _____

How do you think most upperclassmen feel about their performance? _____

What is your sex? _____
class level? _____
major? _____
age? _____

If you would like to make any comments about this research, please feel free to do so on the back of this form.

# APPENDIX B

## INSTRUCTIONS FOR STUDY 1

## APPENDIX B

## INSTRUCTIONS FOR STUDY 1

Briefing Statement

(Two experimenters introduce themselves.)

We are interested in exploring what college students think and feel about a variety of social issues, as well as in establishing performance norms for college students on a general knowledge questionnaire. You will be given 30 minutes to work on a series of questions. You are not expected to complete all of these questions nor are you expected to know all of the answers. At the end of the 30 minutes, you will be paid for your participation in this research, and you will be asked to complete a very brief final questionnaire. The determination of the amount of money to be paid to each of you will be explained after you have worked on sections 1 and 2 of the first questionnaire. All together, each of you will be involved in this research for under an hour.

I would like each of you to read, sign, and date the consent form that we will be handing out. All responses will be kept strictly confidential. The preliminary results of this study will be available to you at the end of this term.

In a moment you will select a cubicle on the side of the room that you are now sitting on. In there you will find the questionnaire booklet and instructions for completing it. If you have any questions at any time, please do not hesitate to ask. Just knock on the cubicle door and we will assist you.

Let me stress that for section 1 there are no right or wrong answers, and no one is expected to know all or even most of the answers to section 2. We are trying to establish norms, so just do the best you can and try to figure out the answers to questions that you are not sure of. In a sense, this is more a test of a questionnaire than a test of individuals.

The first answer sheet is to be used for section 1, the second answer sheet is to be used for section 2. Do NOT put your name on the answer sheets. For identification purposes for data analysis, we ask that your student number and your sex be marked on each answer sheet in the appropriate

grids. All information, of course, will be kept strictly confidential.

If you do happen to finish both sections before the end of 30 minutes, spend the remaining time checking your answers.

Allocation Instructions

Time is now up for the first part of this research. Do not worry if you have not finished all of the questions. We will collect the booklets and explain the next phase.

We are interested in learning what students consider to be fair pay for their participation in research such as this. Therefore, we will pair each of you with one of the people sitting on the other side of the room. You will never know which of these people is your partner. One person of each pair will be randomly assigned to be the allocator. The other will work on a separate, brief task. Each of you will be given five minutes to complete your task, so there is no need to rush.

Allocators Pay Selves. You will be the allocators in this session, which means that you will be given a sum of money and told to pay yourself for your participation in this research. Simply take what you consider to be fair pay for your participation from the envelope you will be given and place it in the envelope marked "MY PAY." Place the remainder in the original envelope; it will be returned to the general research fund. While you are doing this, the (WOMEN/MEN) sitting on the other side of the room will be working on a brief task. After you have paid yourself, you will be asked to complete a short questionnaire. When that is done, you may leave, and of course take with you the money you have paid yourself.

Allocators Pay Partner. You will be the allocators in this session, which means that you will be given a sum of money and told to pay your partner for (HIS/HER) participation in this research. Simply take what you consider to be fair pay for (HIS/HER) participation from the envelope you will be given and place it in the envelope marked "(HIS/HER) PAY." Place the remainder in the original envelope; it will be returned to the general research fund. While you are doing this, your partner, who is one of the (WOMEN/MEN) sitting on the other side of the room, will be working on a brief task. YOUR PAY HAS ALREADY BEEN DETERMINED AND WILL NOT BE AFFECTED IN ANY WAY BY WHAT YOU PAY YOUR PARTNER. After you have paid your partner, you will be asked to complete a short questionnaire. When that is done, you will be paid for your participation, and you may leave at that time.

# APPENDIX C

# STUDY 2 SAMPLE PARAGRAPHS AND RATING SCALES

APPENDIX C

STUDY 2 SAMPLE PARAGRAPHS AND RATING SCALES

## Decision Makers

### Instructions

Read the following paragraphs carefully. Each will describe a decision that a person has made. After reading each paragraph, you will be asked to describe your feelings about the decision maker. For the first two items, simply check the appropriate response.

Next you will find the decision maker's name followed by a series of pairs of adjectives. Here is an example:

John Jones

good:___:___:___:___:___:___:___:bad

Each pair of adjectives forms a scale. By marking an "X" along the scale, you can indicate what you associate with the particular person that is listed above the scale. For example, if you feel that the person is very closely associated with one end of the scale, you would place an "X" as follows:

good:_X_:___:___:___:___:___:___:bad OR
good:___:___:___:___:___:___:_X_:bad

If you think the person is quite closely associated with one or the other end of the scale, you would place your "X" as follows:

good:___:_X_:___:___:___:___:___:bad OR
good:___:___:___:___:_X_:___:___:bad

If the person seems only slightly good or bad, place your "X" as follows:

good:___:___: X :___:___:___:___:bad OR
good:___:___:___:___: X :___:___:bad

If you consider both sides equally associated, you would mark the middle space.

good:___:___:___: X :___:___:___:bad

Never put more than one "X" on any scale. Be certain that you mark every item. If you are undecided, place the "X" in the center space. Do not leave any blank lines. Your first impression is what we would like to learn about, so do not spend more than a few seconds marking each scale.

Version 1 (Business)

Paragraph 1

Gail Harris was hired by the Six Star Manufacturing Company when it began in business. At first she was the only employee. After six months of operation, the company hired another employee. The two workers operated the machines that produced such Halloween goodies as Oozie Blood, Terrible Teeth, and Scary Scars. By October 31st, Gail Harris was responsible for the manufacture of twice as many products every week as her co-worker. Six Star Manufacturing had a very successful selling season. The owner of the company decided to give Gail $100 to divide between herself and her partner. Gail decided that since she was producing twice as much for the company and had worked there twice as long, she would keep $67 for herself and give $33 to the other employee.

## Version 2 (Business)

Paragraph 1

Gary Harris had worked as manager of a clothing store that was part of a large chain until he was 45, when he went into business for himself. After establishing a small clothing store, he had only enough money left to hire one employee. Gary worked 60 hours a week and his employee worked 30 hours a week. They each sold about the same amount of merchandise. The new business barely survived during the first year of operation. When a Small Business Loan was granted, however, things began to improve. After paying all bills and taxes and increasing the inventory, Gary Harris had $100 left. After some thought, he decided to give $50 to his employee and keep $50 for himself.

## Version 3 (Personal)

Paragraph 1

Gary Harris and his neighbor spent one cold winter afternoon filling out entry blanks for a local merchant's sweepstakes. The object was to guess the total value of the coins that filled a globe. They decided to submit as many guesses as possible and were careful not to duplicate answers. By evening, they had each worked about 4 hours and had each completed just under 150 forms. Both hoped to win the first prize, a trip to the Bahamas. As it turned out, however, Gary won the third prize--$100 in cash--and his

neighbor did not win anything. After some thought, Gary decided to give $33 of the prize money to his neighbor and keep $67 for himself.

Version 4 (Personal)

Paragraph 1

Gail Harris was a high school biology teacher whose hobby was breeding and showing dogs. It was a hobby into which she put many hours and was one that she enjoyed very much. Her cousin worked just as long and contributed about one-third of the total effort required to maintain the dogs well. Slowly Gail and her Cousin began to win trophies and ribbons for Gail's dogs. The first time that Gail won a cash prize for one of her dogs, she was very pleased, but she was also uncertain what would be the best thing to do with the $100. After some thought, she decided to divide the money with her cousin. She gave her cousin $50 for helping her and kept $50 for herself.

Paragraph 2

Pat Turner had her master's in social work and had been a marriage counselor for several years. She was satisfied with her career and felt that she was able to benefit most of her clients. The Johnsons, however, posed a problem. According to both the husband and the wife, they frequently fought and occasionally the fights degenerated into physical abuse. No substantial injuries had occurred, but Pat Turner

feared for both of the Johnsons' safety. Yet, the Johnsons claimed that they loved and needed each other very much and wanted the marriage to remain intact. Pat had to decide whether to recommend that they separate and try to learn to live successfully without each other or to recommend that intensive therapy be undertaken to try to save the marriage. She decided that the possibility of permanent physical harm was such that the marriage should probably be terminated. Pat Turner recommended that the Johnsons separate.

Paragraph 3

John Fulton was a freshman college student away from home for the first time. He had always enjoyed academic success and felt that he would probably apply for admission to medical school in his senior year. He soon found, however, that the temptation to have a good time rather than study was often great. The difficulty of his mid-term exams surprised him, and the amount of work he had to do seemed to keep increasing. John was determined to study long and hard for his final exams so that his grades would improve and not hurt his chances of getting into medical school. Then, two weeks before final exams were to begin, he was invited to go away for the weekend with several of his friends. He felt that he needed to spend the time studying but also thought that it would be a shame to miss the social pleasures of college life. He decided to go with his friends and work even harder when he got back to school.

1. Personal Feelings (check one)

____I feel that I would probably like Gail Harris very much.

____I feel that I would probably like Gail Harris.

____I feel that I would probably like Gail Harris to a slight degree.

____I feel that I would probably neither particularly like nor particularly dislike Gail Harris.

____I feel that I would probably dislike Gail Harris to a slight degree.

____I feel that I would probably dislike Gail Harris.

____I feel that I would probably dislike Gail Harris very much.

2. Working Together (check one)

____I believe that I would very much dislike working with Gail Harris.

____I believe that I would dislike working with Gail Harris.

____I believe that I would dislike working with Gail Harris to a slight degree.

____I believe that I would neither particularly dislike nor particularly enjoy working with Gail Harris.

____I believe that I would enjoy working with Gail Harris to a slight degree.

____I believe that I would enjoy working with Gail Harris.

____I believe that I would enjoy very much working with Gail Harris.

" GAIL HARRIS"

ACTIVE:__:__:__:__:__:__:__:PASSIVE

ADMIRABLE:__:__:__:__:__:__:__:NOT ADMIRABLE

AGGRESSIVE:__:__:__:__:__:__:__:UNAGGRESSIVE

AMBITIOUS:__:__:__:__:__:__:__:NOT AMBITIOUS

ASSERTIVE:__:__:__:__:__:__:__:UNASSERTIVE

ATTRACTIVE:__:__:__:__:__:__:__:UNATTRACTIVE

BAD:__:__:__:__:__:__:__:GOOD

CAPABLE:__:__:__:__:__:__:__:UNCAPABLE

COMPASSIONATE:__:__:__:__:__:__:__:NOT COMPASSIONATE

COMPETITIVE:__:__:__:__:__:__:__:NOT COMPETITIVE

CONFIDENT:__:__:__:__:__:__:__:UNCONFIDENT

CONFORMING:__:__:__:__:__:__:__:NOT CONFORMING

CONSCIENTIOUS:__:__:__:__:__:__:__:NOT CONSCIENTIOUS

CONSIDERATE:__:__:__:__:__:__:__:INCONSIDERATE

COOPERATIVE:__:__:__:__:__:__:__:UNCOOPERATIVE

CREATIVE:__:__:__:__:__:__:__:UNCREATIVE

DEMANDING:__:__:__:__:__:__:__:UNDEMANDING

DEPENDABLE:__:__:__:__:__:__:__:NOT DEPENDABLE

DISHONEST:__:__:__:__:__:__:__:HONEST

DOMINEERING:__:__:__:__:__:__:__:SUBMISSIVE

EFFICIENT:__:__:__:__:__:__:__:INEFFICIENT

EGOTISTICAL:__:__:__:__:__:__:__:NOT EGOTISTICAL

ENERGETIC:__:__:__:__:__:__:__:NOT ENERGETIC

ETHICAL:__:__:__:__:__:__:__:UNETHICAL

FAIR:__:__:__:__:__:__:__:UNFAIR

FRANK:__:__:__:__:__:__:__:NOT FRANK

FRIENDLY:__:__:__:__:__:__:__:UNFRIENDLY

GENEROUS:__:__:__:__:__:__:__:NOT GENEROUS

IDEALISTIC:__:__:__:__:__:__:__:NOT IDEALISTIC

IMAGINATIVE:__:__:__:__:__:__:__:UNIMAGINATIVE

INDEPENDENT:__:__:__:__:__:__:__:DEPENDENT

INEFFECTIVE:__:__:__:__:__:__:__:EFFECTIVE

INTROVERTED:__:__:__:__:__:__:__:EXTROVERTED

JUST:__:__:__:__:__:__:__:UNJUST

KIND:__:__:__:__:__:__:__:UNKIND

LEADER:__:__:__:__:__:__:__:NOT LEADER

LIKEABLE:__:__:__:__:__:__:__:UNLIKEABLE

MANIPULATIVE:__:__:__:__:__:__:__:NOT MANIPULATIVE

MATURE:__:__:__:__:__:__:__:IMMATURE

OPTIMISTIC:__:__:__:__:__:__:__:PESSIMISTIC

OUTGOING:__:__:__:__:__:__:__:NOT OUTGOING

PERSUASIVE:__:__:__:__:__:__:__:NOT PERSUASIVE

PRACTICAL:__:__:__:__:__:__:__:IMPRACTICAL

POPULAR:__:__:__:__:__:__:__:UNPOPULAR

RATIONAL:__:__:__:__:__:__:__:IRRATIONAL

REASONABLE:__:__:__:__:__:__:__:UNREASONABLE

RESPONSIBLE:__:__:__:__:__:__:__:IRRESPONSIBLE

SECURE:__:__:__:__:__:__:__:INSECURE

SELFISH:__:__:__:__:__:__:__:UNSELFISH

SENSITIVE:__:__:__:__:__:__:__:INSENSITIVE

SINCERE:__:__:__:__:__:__:__:INSINCERE

SOFT-HEARTED:__:__:__:__:__:__:__:HARD-HEARTED

SYMPATHETIC:__:__:__:__:__:__:__:UNSYMPATHETIC

TACTFUL:__:__:__:__:__:__:__:UNTACTFUL

TRUSTING:__:__:__:__:__:__:__:UNTRUSTING

UNCARING:__:__:__:__:__:__:__:CARING

UNAGREEABLE:__:__:__:__:__:__:__:AGREEABLE

UNDERSTANDING:__:__:__:__:__:__:__:NOT UNDERSTANDING

UNSOCIABLE:__:__:__:__:__:__:__:SOCIABLE

VERSATILE:__:__:__:__:__:__:__:NOT VERSATILE

WARM:__:__:__:__:__:__:__:COLD

WEAK:__:__:__:__:__:__:__:STRONG

WISE:__:__:__:__:__:__:__:UNWISE

WORTHLESS:__:__:__:__:__:__:__:VALUABLE

Personal Information

Please complete all of the items on this page. Do NOT put your name on it.

Sex_____

Age_____

Class level_____

Major_____

1. What do you think would have been the best thing for Gary Harris to do with the $100?

2. What do you think was the sex of Gary Harris' co-worker?

3. What do you think was the best decision Pat Turner could have made?

4. Do you think that people who truly love each other get into physical fights?

5. Have you ever been in a situation similar to that of John Fulton?

6. What would you have done if you were faced with the decision that John Fulton had to make?

# APPENDIX D

# INSTRUCTIONS FOR STUDY 2

## APPENDIX D

## INSTRUCTIONS FOR STUDY 2

I am _____ and this is _____. We are conducting this research under the supervision of Barbara Watts, a psychology graduate student.

You will be asked to read brief descriptions of business and personal decisions that several people made, and rate your feelings about the decision makers. Often in life all we know about someone is a decision that he or she has made, and we are exploring what kinds of reactions people have in a variety of such situations. Of course, there are no right or wrong answers. We are interested in your first reaction, so do not spend too much time on each individual item, but be sure you carefully read the description of the decision makers. It is important that you work accurately--be sure you mark the answer that you intended to mark and do not skip any items.

Each of you has been given a consent form to sign before participating in this research. You will NOT put your name or student number on the booklet, so, of course, all of your responses will be confidential and anonymous. Those who want additional information about this study can get preliminary results at the end of the term from Barbara Watts in room 402 Baker Hall.

After completing your booklet, bring your credit card, your consent form, your booklet, and your pencil to _____ or me. We will check to make sure you completed all of the items and then sign your card.

(Read instructions--entire first page of booklet)

Are there any questions? You may begin.

# APPENDIX E

# BIPOLAR ADJECTIVE FACTORS

## APPENDIX E

## BIPOLAR ADJECTIVE FACTORS

| Factor 1<br>Social Good-Bad | Factor 2<br>Agency | Factor 3<br>Competence | Factor 4<br>Commonsense |
|---|---|---|---|
| admirable | active | capable | practical |
| good | aggressive | dependable | rational |
| compassionate | ambitious | efficient | wise |
| conscientious | assertive | effective | |
| considerate | competitive | responsible | |
| cooperative | confident | | |
| undemanding | domineering | | |
| honest | energetic | | |
| unegotistical | leader | | |
| ethical | outgoing | | |
| fair | strong | | |
| friendly | | | |
| generous | | | |
| just | | | |
| kind | | | |
| likeable | | | |
| mature | | | |
| poular | | | |
| reasonable | | | |
| unselfish | | | |
| sensitive | | | |
| sincere | | | |
| soft-hearted | | | |
| sympathetic | | | |
| trusting | | | |
| caring | | | |
| agreeable | | | |
| understanding | | | |
| sociable | | | |
| warm | | | |
| valuable | | | |

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