PROCESSING PERFORMANCE EVALUATIONS
IN SAME-SEX GROUPS

by

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We accept this thesis as conforming
to the required standard

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August 1999

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Date  August 27, 1999
Seventy-two male subjects were assigned at random and in equal numbers to one of three conditions: two experimental and one control. The same procedure was followed with 72 female subjects. The participants were asked to complete a computerized perceptual task, first alone and then as a team. Half the subjects in the experimental groups were given higher scores on the task than their partner and the other half received lower scores. Control subjects received no scores. Overall, results were as predicted. Subjects formed expectations commensurate to the scores they received, as evidenced by the data obtained on rejection of influence. Subjects were asked to set their own standards for ability and lack of ability in self and partner, and results revealed consistent standards regardless of sex of self, target of standard (self or other) or feedback condition. All participants also showed remarkable similarities in terms of their reaction to the scores, and their disposition toward the task, the experimenter and the context of the study. There were significant gender differences found in regards to the subjects' assessment of the partner - the women appeared to value and be more willing to cooperate with the partner to a greater extent than the men. Theoretical and practical implications of these findings are discussed.
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CHAPTER 1 - THEORETICAL BACKGROUND

Introduction

This research focuses on certain aspects of interaction in situations where previously unacquainted people are placed together in a task-oriented group. Of interest is how such group members form ideas regarding the competence of themselves and their fellow performers to carry out the task at hand. More precisely, how do people with no prior knowledge of one another, placed together in a group and assigned a task to complete, decide who is competent and who is not and how do these decisions affect the future functioning of the group? What factors are group members relying on in order to make these determinations of competence?

Some of the factors considered may be directly linked to the task, such as the level of skill required. Others are indirectly linked to the task through personal characteristics of the performer, such as age, ethnicity, gender, educational background, related experience on similar tasks or proven ability. Still other factors may be either completely disassociated from the task or left undefined in this respect. Thus, the factors which are considered in making attributions of competence may depend on the type of task that is assigned (e.g., difficult or easy; ambiguous or clear-cut) as well as the composition of the group (e.g., with respect to age or sex).

These perceptions of competence, once formed, can have very powerful consequences for the future interactions of the group. For instance, perceptions of competence can determine how often a performer is given the opportunity to speak, and how much weight is given to his or her words by the others in the group. Furthermore, these perceptions can influence the acceptance of ideas, the dynamics of the decision-making process and the final task outcome.

Thus, the process of assigning competence to oneself and to other performers can have far-reaching effects on both the assignor’s and the assignee’s subsequent behaviour. For instance, if a woman in such a group is attributed less competence than a man based on her sex, she will be given fewer opportunities to contribute to the group. She may tend to be interrupted more often and her ideas may be less likely to be approved or accepted. As a result, she may tend to take
fewer opportunities to contribute because she feels less competent than others who are being treated differently by the rest of the group.

**Expectation States Theory**

A long-standing theoretical perspective which has developed numerous propositions regarding the extent to which attitudes held about a performer's characteristics affect inferences of competence is expectation states theory. The theory originated from work done in the early 1950s by Bales who observed the emergence and maintenance of power and prestige in small, informal, task-oriented groups whose members were initially equal in status. Bales found that inequalities in participation and influence regularly emerged in such groups and, once present, tended to be quite stable (Bales 1953; Bales, Strodbeck, Mills & Roseborough 1951). This research was integrated into a single theory by Joseph Berger (1958). Early work in this theory also included proposing an explanation for how and under what circumstances initial status differences (rather than differences emerging from interaction) determine the distribution of power and prestige in task-oriented groups. The literature provides many examples in which externally created status differences (that is, differences originating outside the group) determine the power and prestige order of the group (for a review of these studies see Berger, Fisek, Norman & Zelditch 1977; Berger, Wagner & Zelditch 1985; Wagner & Berger 1993).

Since then, expectation states theory has grown to include several branches sharing a core of basic concepts and propositions, as well as a set of substantive, theoretical and metatheoretical assumptions (Foschi 1992). The emphasis remains, however, on how various characteristics of participants in task-oriented situations can influence the interactions of the group. Propositions derived from this theory have been precisely formulated and subjected to rigorous tests over a period of several years. The empirical results of these tests have provided strong support for the theory's predictions regarding the emergence and prevalence of inequalities of interaction in small task-oriented groups.

The central focus of expectation states theory is the process through which group members assign levels of task competence to one another and the consequences that such assignments have for
their future interactions. A key concept in the theory is that of a "status characteristic." A status characteristic is any valued attribute implying task competence and seen as having at least two levels (i.e., high or low), with one resulting in a more positive evaluation than the other. Status characteristics can range from specific to diffuse. A specific status characteristic is seen to be associated with a particular skill or ability, such as mathematical adeptness. A diffuse status characteristic has no limits set on its perceived applicability and so is relevant to a large number of tasks (Berger, Cohen & Zelditch 1972; Berger et al. 1977; Foschi 1992). Examples of diffuse status characteristics include gender, age and ethnicity.

Another key concept in expectation states theory is that of "performance expectations." Performance expectations are relatively stable beliefs about how well a person will perform a task in the future and are defined in relation to at least two persons - self and other(s). Let us consider a situation where two people are engaging in a task that requires agreement, and the partner’s response does not match with the answer given by self. In this situation, how self will respond depends on the performance expectations he or she holds for both self and other. If a person holds higher performance expectations for self than for other, he or she will tend to reject the partner’s responses in favour of his or her own. In the same way, if a person holds lower expectations for self than for the partner, he or she will be more likely to accept the responses of the partner.

Performance expectations link status characteristics to observable behaviour. The levels of a characteristic that performers are seen to hold are associated with degrees of competence and corresponding expectations, which in turn determine the set of interrelated and observable behaviours known as the "power and prestige order of the group." Examples of such behaviours are offers and acceptance of opportunities to contribute to the group, type of evaluations received and levels of influence exerted by group members. Performance expectations, therefore, refer to the level of competence that a person is predicted to exhibit over a number of performances rather than a single act. Once established, these expectations tend to be quite stable, since the behaviours making up the power and prestige order of the group operate in such a way as to reinforce the status quo (Foschi 1992).
Most research in expectation states theory investigates the performance expectations that a person forms about self and one other where the two are engaged in the solution of a joint task. Performance expectations are therefore relative to a specific pair of performers - the expectation state that is formed regarding self is relative to that formed regarding the other. Such expectations are also relative to the particular situation in which the performers are placed. Therefore, if the performer is placed with a different partner and asked to complete a different task, it follows that such a performer’s expectation state could vary as well. It is important to note that expectation states are not observable phenomena but rather represent a theoretical construct. While expectations are seen as reflecting a performer’s beliefs about various levels of task competence existing within a given group, they are not assumed to be an individual’s conscious awareness of advantage or disadvantage in a given situation. Rather, what is proposed are models that are used to predict the performer’s behaviour given certain circumstances (Foschi 1992).

Propositions in expectation states theory are formulated within well-defined scope conditions, which are clauses that specify the limits under which such propositions apply. For instance, an important scope condition is that the performer is task-oriented - i.e., that the task is one that is important to and valued by the performer. Another scope condition refers to collective orientation - the performer must be willing to take the partner’s ideas into account and be prepared to accept them if they are believed to contribute toward the joint solution of the task. If these scope conditions are not met, predictions cannot be made by the theory.

According to expectation states theory, performance expectations can be formed in one of two ways. The first concerns expectations that are formed on the basis of the status characteristics of self and the partner that the performer perceives to be relevant to the task at hand. Findings from research conducted in the 1950s on the effects of status characteristics external to the task situation showed that such characteristics were able to produce inequalities in the distribution of power and prestige within the group and that this effect occurred regardless of the extent of the actual relevance of the characteristic to the task being performed. The search for a theoretical explanation for this generalization led to the development of the branch of expectation states
theory, known as "status characteristics theory," which is primarily concerned with situations where the performers differ in initial status (Berger et al. 1972; Berger et al. 1977; Wagner & Berger 1993).

In this branch of expectation states theory, researchers have investigated the effects of a single diffuse status characteristic on the interactions between two performers. This diffuse status characteristic constitutes the only information that self has regarding the partner. The prediction is that this information will become meaningful within the situation and will organize the interaction of the two performers. However, for the characteristic to have the predicted effect, the following two conditions are necessary: (1) the performer is aware that the partner differs from him or her with respect to the status characteristic; and (2) the performer believes that the status characteristic is relevant to the task. If these two conditions are not present, the different expectations will not be activated and the status differential will not come into play.

There are two types of relevance conditions examined in expectation states research. In the explicit relevance condition, subjects believe that the status characteristic in question is directly relevant to the task being performed; for example, where gender is being investigated as a status characteristic, subjects in mixed-sex dyads are told that the task is masculine. In the implicit relevance condition, the status characteristic being investigated is not defined in relation to the task, leaving subjects to form their own linkages regarding the relevance between the two. When there is no information to the contrary, status differences become the source of relevance. The process of a performer using "outside information" (i.e., in the case of gender, beliefs regarding the different levels of competence of men and women) to make general predictions about the future performance of two or more persons under the conditions specified above is known as "status generalization" (Berger et al. 1972; Berger et al. 1977).

The formation of performance expectations may be affected by other factors as well, such as whether the performers possess more than one status characteristic. These characteristics may be specific or diffuse, or consistent or inconsistent with each other with regards to their implied levels of competence (Foschi 1992). Two status characteristics would be defined as consistent if they are seen as providing compatible information about a performer, for example, a man with a
high level of mechanical ability. Status characteristics are defined as inconsistent if the information they provide is seen as incongruent according to status values existing in the society in question, for example, a woman with a high level of mechanical ability. Expectation states theory proposes that inconsistent information will have more impact than consistent information and each additional item of consistent information will have less weight than it would have by itself. Therefore, the number and type of status characteristics under investigation can also have significant effects on the formation of performance expectations (Berger et al. 1977).

The second way in which performance expectations are formed is directly, through actual assessments of performance on a given task. Interest in direct formation of performance expectations can be traced to research conducted by Charles H. Cooley at the beginning of the 20th century, who argued that conceptions of self can arise through the evaluations received from others. (Cooley limited his study to appraisals received from significant others within the family setting - but many individuals have the right to evaluate the performances of others in more formal settings, such as work and academic environments.) Cooley (1992) also argued that such evaluations affect the future interactions of performers through a conscious interpretation of and reaction to the perceptions of others in the group. This branch of the theory has come to be known as the “evaluation and expectations” branch, wherein the assignments of competence and the resulting expectations that occur are based on evaluations of task performance rather than on the activation of a status difference (Foschi 1992). Thus, the research in this area focuses on situations that primarily investigate the expectations of performers who initially perceive themselves to be status equals. There are also several studies that combine the two branches of the theory (see, for example, Freese & Cohen 1973; Pugh & Wahrman 1983; Wagner, Ford & Ford 1986). In these studies, subjects were made aware of the diffuse status characteristics differentiating self and partner, as well as given scores indicating ability or lack of ability on a joint task. The investigation focused on the impact of each piece of information on the resulting expectations.

One research program that combines the two branches of the theory is the work conducted on “double standards” for competence - which is the practice of using different requirements for the
inference of competence, depending on who the actors under assessment are. These studies have focused on the use of gender as a diffuse status characteristic that differentiates performers with similar performance records. Results have shown that, under those conditions, a successful female performer will be held to a stricter standard than a comparable male performer and as a result, she will be less likely to meet the requirements imposed on her and will be less likely to be credited with competence. The successful male performer, on the other hand, tends to be assessed by a more lenient standard for lack of competence and is therefore less likely to be seen as incompetent. The implications of this research are that, even though men and women perform at the same level, their performances result in different inferences of ability (Foschi 1996; Foschi, Lai & Sigerson 1994).

**Standards and Performance Expectations**

In the expectation states research conducted utilizing assessments of performance, participants are provided with the results obtained by self and other after having worked individually on several trials of a task. These performance results create the impression that self either possesses or does not possess ability on the task, as this person is given either a higher or a lower score than the partner. Such results lead to the inference of levels of competence for self and other directly, as opposed to subjects being allowed to form such expectations on the basis of one or more status characteristics. These beliefs are then reflected in the amount of influence accepted or rejected by self in the second phase of the task, where the two participants are asked to work together to come to a shared conclusion on a number of these trials (see Berger & Conner 1969; Camilleri & Berger 1967; Freese & Cohen 1973; Sobieszek & Webster 1973; Webster 1969). In these studies, subjects are also given a chart to aid them in the interpretation of scores. The standards provided (defined as the minimum requirements for the inference of ability and lack of ability) are the same for all subjects, which serves to make such interpretation homogenous.

Later studies investigated the impact of such standards by varying the standards subjects were given, thereby creating differential expectations. For example, a score of 60 out of 100 would be a clear indication of ability if the standard for ability was set at 50 but the same score becomes less
convincing if the standard was set at 70. Therefore, the same performance could be assessed differently based on the standards provided for interpretation. Standards were thus used to create different levels of perceived competence in a task-oriented situation. Research focused on the level of influence that was subsequently accepted from the partner in such a situation.

Two studies have been conducted that investigate the role of scores and standards in the formation of performance expectations: Foschi, Warriner and Hart (1985) and Foschi and Freeman (1991). The theoretical impetus, design and results of these two studies are central to the present research in that they provided the questions that this current study set out to answer. Thus, a detailed summary of each study follows.

Foschi et al. (1985) utilized 120 subjects (60 men and 60 women) who worked together in same-sex dyads. Subjects were prevented from either seeing or talking with one another to preclude the formation of expectations based on any perceptions they may have had. They were told, however, that they were of the same sex, age and year at school. Subjects were also told that the purpose of the study was to investigate “pattern recognition ability,” which was presented as being disassociated from age, sex, education, artistic or reasoning ability. The experimental setting used in this study is a version of a standard experimental setting that has been used extensively in expectation states research (see Webster and Sobieszek, 1974, Appendix 1). In the Foschi et al. (1985) experiment, a single pattern was initially displayed and then subjects were asked to indicate which of the two succeeding patterns matched the original. The task is designed to be ambiguous and there is, in fact, no correct answer.

There were two phases, each with twenty trials. During the first phase, the subject worked alone, with no input from the partner. At the end of this stage, the subject was given a computer printout with the scores for self and partner clearly indicated on it. The scores showed that self was either better or worse at the task than the partner. The computer printout also contained a set of standards by which to interpret the scores received, as described below. A control condition was included in which subjects received no information regarding either scores or standards.
The experimental conditions are represented as [+] and [-], wherein the use of the plus and minus signs denotes the expectations formed by self relative to the partner based on the scores received. In the [+] condition, self receives the higher score and thus is expected to form expectations of having more ability than the partner. Conversely, in the [-] condition, self receives the lower score and therefore is expected to form expectations of possessing less ability than the partner. The control groups are represented as [0 0], wherein self is expected to form no differential expectations of ability.

In addition, subjects were assigned to either "strong" or "weak" conditions. The strong conditions were defined as those in which the standards provided were such that it was clear to self that both participants' scores could be assessed with a high degree of certainty that one had ability and the other did not. In the weak conditions, the standards did not provide such certainty of either the presence or absence of ability. Thus, the five conditions of the experiment were as follows:

Table 1. Overview of the Experiment (from Foschi et al. 1985).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Score Received By</th>
<th>Standard Defining</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self ▪ Other ▪ Ability ▪ Lack of Ability</td>
<td></td>
</tr>
<tr>
<td>1. Strong [+ -]</td>
<td>14 ▪ 6 ▪ 12 ▪ 8</td>
<td></td>
</tr>
<tr>
<td>2. Weak [+ -]</td>
<td>14 ▪ 6 ▪ 17 ▪ 3</td>
<td></td>
</tr>
<tr>
<td>3. [0 0]</td>
<td>N/A ▪ N/A ▪ N/A ▪ N/A</td>
<td></td>
</tr>
<tr>
<td>4. Weak [- +]</td>
<td>6 ▪ 14 ▪ 17 ▪ 3</td>
<td></td>
</tr>
<tr>
<td>5. Strong [- +]</td>
<td>6 ▪ 14 ▪ 12 ▪ 8</td>
<td></td>
</tr>
</tbody>
</table>

During the second phase of the experiment, subjects were instructed to work as a team in choosing the matching patterns. They were again shown a pattern and asked to choose the one that matched it from the following set of two similar patterns. This time, however, the partner's response was relayed to the subject following the initial response. Subjects had been informed
that their team would be awarded points only for those trials where agreement was reached regarding the correct answers. The objective of this phase was to measure the level of rejection of influence by a subject who has been informed that the partner’s answer disagrees with his or her own.

Out of twenty trials, sixteen were pre-set disagreements. In each of the 20 trials, the patterns were displayed to the subject again, and the subject was asked to make a final decision, either by remaining with his or her first choice, or changing it to agree with the partner. This constituted the dependent variable of the experiment. Remaining with one’s initial choice, or rejecting influence from the partner, is called an “s-response,” while changing to agree with the partner is called an “o-response.”

Following this phase, subjects were asked to complete a questionnaire designed to determine whether or not they met the scope conditions of the hypotheses, check that the manipulations of the independent variables had been successful and assess any misunderstandings or suspicions. Subjects were individually debriefed and then dismissed.

Four hypotheses were tested in this experiment, as follows:

1. A person holding strong [+ -] expectations (Condition 1) would reject more influence from a disagreeing partner than a person holding weak [+ -] expectations (Condition 2);

2. A person holding strong [- +] expectations (Condition 5) would reject less influence from a disagreeing partner than a person holding weak [- +] expectations (Condition 4);

3. A person holding [+ -] expectations, whether strong or weak (Conditions 1 and 2), would reject more influence from a disagreeing partner than a person holding [0 0] expectations (Condition 3);

4. A person holding [- +] expectations, whether strong or weak (Conditions 4 and 5), would reject less influence from a disagreeing partner than a person holding [0 0] expectations (Condition 3).
The scope conditions for these hypotheses were as follows:

1. Two persons, self and other, perform a task requiring a single, valued ability;

2. The task consists of a series of trials, each involving the same degree of difficulty, and each having only one correct answer;

3. The two persons are task-oriented; and

4. The two persons are collectively oriented.

The results of the experiment showed support for three out of the four hypotheses. Table 2 below shows those results for the five conditions.

**Table 2. Rejection of Influence by Condition (from Foschi et al. 1985).**

<table>
<thead>
<tr>
<th>Condition</th>
<th>p(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strong [+ -]</td>
<td>.684</td>
</tr>
<tr>
<td>2. Weak [+ -]</td>
<td>.611</td>
</tr>
<tr>
<td>3. [0 0]</td>
<td>.503</td>
</tr>
<tr>
<td>4. Weak [- +]</td>
<td>.424</td>
</tr>
<tr>
<td>5. Strong [- +]</td>
<td>.420</td>
</tr>
</tbody>
</table>

Results support Hypotheses 1, 3 and 4 but not 2. From the data regarding self’s ability relative to other, it was determined that subjects did not form the two types of [- +] expectations that the design was expected to create.

This experiment was based on the expectation states theory assumption that gender as a status characteristic would not be activated in same-sex dyads; that is, it would not be a basis for differential expectations for self and other. Sex of subject, therefore, was not considered to be a variable in this study and in each condition, the data from men and women were combined.
However, when the data were analyzed by gender, some interesting differences emerged. The following p(s) values were found:

Table 3. Rejection of Influence by Condition and Sex (from Foschi et al. 1985).

<table>
<thead>
<tr>
<th>Condition</th>
<th>p(s) scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>1.  Strong [+ -]</td>
<td>.646</td>
</tr>
<tr>
<td>2.  Weak [+ -]</td>
<td>.619</td>
</tr>
<tr>
<td>3.  [0 0]</td>
<td>.479</td>
</tr>
<tr>
<td>4.  Weak [- +]</td>
<td>.432</td>
</tr>
<tr>
<td>5.  Strong [- +]</td>
<td>.456</td>
</tr>
</tbody>
</table>

As can be seen from Table 3, the men in the experiment did not accept the difference between the weak and the strong conditions to the same extent as the women did although none of the four comparisons achieved statistical significance. (There were also no gender differences in the [0 0] condition.) The authors proposed that the men were more cautious about accepting extreme attributions, especially where such scores and standards supposedly indicated a lack of ability. Women, on the other hand, appeared more ready to both accept the scores they were given as evidence of ability or lack of ability and to act accordingly.

These findings pointed to the importance of taking gender into account when studying the formation of expectations, even in same-sex dyads. However, as gender was not studied as an experimental variable in this study, there was not a sufficient number of cases to fully determine its effects. It did raise some interesting issues and questions, however, that a further study set out to answer.

Foschi and Freeman (1991) was explicitly designed to investigate the assumption that sex would not be activated in same-sex dyads when participants work on a neutral task. Because the gender
differences in forming expectations were most pronounced in the strong and weak [-+] conditions in Foschi et al. (1985) (as compared, respectively, to the strong and weak [+ -] conditions), only the former were included in the follow-up study. Thus, the hypothesis that had failed to be supported in the previous study due to the inability to create different [-+] conditions in the men and women was proposed again, that being, subjects in the strong [-+] condition would reject less influence from a disagreeing partner than subjects in the weak [-+] condition. The possibility of gender effects was also explored. The independent variables were: (1) type of standards being used (i.e., strict or lenient) and; (2) sex of dyad (i.e., male or female). The dependent variable was again the proportion of s-responses. No control group was utilized in this study.

Four additional variables were also studied for their possible role in the formation of expectations by men and women, as follows:

1. level of motivation;
2. importance assigned to the task;
3. seriousness regarding task performance; and
4. perceived control over own outcome.

The method followed in Foschi and Freeman (1991) was very similar to that utilized in Foschi et al. (1985) with a few important improvements. The task was changed from “pattern recognition” to “contrast sensitivity” on the assumption that subjects would perceive it to be less difficult, and for enhanced comparability with previous expectation states studies. The “contrast sensitivity” task involved several trials, each consisting of a slide showing two rectangles, both covered to about the same extent by white and black areas. The subject must decide which figure has the highest proportion of white. Subjects were again told that “contrast sensitivity” was an important ability that was unrelated to characteristics such as age, sex and education, and to skills such as mathematical ability.

In the first twenty trials, subjects worked alone. At the end of this phase, subjects were given a computer printout indicating the number of correct answers for self and other, as well as standards for interpreting those scores. The scores and standards were changed in this study to
make them more realistic and easily acceptable to the subjects, relative to the earlier study. Thus, the experimental conditions were as follows:

Table 4. Overview of the Experiment (from Foschi and Freeman 1991).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Score Received By</th>
<th>Standard Defining</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self</td>
<td>Other</td>
</tr>
<tr>
<td>FF Weak [- +]</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>FF Strong [- +]</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>MM Weak [- +]</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>MM Strong [- +]</td>
<td>9</td>
<td>15</td>
</tr>
</tbody>
</table>

During the second phase, subjects were asked to work with their partner to obtain the correct answer. The same procedure as in Foschi et al. (1985) was followed, except that subjects performed 25 trials, with 20 pre-set disagreements. At the conclusion of the study, subjects were given a detailed questionnaire designed to determine whether or not they met the scope conditions of the hypothesis, check on the acceptance of scores and standards, obtain values on the four additional variables and assess any misunderstandings or suspicions regarding the procedures. Subjects were individually debriefed and then dismissed.

Methodological improvements over the earlier study were as follows:

1. The same experimenter conducted all sessions and gave careful attention to uniformity of presentation;

2. The contrast sensitivity task was used in the place of the pattern recognition task, which may have been perceived by subjects as being extremely difficult;

3. The second phase of the experiment included four more disagreement trials for a more reliable measure of rejection of influence;
4. Standards were changed so as to be manipulated in a more realistic and easier to understand manner (they were expressed both as scores and percentages); and

5. The manipulation check of standards was more refined.

It was believed these changes would remove the ambiguities and extreme values that could serve as possible explanations for the sex differences found in the earlier study.

The results of this experiment showed no sex of subject differences in terms of level of motivation, importance assigned to the task, seriousness regarding task performance, and perceived control over outcome. Once again, however, gender differences were found regarding the formation of expectations as shown by the manipulation checks on reported ability of self relative to the partner. In line with these checks, the p(s) scores obtained were as follows:

Table 5. Rejection of Influence by Condition (from Foschi and Freeman 1991).

<table>
<thead>
<tr>
<th>Condition</th>
<th>p(s) scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF Weak [- +]</td>
<td>.475</td>
</tr>
<tr>
<td>FF Strong [- +]</td>
<td>.350</td>
</tr>
<tr>
<td>MM Weak [- +]</td>
<td>.463</td>
</tr>
<tr>
<td>MM Strong [- +]</td>
<td>.440</td>
</tr>
</tbody>
</table>

The results again indicate that the men did not differentiate between the two conditions but that the women did, similar to the results from Foschi et al. (1985). Thus, the hypothesis was supported in one case only. In the other case, the conditions for testing it were not created. Thus, this study provided clear evidence for gender differences in the formation of expectations.

Manipulation checks in scores and standards and analyses of the four additional variables gave some insight into the results. In all cases, both men and women reported that they accepted the standards and scores to the same degree, yet the men’s behaviour did not match their statements.
A gender analysis was conducted on these data from the four additional variables, and the following differences were noted:

1. Level of motivation: Women responded more to the treatment when they were motivated but less when they were not. Men responded the same regardless of stated motivation.

2. Importance assigned to the task: Regardless of the importance attached to the task, women’s p(s) values reflected the effects of the standards more noticeably than did men’s.

3. Seriousness regarding task performance: When women were serious about task performance, they responded more to the treatments than did men. On the other hand, women responded less when they were not as serious.

4. Perceived control over own outcome: When little or no perceived control was considered, women clearly showed the effects of standards, while men did not.

Taken together, these analyses gave some explanation for the results recorded above, as follows. In regards to motivation and task performance, women behaved in accordance with their stated beliefs, while men did not. With regards to level of perceived control and importance given to the task, women accepted the interpretation given to them by the experimenter, while men did so to a lesser degree. Furthermore, the women accepted this information even when there were reasons not to (i.e., when they felt little or no control over the outcome) and even when the treatment conflicted with their own stated beliefs (i.e., when they felt the task was not important):

The results of this experiment do not appear to support the expectation states assumption that in same-sex dyads, gender will not be activated; that is, become a salient factor in the interaction. There are distinct gender differences in how the men and women reacted to the scores they were given. However, some issues that these results raise are how and when gender is being activated in such a situation. The authors propose that one possible explanation and area for further investigation is the effect of the source of expectations on male and female subjects on the activation of gender. It also appears to be the case that men needed more performances or proof
before arriving at the conclusion that they do not have task ability. Women, on the other hand, took the results as a sufficient indication of lack of task ability. They took the scores at face value and formed two levels of performance expectations, as predicted, while the men did not differentiate between the two conditions.

**The Research Problem**

The Foschi and Freeman (1991) study, while answering some of the questions arising from Foschi et al. (1985), left further questions unanswered. Most importantly, are scores processed differently by men and women and what do they each consider necessary to be convinced either of their own ability or lack of ability on a task? Although these were not apparent in either study, are there gender differences in how standards for ability and lack of ability are set? Furthermore, in the study by Foschi and Freeman (1991), why did the men state that they accepted the scores and standards, but then did not act in accordance with their stated beliefs, while women did? What would it take, therefore, to convince men either of their ability or lack of ability on a task, and to have them behave accordingly? What kind of proof would be required? How would this additional proof be accepted by the women, who originally accepted the scores and standards without the need for extra proof? Furthermore, are there differences in how male and female subjects view the experimenter and accept the information given by him or her? Is the type of relationship formed between the subject and experimenter a factor in the way the information is processed? These are some of the questions that the present study is designed to answer.

In an attempt to explain the differences found in the experiments conducted by Foschi et al. (1985) and Foschi and Freeman (1991), I propose that there are several factors affecting the strength of the expectations being formed by subjects, as follows:

1. **The context of the study.** Careful attention will be given to investigating how subjects perceive the task (i.e., in terms of importance, difficulty, etc.), the status and credibility of the experimenter, and the setting of the study, with a view to linking differences on these factors to differences in the strength of the expectations formed. For example, I propose
that subjects who view the task as less important and the experimenter as less credible may form weaker expectations than those who find the task to be more important and view the experimenter as more credible and authoritative.

2. The amount of evidence required by subjects to accept that they either have or do not have ability on the task. I propose that subjects who require more evidence than what is provided to them by the experimenter to infer either ability or lack of ability (i.e., require more trials than those provided) will form weaker expectations than those who require less evidence.

3. The standards the subjects set for themselves and the partner. I am interested in how subjects are processing the scores using internal standards. Thus, I will not be providing subjects with pre-set standards by which to interpret their scores but rather will be asking subjects to set the standards themselves. I propose that subjects who set higher standards for self and partner will form weaker expectations than those who set lower standards because their personal criteria have not been met by the scores they have been given. For example, a person receiving a score of 15/20 who requires 18/20 to be convinced of his or her ability on the task is more likely to form weaker expectations than a person who requires only 12/20.

4. The information that a person takes into account when forming ideas regarding self and other’s competence: I am interested in what factors subjects take into account in setting standards for themselves and the partner, such as the difficulty of the task, previous experience on similar or related tasks and self and other’s score on the task. I would like to examine the effect that such information has on the strength of the expectations being formed.

I propose to investigate these issues within the context of the following six conditions:
Table 6. Overview of the Present Experiment.

<table>
<thead>
<tr>
<th>Sex of Dyad</th>
<th>Condition</th>
<th>Scores Received by Self</th>
<th>Other</th>
<th>p(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF</td>
<td>[+ -]</td>
<td>15</td>
<td>9</td>
<td>a</td>
</tr>
<tr>
<td>FF</td>
<td>[0 0]</td>
<td>--</td>
<td>--</td>
<td>b</td>
</tr>
<tr>
<td>FF</td>
<td>[- +]</td>
<td>9</td>
<td>15</td>
<td>c</td>
</tr>
<tr>
<td>MM</td>
<td>[+ -]</td>
<td>15</td>
<td>9</td>
<td>d</td>
</tr>
<tr>
<td>MM</td>
<td>[0 0]</td>
<td>--</td>
<td>--</td>
<td>e</td>
</tr>
<tr>
<td>MM</td>
<td>[- +]</td>
<td>9</td>
<td>15</td>
<td>f</td>
</tr>
</tbody>
</table>

That is, I will investigate the possibility of an association between gender and the strength of expectations being formed. Specifically, I wish to investigate the possibility that men and women process the scores they are given differently, leading to different levels of expectations being formed. For example, if men are less likely than women to accept the score as definite proof of either ability of lack of ability, then they would be more likely to form weaker expectations.

**Predictions**

I propose the predictions listed below; all predictions are made for a context meeting the following scope conditions:

1. Self values the task;
2. Self is task-oriented, or is motivated to do well at the task;
3. Self is collectively oriented, or is willing to take the partner’s ideas into account and be prepared to accept them if they are believed to contribute toward the joint solution of the task; and
4. Self has no prior knowledge of or experience with the task and thus no differential expectations are formed regarding the ability of self and other.

It is proposed that if there are no differences between male and female subjects on the variables identified on pages 17 - 18, then there should be no differences in the subjects’ expectations and p(s) scores in the corresponding conditions. If this is the case, I predict no differences in the p(s) scores within the [+ -], [- +] or [0 0] conditions. I do predict differences across feedback conditions as follows:

\[ a \equiv d > b \equiv e > c \equiv f \]

If, however, there are differences in the formation of expectations by men and women (i.e., one group forms expectations of a different level of strength from those formed by the other group), the following predictions apply:

- strong [+ -] > weak [+ -]
- [0 0] > weak [- +]
- weak [- +] > strong [- +]
CHAPTER 2 - DESIGN

Subjects and Experimenters

This experiment was run in the Small Groups Laboratory of the University of British Columbia during the winter academic term of 1998/99 (i.e., from September to April). Subjects were 72 men and 72 women, all undergraduates from the faculties of Arts and Sciences at U.B.C. Average ages (with standard deviations in brackets) were 18.75 [.82] for the men and 19.04 [.94] for the women. A pool of subjects was recruited from large first and second year classes; those students who had taken courses in psychology beyond an introductory level or who had previously participated in social psychology experiments were excluded from the prospective subject pool. Participation in the study was voluntary and each subject was paid $10.00 at the conclusion of the session, as well as having his or her name placed in a lottery wherein three cash prizes ($50, $40, and $30) were drawn for every 50 participants.

Each subject was teamed with another of the same sex and the dyads were then assigned at random to one of three conditions: (1) higher score for self than for other; (2) lower score for self than for other; and (3) no scores provided for either person (control condition). The study was therefore a 2 (sex of dyad) x 3 (feedback condition) design. It should be noted that sex of dyad is a quasi-experimental variable as subjects cannot be randomly assigned to its levels. Each session was conducted by one of two female experimenters of similar age who had received extensive training to ensure uniformity of procedures for all sessions. A uniform dress code was also enforced in order to reduce the likelihood of experimenter effects. Four research assistants were also available to assist with the initial greeting of the subjects and the post-experimental interviews and were extensively trained to ensure consistency.

Procedures and Materials

The procedures utilized in this study were a variant of the standardized experimental setting developed for and used extensively in expectation states research (see Berger et al. 1977; Moore
1968; Webster & Sobieszek 1974: Appendix 1). Instructions and questionnaires were adapted from reliable instruments used in previous related research, particularly from Foschi 1996.

In order to prevent the formation of expectations based on appearance, ethnicity or other status cues, subjects were prevented from seeing or speaking with one another before and during the course of the experiment. Upon arrival at the laboratory, subjects were asked to sign a consent form stating that they agreed to participate in the study under the stated conditions (see Appendix F). They were then taken into the lab and seated individually at adjacent cubicles separated by an opaque wall and equipped with personal computers. Subjects were given instructions not to speak out loud while in the laboratory and were reminded not to leave their seats or attempt to talk to their partner.

Subjects were informed that the purpose of the study was to investigate how various environments affect job performance. They were told that this was going to be studied by having participants work in different job contexts, as follows: (1) face to face interaction (in which there would be contact with the partner and an open exchange of ideas); (2) limited interaction (in which there would be no contact with the partner, but some exchange of ideas); and (3) no interaction (in which there would be neither contact with the partner nor exchange of ideas). All subjects, however, were told that they had been randomly assigned to work first in the no interaction context and second in the limited interaction context, and that they would not be meeting their partner in either setting. They were also informed that they and their partner were of approximately the same age, in the same year and faculty, and of the same sex.

The task was introduced to participants as “contrast sensitivity,” an ability that has to do with detecting subtle differences in the proportions of two colours within a pattern. Subjects were told that researchers had known about the existence of contrast sensitivity for some time, but only the data that had been collected in the last 10 years were valid. Contrast sensitivity was described as an “important, analytical ability” which had no known relationship to mathematical ability, sex, age, education and artistic ability. The task was therefore explicitly dissociated from several diffuse status characteristics. To prevent subjects from drawing on previous experiences with
tasks that were perceived as similar, subjects were also told that the contrast sensitivity ability was intuitive and naturally-occurring and was not affected by practice or prior exposure.

To enhance the perceived importance of the task and ensure that the scope condition of task-orientation was met, subjects were told that the current study was part of a larger research project being carried out in collaboration with Stanford University (although this was not, in fact, the case). Furthermore, subjects were provided with “examples” of contrast sensitivity’s proven track record in various fields of research, as well as its practical applications. Subjects were told that contrast sensitivity was used by neurologists when assessing individuals who had suffered various types of head trauma, allowing the neurologists to establish the extent of damage done to the brain areas that were responsible for spatial perception. It was also mentioned that contrast sensitivity was now used as part of several graduate student admissions exams, and specifically, that several universities had chosen to use contrast sensitivity when considering graduate admissions because it allowed insight into how advanced the abstract thought processes of applicants were. (For the text of the instructions, see Appendix A.)

The contrast sensitivity task has two phases, each with a number of trials. In the first phase, subjects are presented with one large rectangle covered to about the same extent with smaller rectangles of two different colours (for this study, the colours chosen were blue and white) and are then asked to decide which of the two colours predominates in the overall pattern. In the second phase, subjects are given two patterns instead of one and are asked to decide which contains the most white. The task is actually ambiguous, with each rectangle containing exactly 49% white and 51% blue (Foschi 1996; Webster & Sobieszek 1974: Appendix 1). This is a reliable instrument used in many expectation states studies which allows for the measurement of either acceptance or rejection of influence.

A computerized version of the contrast sensitivity task was utilized in this study and all visual stimuli associated with the task were presented on the computer screen (Foschi, Sigerson, Lai & Foschi 1990; Foschi 1996). The computerization of the contrast sensitivity task offers the advantages of eliminating the possibility of experimenter error in communicating prearranged feedback (i.e., disagreements or agreements) to the subjects and recording their responses, as well
as giving more control to the experimenter in regards to the presentation time for each pattern as well as the time elapsed between patterns. Furthermore, it enhances the realism and credibility of the task while making it more engaging to subjects.

The program gave participants 10 seconds to look at the first pattern before prompting them for a response. After a response was given, the program automatically moved on to the next pattern after 5 seconds. Subjects were told that they were working within time limits - if they took too long, the computer would record their choice as an error, whether or not the correct choice was made. Subjects were assured that, while the task appeared difficult, there was a correct answer for each trial. They were also told that most people who did well on the task appeared to be responding to subtle perceptual cues and therefore they should follow any impulses they might have.

The first phase of the study, labeled the “no interaction context,” involved subjects working alone on 20 trials of the task. At the end of this phase, the results obtained by subjects in the Scores Conditions appeared on both computer screens. These scores were pre-arranged so that these subjects received either 15 correct answers for self and 9 for partner, or the reverse. Each subject also received a computer print-out of these scores. Next, subjects were requested to complete a questionnaire designed to check that the scope conditions were being met and that the manipulation of the independent variables had been successful, as well as to investigate the several additional variables included in the study. A question which asked subjects to provide their own standards for ability and lack of ability for self and the partner was also included. (For the No Interaction – Scores Conditions questionnaire, see Appendix B.) Subjects in the control conditions received no scores or printout and were given the questionnaire to fill out with no mention made of the results from the first session. (For the No Interaction – No Scores Conditions questionnaire, see Appendix C.) The task and the questionnaires are each designed to investigate different processes - the task provides a measure of the subjects’ out-of-awareness behavioural reactions and the questionnaires provide a paper-and pencil measure of their more cognizant responses. For a summary of the design of this experiment, see Table 7 below.
Table 7. Design of the Present Experiment.

<table>
<thead>
<tr>
<th>Condition</th>
<th>No Interaction Context</th>
<th>Scores Received By</th>
<th>First Opinion Questionnaire</th>
<th>Limited Interaction Context</th>
<th>p(s) Measured</th>
<th>Second Opinion Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF [+ -]</td>
<td>Yes</td>
<td>15 9</td>
<td>Yes</td>
<td>Yes</td>
<td>a</td>
<td>Yes</td>
</tr>
<tr>
<td>FF [0 0]</td>
<td>Yes</td>
<td>-- --</td>
<td>Yes</td>
<td>Yes</td>
<td>b</td>
<td>Yes</td>
</tr>
<tr>
<td>FF [- +]</td>
<td>Yes</td>
<td>9 15</td>
<td>Yes</td>
<td>Yes</td>
<td>c</td>
<td>Yes</td>
</tr>
<tr>
<td>MM [+ -]</td>
<td>Yes</td>
<td>15 9</td>
<td>Yes</td>
<td>Yes</td>
<td>d</td>
<td>Yes</td>
</tr>
<tr>
<td>MM [0 0]</td>
<td>Yes</td>
<td>-- --</td>
<td>Yes</td>
<td>Yes</td>
<td>e</td>
<td>Yes</td>
</tr>
<tr>
<td>MM [- +]</td>
<td>Yes</td>
<td>9 15</td>
<td>Yes</td>
<td>Yes</td>
<td>f</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The scores of 15 and 9 were chosen for two reasons: (1) to allow for continuity and comparability with Foschi and Freeman (1991), who also utilized these scores; and (2) to allow some room for interpretation by subjects of their meaning. For example, the score of 9 out of 20, while falling below the 50% mark, may not be perceived by some as an indication of lack of ability on the task whereas a lower score, such as 3, may leave no such room for interpretation. In the same way, a score of 15 out of 20 may be considered by some as an indication of ability but not by others, whereas a higher score, such as 19, would be universally considered an indication of ability. It is believed that subjects would process the scores based on their own personal standards for self and other. Thus, subjects were asked to give their own standards of ability and lack of ability for self and partner on the questionnaire following the no interaction context of the study.

In the second phase of the task, labeled the “limited interaction context,” subjects were told that the purpose of this phase was to see how well they could work together as a team toward the correct solution of each trial. They were told that they would have the opportunity to exchange information with their partner regarding what they thought the correct answer was before they
were asked to make a final decision. Subjects were instructed that they would now be receiving a team score, and each time both participants selected the correct answer, the team would receive two points. If only one participant chose the correct answer, the team would receive one point and if neither chose the correct answer, the team would receive zero points. In order to enhance the subjects' motivation to work together as a team and to ensure the scope condition requiring collective motivation was met, participants were told that they had a chance to win additional cash prizes; for each group of 25 teams, $30 would be awarded to the pair that came up with the highest score.

As stated earlier, the task varied slightly in the second phase of the experiment. Subjects were now shown two patterns and asked to decide which one contained the most white. After 10 seconds, subjects were prompted for a response and given five seconds to provide their choice. After a subject made an initial decision, the partner’s choice was relayed to him or her on the computer screen. Subjects were again told that if they failed to answer quickly enough, the computer would record their choice as an error, whether or not the correct decision was made. The time constraints are designed to elicit a spontaneous and instinctive response from subjects, who, if given more time, might try to invent and apply strategies for solving the difficult and ambiguous task rather than acting on impulse as instructed. Expectation states theory concerns such automatic responses to status. The feedback was pre-arranged to provide 20 disagreements and five agreements on the initial choices. The subject was then prompted to make a final decision and given five seconds to indicate his or her choice. In the disagreement conditions, this consisted of either staying with his or her own initial choice or changing it to agree with that of the partner. The former decision is referred to as an s-response. The proportion of s-responses operationalizes the dependent variable, rejection of influence, and indicates the level of competence that self holds for the partner in the task setting.

At the end of the second phase of the task, subjects were given a second questionnaire to complete that included further manipulation and scope condition checks, questions investigating the additional variables and questions regarding the setting and procedures designed to assess any problems, misunderstandings or suspicions. (For the Limited Interaction - Scores Conditions
questionnaire, see Appendix D; for the Limited Interaction – No Scores Conditions questionnaire, see Appendix E.) Subjects were then taken out of the lab and placed in separate rooms, where they were interviewed.

Before interviewing each subject, the research assistant reviewed the subject’s completed questionnaires for adherence to set standards on questions designed to investigate whether the manipulations had been successful and the scope conditions had been met. Any answers which fell outside of the expected parameters were noted and the subject was then requested in the interview to clarify or explain the answer he or she had given. The research assistant also reviewed the subject’s p(s) scores and, if any extreme or unusual results were noted, questioned the subject regarding the possible reasons for such a result. (For example, if a subject in the [-+] condition had a p(s) of .80, the research assistant would try to ascertain whether or not the subject had accepted the scores he or she had received and why he or she had not agreed more with the partner given that the partner had received the higher score.) The subject’s responses were written down by the person conducting the interview and used to determine whether or not the subject should be retained, based on the exclusion criteria formulated at the outset of the study. Subjects were also asked general questions intended to determine their level of task orientation, collective orientation and suspicion regarding the true nature of the study. Subjects who expressed more than a low level of suspicion regarding the task, the procedures, or the true nature of the study were extensively questioned regarding how those suspicions may have affected their behaviour during the study.

At the conclusion of the post-experimental interview, subjects were provided with a debriefing sheet which contained a full explanation of the objectives of the study, the manipulations conducted and the deception used. (See Appendix F for the debriefing sheet.)
CHAPTER 3 - RESULTS AND ANALYSIS

On the basis of the information obtained from the two questionnaires and the post-experimental interview, 13 subjects (eight men and five women) were excluded from the analysis. This figure represents 9.03% of the total number of participants. Rejection rules were conservative and were formulated beforehand. This percentage is similar to the exclusion rates of related studies.

The excluded subjects can be classified as follows: twelve showed a clear lack of task orientation and/or collective orientation, two misunderstood the question on standards and/or showed major inconsistencies in their answers, and one volunteered well-articulated suspicions regarding the true nature of the experiment. (Two subjects fell into more than one of these categories.)

The pattern of rejections revealed that six subjects were excluded from the [- +] conditions; two from the [+] conditions and five from the [0 0] conditions. This is not surprising considering the nature of the study – the subjects who received the higher scores and believed themselves to have done well on the task were more engaged in it than those who believed they had done poorly or were given no information at all.

The following analysis includes only the 131 retained subjects.

Manipulation Checks

The questionnaires completed by subjects after each phase of the study consisted of a number of items, some of which were included to maintain the deception until the experiment was concluded. The majority of the questions were designed as manipulation checks to insure that the scope conditions had been met. These manipulation checks are examined next with respect to three variables: sex of dyad, feedback condition, and, where the same question was asked on both questionnaires, context (i.e., either no interaction or limited interaction). Where no significant results were found, the data have been collapsed for all conditions and are presented as one mean and standard deviation (in brackets). For ease of presentation, where \( p \) values are not significant, they are not provided. In line with commonly accepted use in statistical analysis, a result is
considered significant if $p < 0.05$, of marginal or borderline significance if $0.05 < p < 0.10$, and nonsignificant otherwise.

Included in the questionnaires were five six-point bi-polar scales used to assess the subjects' perceptions of the contrast sensitivity task. Analyses conducted on three of these items showed no significant differences from sex of dyad, feedback condition or context. The overall mean results from these items are as follows: creative (1) -- routine (6): 3.48 [1.41]; intuitive (1) -- learned (6): 2.27 [1.07]; and masculine (1) -- feminine (6): 3.70 [1.724].

In addition, subjects were asked to rate the difficulty of the task from (1) (easy) to (6) (difficult). The results obtained on this measure showed a significant effect from feedback condition for the no interaction context but not for the limited interaction context. Means for the first context when values are collapsed across sex of dyad are: [+ -] = 3.26, [0 0] = 3.88, [- +] = 4.50, $F(2, 125) = 10.69$, $p = .000$. As can be seen from these figures, subjects in the [- +] condition rated the task as more difficult after receiving lower scores than the partner than did subjects in the other two conditions. After working together with the partner on the task, however, differences across feedback conditions were no longer significant.

Subjects were also asked to indicate the importance of the sensitivity task from (1) (important) to (6) (unimportant). While no significant differences were obtained for sex of dyad or feedback condition in the no interaction context, significant results were obtained for feedback condition in the limited interaction context ([+ -] = 2.96, [0 0] = 3.05, [- +] = 3.43, $F(2, 125) = 3.096$, $p = .049$). These results indicate that subjects in the [+ -] conditions found the task to be more important than those in the other conditions but only after working with a partner whom they viewed as having less ability than themselves.

Despite some differences between the two contexts of the study, analyses of these five variables produced results within expected ranges and indicate that the procedures created the intended perceptions of the task. Subjects were quite similar in finding the task to be fairly intuitive, somewhat creative and relatively neutral in sex-linkage, as was suggested to them by the
instructions. In addition, all subjects found the task to be fairly difficult and relatively important, although feedback condition influenced their opinion on these measures.

The questionnaires also included similar scales designed to assess the participants' dispositions toward the contrast sensitivity task. A measure of the subjects' involvement in the task indicated no significant effects from feedback condition, sex of dyad or context. On a scale from (1) (involved) – (6) (uninvolved), the overall mean was 2.69 [1.16]. Subjects' level of interest was measured on a six-point scale from (1) (interested) to (6) (uninterested). Results revealed a significant effect from feedback condition in the no interaction context ( [+ -] = 2.37, [0 0] = 2.98, [-+] = 3.05, \( F(2, 125) = 3.45, p = .035 \)) which did not carry through to the limited interaction context. These results show that subjects in the [+ -] condition found the task more interesting than those in the other conditions, but after the second part of the study, the significant difference was no longer present.

Finally, results obtained on subjects' motivation toward the task, which was measured from (1) (motivated) to (6) ( unmotivated), reveal a significant effect of feedback condition in the no interaction context ( [+ -] = 2.65, [0 0] = 3.19, [-+] = 3.21, \( F(2, 125) = 2.91, p = .058 \)) but no significant differences from either feedback or sex of dyad in the limited interaction context. These results indicate that subjects in the [+ -] condition were more motivated after receiving a higher score than their partner than were subjects in the other two conditions, but that the effect disappeared after they worked with the partner in the limited interaction setting.

The results of these three analyses, taken together, reveal that, while all subjects report the expected levels of involvement, motivation and interest, subjects in the [+ -] condition show initially higher levels of interest and motivation immediately after receiving proof of having greater ability than the partner. In other words, receiving a good score on the test led to a more positive disposition toward it. This effect disappeared after the subjects worked with a constantly disagreeing partner on the second phase.
Overall, the results from these manipulation checks show that the procedures created the necessary disposition and level of engagement toward the task in the subjects. No significant differences were found for sex of dyad in any of the above variables and the significant differences relating to feedback condition and context are not surprising given the ambiguity of the task, the effect of receiving a score which connotes either ability or lack of ability on such a task, and the experience of working with a partner who disagrees with one’s initial answer on 80% of the trials.

As a further measure of task orientation, subjects were asked to indicate how valid they thought the test was. Overall mean results (valid (1) – invalid (6): 2.75 [1.01]) clearly show that the subjects found the task to be a good measure of level of ability. No significant results for either feedback condition or sex of dyad were obtained.

In order to investigate subjects’ impressions of the research assistant conducting the study, two additional measures were included in the questionnaire following the limited interaction context. Subjects were asked to indicate her standing relative to their own on a six point scale from (1) (inferior) to (6) (superior). Overall mean results (4.65 [.73]) show that subjects found the research assistant to be slightly superior to themselves, and no significant differences were obtained for either sex of dyad or feedback condition. The second measure asked subjects to check the level of education they perceived the research assistant to have, ranging from (1) Bachelor’s degree in progress to (6) Doctorate degree completed. Overall mean results (2.91 [.86]) show that subjects perceived the research assistant to clearly be beyond a Bachelor’s degree (2 on the scale), which is consistent with the above measure indicating relative superiority. Both measures are in line with the instructions given. Again, no significant effects were found for either sex of dyad or feedback condition.

As a further check on the value of the task to the participants, subjects were asked to indicate how much should be charged for a workshop which would improve their skills on the contrast sensitivity task, with values ranging from $30 to $100. The mean total obtained was $38.59 [11.72] and no significant differences were found for either sex of dyad or feedback condition. This measure shows that, despite efforts to make the task appear interesting and important to
subjects, the amount of money they were prepared to spend to improve their scores on contrast sensitivity was at the low end of the options provided.

Finally, other questionnaire items were included as manipulation checks on the independent variables, namely, sex of dyad and feedback condition. Responses indicated that all subjects recalled exactly the scores received by both themselves and the partner, and all but one of the subjects correctly identified their partner as being of the same sex. The exception was one subject who indicated that he did not hear the research assistant identify his partner as a man. In the post-experimental interview, however, he noted that he did not consider sex of partner an important factor and therefore was likely not listening for that information, nor would it have made any difference to him had he heard. He can then be assumed to have thought that he and his partner were status equals, as was intended by the procedures.

**Standards and Evidence of Ability**

Additional measures were included to obtain the standards set by subjects for ability and lack of ability in self and the partner. Results are displayed in Table 7 below. As predicted, they indicate internal consistency across all four measures and no significant differences for sex of dyad or feedback condition were found. It is also interesting to note that there are no significant differences with respect to the target of the standards - subjects set similar standards for ability and lack of ability regardless of whether they were directed at self or the partner.
Table 8. Standards for Ability and Lack of Ability in Self and Partner.

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Standards for Ability in Self</th>
<th>Standards for Lack of Ability in Self</th>
<th>Standards for Ability in Partner</th>
<th>Standards for Lack of Ability in Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>FF [+ -]</td>
<td>23</td>
<td>72.87</td>
<td>7.77</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>FF [0 0]</td>
<td>22</td>
<td>69.59</td>
<td>10.75</td>
<td>41.27</td>
<td>13.96</td>
</tr>
<tr>
<td>FF [- +]</td>
<td>22</td>
<td>--</td>
<td>--</td>
<td>42.23</td>
<td>12.82</td>
</tr>
<tr>
<td>MM [+ -]</td>
<td>23</td>
<td>73.13</td>
<td>7.32</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>MM [0 0]</td>
<td>21</td>
<td>72.00</td>
<td>9.13</td>
<td>40.24</td>
<td>12.55</td>
</tr>
<tr>
<td>MM [- +]</td>
<td>20</td>
<td>--</td>
<td>--</td>
<td>37.45</td>
<td>13.34</td>
</tr>
<tr>
<td>Total</td>
<td>131</td>
<td>71.92</td>
<td>8.77</td>
<td>40.36</td>
<td>13.06</td>
</tr>
</tbody>
</table>

In order to obtain an assessment of how much proof subjects needed to be assured that they either did or did not have ability on the task, following the no interaction phase, subjects were asked to state how many trials they would need to complete in order to be convinced of their level of ability. At this point in the study, they had completed 20 trials. The question asked subjects to report the exact number of trials they would require should they need less than or more than 20. Analysis of variance on this measure shows no significant results for either feedback condition or sex of dyad. Results (50.53 [27.76]) reveal that, in all conditions, subjects required considerably more than the 20 trials that they had completed to that point in order to be convinced of their level of task ability.

These two measures, taken together, indicate that the subjects found the task to be quite difficult. They set a stricter standard for lack of ability than for ability, suggesting that they found it easier to infer lack of ability on the task. Subjects also required substantially more than the 20 trials they
were given as evidence of either ability or lack of ability on the task, indicating that they needed more proof than what had been provided.

**P(s) and Related Variables**

Perceived competence in self and other was measured primarily through level of rejection of influence from the partner and was calculated as the proportion of times a subject did not change his or her initial answer. The higher the proportion of s-responses, the higher self’s perceived competence as compared to the partner. In addition to this behavioural measure, a further measure was obtained through the use of a bipolar scale measuring the partner’s perceived task ability relative to that of self. Responses ranged from partner’s ability being perceived as (1) “much better than mine” to (7) “much worse than mine.” Results from both measures appear in Table 9.

Table 9. Perceived Competence in Self and Partner.

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>p(s)</th>
<th>Relative Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>FF [+-]</td>
<td>23</td>
<td>.607</td>
<td>4.78</td>
</tr>
<tr>
<td>FF [0 0]</td>
<td>22</td>
<td>.521</td>
<td>3.18</td>
</tr>
<tr>
<td>FF [-+]</td>
<td>22</td>
<td>.359</td>
<td>1.68</td>
</tr>
<tr>
<td>MM [+-]</td>
<td>23</td>
<td>.663</td>
<td>5.22</td>
</tr>
<tr>
<td>MM [0 0]</td>
<td>21</td>
<td>.536</td>
<td>3.71</td>
</tr>
<tr>
<td>MM [-+]</td>
<td>20</td>
<td>.368</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Analysis of variance on rejection of influence shows significant results from feedback condition only. Means when values are collapsed across sex of dyad are: [+-] = .635, [0 0] = .528, [-+] =
.363, \(F(2, 125) = 47.95, p = .000\). No significant results were obtained for sex of dyad and means when collapsed across feedback condition are as follows: (male dyad) = .529, (female dyad) = .497.

Results for the question on relative ability show a similar pattern as those for rejection of influence. On this measure, ANOVA indicates significant effects from feedback condition, with means collapsed across sex of dyad being: [+ -] = 5.00, [0 0] = 3.44, [- +] = 1.90, \(F(2, 125) = 143.85, p = .000\). Significant results were also found for sex of dyad and means when collapsed across feedback condition are as follows: (male dyad) = 3.77, (female dyad) = 3.24, \(F(1, 125) = 10.31, p = .002\). No significant results were found from the interaction.

Two other measures were designed to investigate subjects' perceptions of their partner's ability, as well as how much confidence subjects placed in their partners' responses. Subjects were asked to indicate, on a six point bipolar scale, how correct they thought their partner's responses were with (1) mostly correct to (6) mostly incorrect. Subjects were also asked to record on a similar scale how confident they were that their partners' responses were correct, with (1) very confident to (6) very unconfident. The results from these measures appear in Table 10 below.

Table 10. Assessment of Partner's Contribution.

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Correctness of partner's choices</th>
<th>Confidence in partner's choices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(M)  (SD)</td>
<td>(M)  (SD)</td>
</tr>
<tr>
<td>FF [+ -]</td>
<td>23</td>
<td>3.74  0.62</td>
<td>3.87  0.69</td>
</tr>
<tr>
<td>FF [0 0]</td>
<td>22</td>
<td>3.23  0.53</td>
<td>3.32  0.65</td>
</tr>
<tr>
<td>FF [- +]</td>
<td>22</td>
<td>2.23  0.53</td>
<td>2.55  0.67</td>
</tr>
<tr>
<td>MM [+ -]</td>
<td>23</td>
<td>4.04  0.71</td>
<td>4.00  0.30</td>
</tr>
<tr>
<td>MM [0 0]</td>
<td>21</td>
<td>3.43  0.68</td>
<td>3.71  0.64</td>
</tr>
<tr>
<td>MM [- +]</td>
<td>20</td>
<td>2.67  1.10</td>
<td>2.60  0.75</td>
</tr>
</tbody>
</table>
Analysis of variance on correctness of partner's choices shows significant results for feedback condition and means collapsed across sex of dyad are: [+ -] = 3.89, [0 0] = 3.33, [- +] = 2.44, $F(2, 125) = 45.27, p = .000$. Significant results were also obtained for sex of dyad; means collapsed across feedback condition are: (male dyad) = 3.41, (female dyad) = 3.07, $F(1, 125) = 6.51, p = .012$. Results for the interaction were not significant.

Analysis of variance on confidence in partner's choices shows significant results for feedback condition with means collapsed across sex of dyad being: [+ -] = 3.93, [0 0] = 3.51, [- +] = 2.57, $F(2, 125) = 52.86, p = .000$. Marginally significant results were obtained for sex of dyad; means collapsed across feedback condition are as follows: (male dyad) = 3.47, (female dyad) = 3.25, $F(1, 125) = 3.069, p = .082$. No significant results for the interaction were obtained.

Finally, a measure was included to assess the subjects' disposition toward their partner. The scale ranged from (1) partner was likeable to (6) partner was not likeable. In addition, two measures were utilized to investigate the perceived seriousness of self and partner. Subjects were asked to respond to two statements on a six-point scale with (1) strongly agree to (6) strongly disagree. One item stated that the partner was very serious about doing the task well; the other item directed the same statement toward self.

The results from these three measures appear in Table 11 below. Analysis of variance on likeability of partner shows significant results for sex of dyad. No significant results were obtained for feedback condition or the interaction. Means collapsed across feedback condition are as follows: (male dyad) = 3.23, (female dyad) = 2.81, $F(1, 125) = 7.942, p = .006$. Means collapsed across sex of dyad are: [+ -] = 3.09, [0 0] = 2.98, [- +] = 2.97. Analysis of variance conducted on perceived seriousness of partner shows significant results for sex of dyad, with means collapsed across feedback condition being: (male dyad) = 2.88, (female dyad) = 2.51, $F(1, 125) = 5.740, p = .018$. Significant results were likewise obtained for feedback condition, and the means collapsed across sex of dyad are as follows: [+ -] = 2.97, [0 0] = 2.77, [- +] = 2.31, $F(2, 125) = 6.741, p = .002$. No significant results were obtained for the interaction. The results for
seriousness of self revealed no significant differences for either sex of dyad or feedback condition, that is, all subjects felt that they were equally serious about the task.

Table 11. Likeability of Partner and Seriousness of Self and Partner.

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Likeability of Partner</th>
<th>Seriousness of Self</th>
<th>Seriousness of Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>FF</td>
<td>23</td>
<td>2.83</td>
<td>.89</td>
<td>2.13</td>
</tr>
<tr>
<td>[0 0]</td>
<td>22</td>
<td>2.86</td>
<td>.71</td>
<td>2.05</td>
</tr>
<tr>
<td>FF</td>
<td>22</td>
<td>2.73</td>
<td>.70</td>
<td>2.32</td>
</tr>
<tr>
<td>[0 0]</td>
<td>21</td>
<td>3.10</td>
<td>.94</td>
<td>2.00</td>
</tr>
<tr>
<td>[0 0]</td>
<td>20</td>
<td>3.25</td>
<td>.91</td>
<td>2.35</td>
</tr>
</tbody>
</table>

The results from all of these measures, taken together, show a very interesting pattern. While the results on the p(s) values are not significant for sex of dyad, the data from the six other measures do provide evidence of gender differences. In terms of relative ability, the men consistently attributed less ability to the partner than the women did. In addition, in all conditions, the men reported that they were less confident in their partner's answers and found their partner's choices to be less correct than the women did. Moreover, the men liked their partner to a lesser degree than did the women, and reported that they felt their partner was not as serious about doing the task well. It is interesting to note that these reported beliefs were not borne out by their behaviour on the contrast sensitivity task, as evidenced by their p(s) scores. The conclusion therefore is that, while the men behaved in a manner consistent with the scores they were given, their results on the reported measures show inflated perceptions relative to that of the women, and a stronger reaction in terms of likeability and seriousness of the partner.
In summary, results from the manipulation checks show that subjects' perceptions of the task and their involvement in it were created to a large extent as anticipated. Findings on perceived competence indicate that, while performance expectations based on the feedback conditions were created as anticipated, and subjects appeared to have reacted to the scores as predicted, there are some apparent sex differences in the reported measures, especially as they relate to the relative contributions of the partner.
CHAPTER 4 - DISCUSSION AND CONCLUSIONS

Overall Assessment

This study was designed to investigate several variables affecting the formation of performance expectations leading to inferences of competence. The focus is on situations where two previously-unacquainted participants are placed together in same-sex dyads in order to complete a task. Overall, results were as expected. The data obtained regarding the effect of the feedback condition show that the subjects accepted the scores they were given and formed expectations accordingly. The p(s) scores reveal a clear reaction to feedback condition and provide proof that the methods and procedures created the three separate conditions, as intended. In addition, there were no significant differences found in the standards for ability and lack of ability for self and partner set by the subjects, regardless of feedback condition, indicating that all subjects reacted to the scores in a similar manner.

The p(s) scores and the results obtained on standards reflect how difficult the subjects perceived the task to be. The asymmetry between the results in the [- +] and [+ -] conditions indicates the subjects found it easier to form [- +] expectations. This is in line with the standards they provided, wherein they set a rather unforgiving standard for lack of ability of <40, showing they found the task to be one that is easy to fail.

There were no significant sex differences found in any of these measures, indicating that the men and women were remarkably similar in their reactions to the scores and in the resulting interactions. Table 12 below shows these data where results have been collapsed across sex of dyad and target of standard.
Table 12. Standards and p(s) Scores Collapsed Across Sex of Dyad and Target of Standards.

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Standards for Ability (in self and other)</th>
<th>Standards for Lack of Ability (in self and other)</th>
<th>p(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>[+] FF/MM</td>
<td>46</td>
<td>73.00</td>
<td>7.46</td>
<td>40.59</td>
</tr>
<tr>
<td>[0 0] FF/MM</td>
<td>43</td>
<td>70.73</td>
<td>9.95</td>
<td>40.62</td>
</tr>
</tbody>
</table>

The manipulation checks on the scope conditions (e.g., task-orientation, collective orientation) provided further proof that the methods and procedures of the study had been successful overall in creating the conditions as intended. In addition, these checks showed that subjects displayed the necessary level of engagement and disposition toward the task. Furthermore, these checks revealed no significant gender differences in the subjects' perceptions of the context of the study, the experimenter or the task. In fact, the only significant gender differences obtained were found in the measures pertaining to the partner, i.e., relative ability, likeability, seriousness, correctness and confidence in the partner's responses. These differences emerged in the reported measures contained in the questionnaire following the second phase of the experiment.

The question then is, why are these gender differences appearing and more particularly, why is there a discrepancy between behaviour and written responses in this study? To begin with, one must always keep in mind that gender is not an experimental variable; that is, subjects cannot be randomly assigned to conditions. Therefore, there are likely to be variations across studies as one group of subjects may differ from another in important, and mainly undetected, ways.
Secondly, the auxiliary measures were paper-and-pencil items that asked subjects to choose a concrete number on a bi-polar scale. These items required a conscious decision to be made on the part of the subjects - and one that they knew someone (i.e. the experimenter) would be seeing and analyzing. This is in contrast to the behavioural measure, wherein the subjects were engaged in a task with a view to completing it to the best of their ability - first alone, and then in a team setting. It can be argued, therefore, that the two measures investigate different processes, and that there may be gender differences in how those processes occur.

This does indeed appear to be the case in the current study. On nearly every measure wherein the subjects are asked to rate themselves or the partner on such factors as ability, correctness, seriousness and likeability, the men report inflated perceptions as compared to the women. Part of the reason for such gender differences may be found in attribution theory, which is a body of work that investigates the explanations people give for why and how an outcome has occurred, including task success or failure. Research in this area has determined that men are more likely to accept credit for their success whereas women are more likely to attribute success to factors such as luck and ease of task. On the other hand, women are more likely to accept failure and blame it on their lack of ability, whereas men are more likely to blame failure on factors such as bad luck or difficulty of task (Michener, DeLamater & Schwartz 1990: 130-145; Ross & Fletcher 1985).

It is suggested that such attributions do not come into play during the behavioural task, as the processes involved are largely subconscious and therefore not directly under the subject’s control. However, during the auxiliary measures, when the subjects are asked to rate their own ability relative to that of the partner and the partner’s contributions to the team, these attributions become an important factor. In the [+ -] condition, the men are able to accept their ability to a greater extent than the women and therefore indicate that they have higher relative ability and less confidence in their partner or the correctness of the partner’s choices. In the [- +] condition, men are less able to accept that they have less ability relative to the partner and attribute their low score to factors other than lack of ability. They therefore attribute their partner’s higher score to factors such as luck, and report more relative ability in this condition than the women do, and less confidence in the partner’s choices and in the correctness of those responses. The women, on the
other hand, are more able to accept that they have less ability than the partner and demonstrate this in their reported responses. In the [0 0] condition, where they have no indication as to whether they have ability or not, the men still attribute more ability to themselves than do the women, indicating that, in the absence of any proof to the contrary, men are more likely than women to assume that they have ability.

Additionally, in all conditions the men reported finding their partner less likeable than the women did, reported themselves to be less confident in the partner’s answers, and found those answers to be less correct. In terms of the perceived seriousness of the partner toward doing the task well, the men found the partner less serious to a greater degree than the women in both the [+ -] and the [0 0] conditions. These results appear to show that the women were more disposed to like the partner and give them the benefit of the doubt, whereas the men were more likely to interpret the situation as competitive and depreciate the contributions of the partner.

The differences between the behavioural measure and the auxiliary measures pose some interesting questions that only further research in this area can answer. To date, no studies have investigated the differences between these two processes, as well as how they may differ for men and women.

**Suggestions for Further Research**

The no interaction questionnaire included a item regarding the number of trials required by the subjects to be convinced that they either had or did not have ability on the task. This item was designed to investigate the idea proposed by Foschi & Freeman (1991) that male subjects would require more proof than female subjects. No significant results were obtained for either sex of dyad or feedback condition on this question, and this is due, in part, to the large standard deviations that resulted from subjects being given the opportunity to report the exact number of trials they would require rather than being given fewer choices. It should be noted, however, that in every condition the male subjects required more trials than the female subjects, as presented in Table 12 below.
The question regarding number of trials required could be improved by providing fewer choices for subjects to choose from. In order to explore this idea further, a study could be conducted whereby subjects are assigned to either 20 or 40 trials of the task, with a view to investigating the differences in how convinced they are of their ability or lack of ability based on the number of trials completed.

Another suggestion for further research focuses on the design of the current study. Although a control group was utilized, the subjects assigned to it were not given scores by which to determine their level of ability on the task, which served to give them a different experience from the two experimental groups who did receive scores. In order to reduce the ambiguity and ensure consistency of procedures, subjects in the control group could be given scores of either 9 for both self and partner, or 15 for both self and partner, thereby creating a definite belief of ability or lack of ability and a more valid baseline to compare the other conditions against.

Finally, an interesting variation might be to move away from the study of gender differences and recast the data according to the strength of expectations being formed (i.e., weak or strong). In that way, a theoretical variable would be investigated rather than simple gender differences. A subject receiving a score of 9 out of 20 may form either weak or strong expectations depending on the context.
on the standards he or she is using to interpret that score. For example, if his or her own internal standard is higher than 9, then the expectations formed will be strong in that the subject will be convinced that he or she does not have ability on the task. On the other hand, if the standard is set at less than 9, then the expectations formed will be weak, as the score does not provide a definite indication of lack of ability. Subjects could then be reclassified in terms of strength of expectations by the standards they provide. Such an analysis would be a theoretical step forward in the investigation of gender beyond a mere classification of subjects into men and women.
Bibliography


APPENDIX A

INSTRUCTIONS TO SUBJECTS
(Scores and No Scores Conditions)
SCRIPT FOR EXPERIMENTAL RUN  
(Scores Conditions)

GREETING AND PRE-TASK ORIENTATION:
Note: If subjects arrive at the same time, the experimenter goes directly into the lab and the assistant will be responsible for bringing in both subjects (separately) and for delivering ALL of the greeting as outlined below. In this situation, the experimenter should enter the lab the back-way to avoid being seen by either of the subjects.

Greetings/Seating for subject #1:
TO BE SPOKEN ALOUD BY THE EXPERIMENTER/ASSISTANT (in the greeting area of the Small Groups Lounge):

Hello. Are you here for one of our job performance studies? Great. Could I get your name please? (Host checks name off the list)

Please come with me. (the first subject - who will be participant A - is taken to the lab via the far doorway and seated in room 111)

You will be working with a partner today but he/she is not here yet.

AFTER SUBJECT #1 HAS BEEN SEATED IN THE LAB:

Are you familiar with how to use a mouse?

(IF NO: The mouse must be kept on the grey pad at all times and if you run out of room, simply lift the mouse up and place back on the centre of the pad.)

This is a consent form which simply says that you agree to take part in the study under the conditions stated. Please read it carefully and then sign your name and put the date at the bottom of the page.

For today's session, you and your partner have been assigned to work first, in a "no interaction" context and second, in a "limited interaction" context. Please leave the door like this as for these 2 sessions we do not want you to have any contact with your partner. Also, please do not speak out loud. If you have a question, just raise your hand and the experimenter will come to you, at which time you can quietly ask your question. Also, please do not touch the computer
keyboard or the mouse until you are instructed to do so.

We'll be starting shortly but please feel free to look at the magazines while you are waiting.

Greeting/Seating for subject #2:
TO BE SPOKEN ALOUD BY THE EXPERIMENTER/ASSISTANT (in the greeting area of the Small Groups Lounge):

Hello. Are you here for one of our job performance studies? Great. Could I get your name please? (Host checks name off the list)

You will be working with a partner today. He/she is ready and waiting for you in the lab which is just through these doors (motion to lab entrance closest to Small Groups Lounge).

Are you familiar with how to use a mouse?

(IF NO: The mouse must be kept on the grey pad at all times and if you run out of room, simply lift the mouse up and place back on the centre of the pad.)

This is a consent form which simply says that you agree to take part in the study under the conditions stated. Please read it carefully and then sign your name and put the date at the bottom of the page.

Before we go into the lab, I need to tell you that for today's session, you and your partner have been assigned to work first, in a "no interaction" context and second, in a "limited interaction" context. This means that you cannot speak aloud once you are in the lab. If you should have a question, just raise your hand and the experimenter will come to you, at which time you can quietly ask your question.

Please come with me. (the second subject - who will be participant B - is taken to the lab via the entrance that is just off the Small Groups Lounge and seated in room 110).

AFTER SUBJECT #2 HAS BEEN SEATED IN THE LAB: Please leave the door like this as for the 2 contexts in which you will be working, we do not want you to have any contact with your partner. Also, please do not touch the computer keyboard or the mouse until you are instructed to do so.
NOTE TO THE EXPERIMENTER:

The experimenter remains in the room until the assistant arrives with Participant B. If he/she has not arrived after 10 minutes, the experimenter should leave the room to discuss the situation with the assistant. Other research team members can act as confederates.

INSTRUCTIONS TO PARTICIPANTS

Our study involves 2 participants. (Experimenter approaches Participant A and says:) You will be participant A and he/she will be participant B. (Experimenter approaches participant B and says:) and you will be participant B and she/he will be participant A.

Okay, we are about to begin but before we do I would just like to stress that for the first part of this session you will both be participating in a "no interaction" work context, so it is very important that you do not see or speak with your partner. If you have any questions as we go along, please do not talk out loud. Just raise your hand and I will come over and speak with you individually. Finally, I would also like to remind you not to touch the computer keyboard or the mouse until you are instructed to do so.

My name is __________. I am a graduate student working with Dr. Foschi here in the Department of Anthropology and Sociology. First I would like to thank you both for coming here today. I think that you'll find this to be an interesting and enjoyable experience. The study is quite straightforward, and your results as well as the information you give us will be kept strictly confidential.

In this project we are interested in the way in which various environments affect job performance. This is an important issue because of the widespread use of computers in the workplace which tends to limit interaction among workers.

Our research at U.B.C. is part of a larger project being carried out in collaboration with Stanford University. This project investigates many different facets of job performance. Our study will be focusing on such things as satisfaction with performance and perception of job difficulty. The way that we are going to study these aspects of performance is to have participants work in different job contexts. The three contexts are "face-to-face interaction" (in which there is contact with your partner and open exchange of ideas), "limited interaction" (in
which there is no contact with your partner, but some exchange of ideas), and "no interaction" (in which there is neither contact with your partner nor exchange of ideas). For today's session, the two of you have been assigned at random to work first in the "no interaction" context and second in the "limited interaction" context.

Other studies have used natural work settings to investigate different aspects of job performance but our research is more experimental. We will be using a task called "contrast sensitivity" which has to do with detecting subtle differences in the proportions of two colours within a pattern. From what we know so far, contrast sensitivity is a very important, analytical ability. It has been known for many years that this ability exists, but only the data that have been gathered in the last 10 years are valid. Research so far shows no significant relationship between contrast sensitivity and such things as mathematical ability, sex, age, education and artistic ability — that is, these abilities and characteristics may or may not influence performance on the contrast sensitivity task. It is also thought that contrast sensitivity is an intuitive and naturally occurring ability that is not affected by practice or prior exposure.

We have chosen to use contrast sensitivity in today's study because of its well established track record in various fields of research. Contrast sensitivity has been applied in a number of practical ways. For example, it is used as a diagnostic tool by various medical personnel. One instance of this is the use of contrast sensitivity by neurologists when assessing individuals who have suffered various types of head trauma. This allows the neurologists to establish the extent of damage done to the brain areas that are responsible for spatial perception.

Another example of the practical application of contrast sensitivity is that it is now a component of several graduate student admissions exams — several universities have chosen to use contrast sensitivity when considering graduate admissions because it allows insight into how advanced the abstract thought processes of applicants are.

You will be participating first, in a no interaction context and second, in a limited interaction context and you will not be meeting your partner in either setting. But, just so you know, both of you are U.B.C. students of approximately the same age, in the same year and faculty and of the same sex. After each of the 2 parts of this study, you will be given a questionnaire so that we'll be able to have your impressions of working in each situation. It is
very important that you complete these questions carefully.

The computer images you are going to see come from a very reliable test of contrast sensitivity consisting of one hundred patterns. Since in this study we are more interested in the effects of various contexts on job performance than in measuring your actual ability, you will see only some of these patterns.

At times, the tasks you will be doing will seem difficult because of the similarity between the choices you will be asked to make. The choices are difficult, but there is a correct answer. And don't worry since other people who thought they were guessing did in fact perform very well. Current research leads us to believe that these people were responding to subtle perceptual cues. So concentrate hard, and follow any impulses you might have.

It is important that you do not lose sight of what you should be doing here today. This is a study on job performance, so it is important that you try your hardest at contrast sensitivity. By working hard at it you will be helping us to simulate the environment of the workplace.

Okay, let's go over a couple of practice trials together. (Experimenter moves closer to the subjects so she can follow what they are doing on the computer)

Two things you should keep in mind as we work through this are: 1) Remember not to touch any computer keys or the mouse until you have been instructed to do so and 2) these are only practice trials - the computer won't be storing your responses to these trials. Please press the ENTER key now. The words "No Interaction" should appear on your screen. Good. Please press ENTER again and it should say "Let's run a couple of practice trials". Press ENTER one more time and at this point you will see a pattern of blue and white rectangles on the screen. What you have to do is to decide whether there is more blue or more white in the pattern. You will have 10 seconds to think about your answer and then the word "select" will begin to flash in the right hand corner of the screen. Shortly after, a response box will appear beside the words "more blue" and "more white" respectively. Please use the mouse NOW to indicate your answer by moving the cross from the right hand corner of the screen to the colour box of your choice. You must answer immediately or the computer will record your choice as an error, whether or not a correct decision is made. Each time you make your choice, the computer will process your answer and then automatically go on to the next trial. Remember, you will have limited time in
which to make your choice. Please do not attempt to count the rectangles since this ability is about intuitive perceptions.

Let's do the second practice trial now, just to make sure that everything is clear.

**The experimenter reviews instructions:**
- First, decide if the pattern has more blue or more white area in it.
- Second, after the word "select" begins to flash on the screen, indicate your answer immediately by moving the cross to the colour box of your choice and pressing any one of the three buttons on the mouse.
- There will be a 10 second delay before you are required to make your answer and then the computer will automatically go on to the next trial.

This part of the study has 20 trials. I will remain in the room for the duration of this session so if you have any questions about the study or the procedures to follow, just raise your hand. I would like to remind you that for this first part, you are working alone in a "no interaction" context, so please remember the following: do not get up from your seat, do not try to talk to your partner and do not speak out loud to me. Please press the ENTER key now to begin.

Okay, I think we are ready to go on now. Please press the ENTER key and a summary of this first session will appear on your screen in a moment. I would like you both to have a printout of these results and I am going to walk you through the steps you must follow to get a printout. Using the mouse, move the cursor to the box that says "P" on the right hand side of the computer screen and press any one of the buttons on the mouse. I would like both of you to do this now so that the printer will make two copies of the results. **Noise from printer in the background.** EXPERIMENTER WAITS FOR THE COMPUTER PRINTOUTS, AND THEN, HAVING CIRCLED THE PARTICIPANT'S SCORE ON EACH, GIVES ONE TO EACH SUBJECT.

TO PARTICIPANT A: here's a copy of the results for you and TO PARTICIPANT B: here's a copy for you. I have circled each of your scores so please take a look at them while I'm getting the questionnaires ready. EXPERIMENTER GETS PART I QUESTIONNAIRES AND PENCILS AND PASSES THEM OUT TO THE SUBJECTS. Your responses to these questions will be kept confidential and with this in mind, we ask that you do not write your name on this form. Remember, with the
exception of the research team, you can be assured that no one, including your partner, will be seeing your responses to this questionnaire. In addition, at no time will you be required to justify your responses, nor will you be meeting with your partner at any point during the study. Okay, I would like you to complete the questionnaires, and then we'll go on to the second part of the study.

PART II

We are now ready to start Part II of the study. As I told you earlier, the second part of this study involves doing the task in a different context. In the first part of the study you worked in the "no interaction" context. For this second part of the study, you have been assigned to work in the "limited interaction" context. In this context, you will work as a team but in a limited interaction situation. This means that you will have no direct contact with your partner but you will be able to communicate with each other through the terminals in front of you. We are going to show you 2 patterns instead of one and your task is to choose which of the 2 contains the most white. Since we are interested in seeing how well the two of you can work together as a team, we are going to give you the opportunity to exchange information with each other as to what you think the correct answer is before you make your final decisions. As well, it is known that most individuals do considerably better on the contrast sensitivity task when they work as a team.

For this part of the study, you will first be asked to make an initial decision regarding the contrast sensitivity patterns on your own. Shortly after, your partner's choice will be relayed to you and then you will be given an opportunity to make a final decision. The most important goal of this exercise is that you and your partner come up with the correct answer working as a team. It is not important which person makes the correct initial choice, but it is important that both of you come up with the correct final choice because you will receive a team score rather than an individual score.

As well as the $10 you are already being paid to participate in this study, you will have a chance at winning additional cash prizes. For each group of 25 teams, $30 will be awarded to the pair that comes up with the highest score. A correct team decision is made only if both of you have agreed on the correct final choice. So don't hesitate to change your mind about the correct
answer, but only if you think it will improve your team score. If both of you make the correct final choice, the team gets two points; if only one of you makes the correct final choice, the team gets one point; and if neither of you makes the correct final choice, the team gets zero points. By doing this we are trying to reproduce the incentive system for team work that is used in many work settings.

Let's go over a couple of practice trials together. (Experimenter moves closer so she can follow what the subjects are doing on the computer). Please move the cross with your mouse to the box that says "C", which stands for continue, on the right hand side of the screen and press any of the buttons on the mouse. The words "please wait" should now appear on your screen. Please press the ENTER key again and it should say "Limited Interaction" on your screen. Good. Please press the ENTER key again and it should say "Let's run a couple of practice trials". Remember these are only practice trials - the computer won't store these responses.

Press <ENTER> one more time and at this point, you will see two patterns of blue and white rectangles on the screen. What you have to do is decide which of the two patterns contains more white. You will have 10 seconds to look at these patterns and then the words "Your Initial Choice" will begin to flash and beside these words you will see two boxes, labelled "pattern 1" and "pattern 2" respectively. Please use the mouse NOW to indicate your answer.

Note that these words will flash only 5 times and then you must make your decision immediately. If you do not answer quickly enough, the computer will record your choice as an error whether or not the correct decision was made. After the computer has processed your answer, it will send you your partner's response. You should then look at the patterns one more time before you make your final decision. You must make your final decision immediately after the words "Your Final Choice" have finished flashing. Once again, if you wait too long, the computer will record your choice as an error whether or not the correct decision was made. Each time you make your choice, the computer will process your answer and then automatically go on to the next trial.

There are two things you should be aware of. The first is that since we are only interested in your final choices, your initial responses will not be stored by the computer. The second thing
is: don't wait for your partner's response because it won't be relayed to you until you have made your initial choice.

Just to make sure everything is clear, let's run through another practice trial.

- First, decide which rectangle has more white in it and after the words "Your Initial Choice" have finished flashing, indicate your answer.

- Once both of you have made your initial choice, your partner's choice will also appear on the screen.

- Then, after you have looked at the same patterns again, make your final choice and indicate your answer in the same manner as before.

Remember, this part of the study has been designed to see how team interaction affects performance on the contrast sensitivity task, so even though you have only limited information about your partner, please try your hardest to be team oriented. As a team you should be concerned with getting as many correct final choices as possible. The number of correct team decisions will be based on your final choices - as I said earlier, your initial choices will not be recorded by the computer.

This part of the study has 25 trials after which you will be asked to fill out a form and answer a few questions. I will remain in the room for the duration of this session so if you have any questions about the study or the procedures to follow, just raise your hand. I would like to remind you that you are working in a "limited interaction" context, so please keep the following in mind: do not get up from your seat, do not try to talk to your partner and do not speak out loud to me. Also, you should know that you will not have to justify your choices on the tasks to anyone, nor will you be meeting with your partner at any point during the course of the study. Okay, please press the ENTER key now to start the 25 trials. Choose carefully, and I will talk to you when the session is over.

Okay, I think we are ready to go on now. That completes the first 2 parts of the study. There is one more questionnaire for each of you to complete, and then we would like to ask you a few questions. You may notice that some of the items are the same as those you saw on the first questionnaire. The reason for this is that in each case, we want to study the effects of the context.
Your responses to these questions will be kept confidential and with this in mind, we ask that you do not write your name on this form. Remember, with the exception of the research team, you can be assured that no one, including your partner, will be seeing your responses to this questionnaire. In addition, at no time will you be required to justify your responses, nor will you be meeting with your partner at any point during the study. (Experimenter gives the questionnaires to the subjects and collects them when they are complete)

Now we would like to discuss your opinions with you. TO PARTICIPANT A: If you would like to stay here, someone will be with you shortly (partially shut Participant A's door). TO PARTICIPANT B: Can you follow me please? (Participant B is taken to room 117 to be debriefed and Participant A is debriefed in room 109).
SCRIPT FOR EXPERIMENTAL RUN
(No Scores Conditions)

GREETING AND PRE-TASK ORIENTATION:

Note: If subjects arrive at the same time, the experimenter goes directly into the lab and the assistant will be responsible for bringing in both subjects (separately) and for delivering ALL of the greeting as outlined below. In this situation, the experimenter should enter the lab the back-way to avoid being seen by either of the subjects.

Greeting/Seating for subject #1:

TO BE SPOKEN ALOUD BY THE EXPERIMENTER/ASSISTANT (in the greeting area of the Small Groups Lounge):

Hello. Are you here for one of our job performance studies? Great. Could I get your name please? (Host checks name off the list)

Please come with me. (the first subject - who will be participant A - is taken to the lab via the far doorway and seated in room 111)

You will be working with a partner today but he/she is not here yet.

AFTER SUBJECT #1 HAS BEEN SEATED IN THE LAB:

Are you familiar with how to use a mouse?

(IF NO: The mouse must be kept on the grey pad at all times and if you run out of room, simply lift the mouse up and place back on the centre of the pad.)

This is a consent form which simply says that you agree to take part in the study under the conditions stated. Please read it carefully and then sign your name and put the date at the bottom of the page.

For today's session, you and your partner have been assigned to work first, in a "no interaction" context and second, in a "limited interaction" context. Please leave the door like this as for these 2 sessions we do not want you to have any contact with your partner. Also, please do not speak out loud. If you have a question, just raise your hand and the experimenter will come
to you, at which time you can quietly ask your question. Also, please do not touch the computer
keyboard or the mouse until you are instructed to do so.

We'll be starting shortly but please feel free to look at the magazines while you are
waiting.

Greeting/Seating for subject #2:
TO BE SPOKEN ALOUD BY THE EXPERIMENTER/ASSISTANT (in the greeting area of the
Small Groups Lounge):

Hello. Are you here for one of our job performance studies? Great. Could I get your
name please? (Host checks name off the list)

You will be working with a partner today. He/she is ready and waiting for you in the lab
which is just through these doors (motion to lab entrance closest to Small Groups Lounge).

Are you familiar with how to use a mouse?
(If No: The mouse must be kept on the grey pad at all times and if you run out of room, simply
lift the mouse up and place back on the centre of the pad.)

This is a consent form which simply says that you agree to take part in the study under the
conditions stated. Please read it carefully and then sign your name and put the date at the bottom
of the page.

Before we go into the lab, I need to tell you that for today's session, you and your partner
have been assigned to work first, in a "no interaction" context and second, in a "limited
interaction" context. This means that you cannot speak aloud once you are in the lab. If you
should have a question, just raise your hand and the experimenter will come to you, at which time
you can quietly ask your question.

Please come with me. (the second subject - who will be participant B - is taken to the lab
via the entrance that is just off the Small Groups Lounge and seated in room 110).

AFTER SUBJECT #2 HAS BEEN SEATED IN THE LAB: Please leave the door like this as for
the 2 contexts in which you will be working, we do not want you to have any contact with your
partner. Also, please do not touch the computer keyboard or the mouse until you are instructed
to do so.
NOTE TO THE EXPERIMENTER:

-The experimenter remains in the room until the assistant arrives with Participant B. If he/she has not arrived after 10 minutes, the experimenter should leave the room to discuss the situation with the assistant. Other research team members can act as confederates.

INSTRUCTIONS TO PARTICIPANTS

Our study involves 2 participants. (Experimenter approaches Participant A and says:) You will be participant A and he/she will be participant B. (Experimenter approaches participant B and says:) and you will be participant B and she/he will be participant A.

Okay, we are about to begin but before we do I would just like to stress that for the first part of this session you will both be participating in a "no interaction" work context, so it is very important that you do not see or speak with your partner. If you have any questions as we go along, please do not talk out loud. Just raise your hand and I will come over and speak with you individually. Finally, I would also like to remind you not to touch the computer keyboard or the mouse until you are instructed to do so.

My name is ______. I am a graduate student working with Dr. Foschi here in the Department of Anthropology and Sociology. First I would like to thank you both for coming here today. I think that you'll find this to be an interesting and enjoyable experience. The study is quite straightforward, and your results as well as the information you give us will be kept strictly confidential.

In this project we are interested in the way in which various environments affect job performance. This is an important issue because of the widespread use of computers in the workplace which tends to limit interaction among workers.

Our research at U.B.C. is part of a larger project being carried out in collaboration with Stanford University. This project investigates many different facets of job performance. Our study will be focusing on such things as satisfaction with performance and perception of job difficulty. The way that we are going to study these aspects of performance is to have participants work in different job contexts. The three contexts are "face-to-face interaction" (in
which there is contact with your partner and open exchange of ideas), "limited interaction" (in which there is no contact with your partner, but some exchange of ideas), and "no interaction" (in which there is neither contact with your partner nor exchange of ideas). For today's session, the two of you have been assigned at random to work first in the "no interaction" context and second in the "limited interaction" context.

Other studies have used natural work settings to investigate different aspects of job performance but our research is more experimental. We will be using a task called "contrast sensitivity" which has to do with detecting subtle differences in the proportions of two colours within a pattern. From what we know so far, contrast sensitivity is a very important, analytical ability. It has been known for many years that this ability exists, but only the data that have been gathered in the last 10 years are valid. Research so far shows no significant relationship between contrast sensitivity and such things as mathematical ability, sex, age, education and artistic ability - that is, these abilities and characteristics may or may not influence performance on the contrast sensitivity task. It is also thought that contrast sensitivity is an intuitive and naturally occurring ability that is not affected by practice or prior exposure.

We have chosen to use contrast sensitivity in today's study because of its well established track record in various fields of research. Contrast sensitivity has been applied in a number of practical ways. For example, it is used as a diagnostic tool by various medical personnel. One instance of this is the use of contrast sensitivity by neurologists when assessing individuals who have suffered various types of head trauma. This allows the neurologists to establish the extent of damage done to the brain areas that are responsible for spatial perception.

Another example of the practical application of contrast sensitivity is that it is now a component of several graduate student admissions exams - several universities have chosen to use contrast sensitivity when considering graduate admissions because it allows insight into how advanced the abstract thought processes of applicants are.

You will be participating first, in a no interaction context and second, in a limited interaction context and you will not be meeting your partner in either setting. But, just so you know, both of you are U.B.C. students of approximately the same age, in the same year and faculty and of the same sex. After each of the 2 parts of this study, you will be given a
questionnaire so that we'll be able to have your impressions of working in each situation. It is very important that you complete these questions carefully.

The computer images you are going to see come from a very reliable test of contrast sensitivity consisting of one hundred patterns. Since in this study we are more interested in the effects of various contexts on job performance than in measuring your actual ability, you will see only some of these patterns.

At times, the tasks you will be doing will seem difficult because of the similarity between the choices you will be asked to make. The choices are difficult, but there is a correct answer. And don't worry since other people who thought they were guessing did in fact perform very well. Current research leads us to believe that these people were responding to subtle perceptual cues. So concentrate hard, and follow any impulses you might have.

It is important that you do not lose sight of what you should be doing here today. This is a study on job performance, so it is important that you try your hardest at contrast sensitivity. By working hard at it you will be helping us to simulate the environment of the workplace.

Okay, let's go over a couple of practice trials together. (Experimenter moves closer to the subjects so she can follow what they are doing on the computer)

Two things you should keep in mind as we work through this are: 1) Remember not to touch any computer keys or the mouse until you have been instructed to do so and 2) these are only practice trials - the computer won't be storing your responses to these trials. Please press the ENTER key now. The words "No Interaction" should appear on your screen. Good. Please press ENTER again and it should say "Let's run a couple of practice trials". Press ENTER one more time and at this point you will see a pattern of blue and white rectangles on the screen. What you have to do is to decide whether there is more blue or more white in the pattern. You will have 10 seconds to think about your answer and then the word "select" will begin to flash in the right hand corner of the screen. Shortly after, a response box will appear beside the words "more blue" and "more white" respectively. Please use the mouse NOW to indicate your answer by moving the cross from the right hand corner of the screen to the colour box of your choice. You must answer immediately or the computer will record your choice as an error, whether or not a correct decision is made. Each time you make your choice, the computer will process your
answer and then automatically go on to the next trial. Remember, you will have limited time in which to make your choice. Please do not attempt to count the rectangles since this ability is about intuitive perceptions.

Let's do the second practice trial now, just to make sure that everything is clear.

**The experimenter reviews instructions:**

- First, decide if the pattern has more blue or more white area in it.
- Second, after the word "select" begins to flash on the screen, indicate your answer immediately by moving the cross to the colour box of your choice and pressing any one of the three buttons on the mouse.
- There will be a 10 second delay before you are required to make your answer and then the computer will automatically go on to the next trial.

This part of the study has 20 trials. I will remain in the room for the duration of this session so if you have any questions about the study or the procedures to follow, just raise your hand. I would like to remind you that for this first part, you are working alone in a "no interaction" context, so please remember the following: do not get up from your seat, do not try to talk to your partner and do not speak out loud to me. Please press the ENTER key now to begin.

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Okay, I think we are ready to go on now. **Experimenter gets Part I questionnaires and pencils and passes them out to the subjects.** This is the questionnaire for the no interaction phase of the study you just completed. Your responses to these questions will be kept confidential and with this in mind, we ask that you do not write your name on this form. Remember, with the exception of the research team, you can be assured that no one, including your partner, will be seeing your responses to this questionnaire. In addition, at no time will you be required to justify your responses, nor will you be meeting with your partner at any point during the study. Okay, I would like you to complete the questionnaires, and then we'll go on to the second part of the study.
We are now ready to start Part II of the study. As I told you earlier, the second part of this study involves doing the task in a different context. After finishing this second phase of the study, you will be asked to complete one more questionnaire and then you will be given a full report of your scores for the entire study.

In the first part of the study you worked in the "no interaction" context. For this second part of the study, you have been assigned to work in the "limited interaction" context. In this context, you will work as a team but in a limited interaction situation. This means that you will have no direct contact with your partner but you will be able to communicate with each other through the terminals in front of you. We are going to show you 2 patterns instead of one and your task is to choose which of the 2 contains the most white. Since we are interested in seeing how well the two of you can work together as a team, we are going to give you the opportunity to exchange information with each other as to what you think the correct answer is before you make your final decisions. As well, it is known that most individuals do considerably better on the contrast sensitivity task when they work as a team.

For this part of the study, you will first be asked to make an initial decision regarding the contrast sensitivity patterns on your own. Shortly after, your partner's choice will be relayed to you and then you will be given an opportunity to make a final decision. The most important goal of this exercise is that you and your partner come up with the correct answer working as a team. It is not important which person makes the correct initial choice, but it is important that both of you come up with the correct final choice because you will receive a team score rather than an individual score.

As well as the $10 you are already being paid to participate in this study, you will have a chance at winning additional cash prizes. For each group of 25 teams, $30 will be awarded to the pair that comes up with the highest score. A correct team decision is made only if both of you have agreed on the correct final choice. So don't hesitate to change your mind about the correct answer, but only if you think it will improve your team score. If both of you make the correct final choice, the team gets two points; if only one of you makes the correct final choice, the team gets one point; and if neither of you makes the correct final choice, the team gets zero points. By
doing this we are trying to reproduce the incentive system for team work that is used in many work settings. 

Let's go over a couple of practice trials together. (Experimenter moves closer so she can follow what the subjects are doing on the computer). The words "please wait" should be on your screen. Please press the ENTER key and the words "Limited Interaction" should appear on your screen. Good. Please press the ENTER key again and it should say "Let's run a couple of practice trials". Remember these are only practice trials - the computer won't store these responses.

Press <ENTER> one more time and at this point, you will see two patterns of blue and white rectangles on the screen. What you have to do is decide which of the two patterns contains more white. You will have 10 seconds to look at these patterns and then the words "Your Initial Choice" will begin to flash and beside these words you will see two boxes, labelled "pattern 1" and "pattern 2" respectively. Please use the mouse NOW to indicate your answer.

Note that these words will flash only 5 times and then you must make your decision immediately. If you do not answer quickly enough, the computer will record your choice as an error whether or not the correct decision was made. After the computer has processed your answer, it will send you your partner's response. You should then look at the patterns one more time before you make your final decision. You must make your final decision immediately after the words "Your Final Choice" have finished flashing. Once again, if you wait too long, the computer will record your choice as an error whether or not the correct decision was made. Each time you make your choice, the computer will process your answer and then automatically go on to the next trial.

There are two things you should be aware of. The first is that since we are only interested in your final choices, your initial responses will not be stored by the computer. The second thing is: don't wait for your partner's response because it won't be relayed to you until you have made your initial choice.

Just to make sure everything is clear, let's run through another practice trial.

-First, decide which rectangle has more white in it and after the words "Your Initial Choice" have finished flashing, indicate your answer.
-Once both of you have made your initial choice, your partner's choice will also appear on the screen.

-Then, after you have looked at the same patterns again, make your final choice and indicate your answer in the same manner as before.

Remember, this part of the study has been designed to see how team interaction affects performance on the contrast sensitivity task, so even though you have only limited information about your partner, please try your hardest to be team oriented. As a team you should be concerned with getting as many correct final choices as possible. The number of correct team decisions will be based on your final choices - as I said earlier, your initial choices will not be recorded by the computer.

This part of the study has 25 trials after which you will be asked to fill out a form and answer a few questions. I will remain in the room for the duration of this session so if you have any questions about the study or the procedures to follow, just raise your hand. I would like to remind you that you are working in a "limited interaction" context, so please keep the following in mind: do not get up from your seat, do not try to talk to your partner and do not speak out loud to me. Also, you should know that you will not have to justify your choices on the tasks to anyone, nor will you be meeting with your partner at any point during the course of the study.

Okay, please press the ENTER key now to start the 25 trials. Choose carefully, and I will talk to you when the session is over.

Okay, I think we are ready to go on now. That completes the first 2 parts of the study. There is one more questionnaire for each of you to complete, and then we would like to ask you a few questions. You may notice that some of the items are the same as those you saw on the first questionnaire. The reason for this is that in each case, we want to study the effects of the context. Your responses to these questions will be kept confidential and with this in mind, we ask that you do not write your name on this form. Remember, with the exception of the research team, you can be assured that no one, including your partner, will be seeing your responses to this questionnaire. In addition, at no time will you be required to justify your responses, nor will you
be meeting with your partner at any point during the study. (Experimenter gives the questionnaires to the subjects and collects them when they are complete)

Now we would like to discuss your opinions with you. TO PARTICIPANT A: If you would like to stay here, someone will be with you shortly (partially shut Participant A's door).

TO PARTICIPANT B: Can you follow me please?

( Participant B is taken to room 117 to be debriefed and Participant A is debriefed in room 109).
APPENDIX B

OPINION QUESTIONNAIRE
NO INTERACTION CONTEXT
(Scores Conditions)
You have just finished working in a no interaction context and now we would like to learn about your impressions of this work situation. We will be asking you a variety of questions, all of which are important to this job performance study. Please answer each question below, giving us your true feelings. Remember, this is not a test, and there are no right or wrong answers.

All the information you provide us with is confidential; it will never be associated with you individually. However, your impressions are important as this is the only way we can learn how working in certain contexts affects people.

Participant:  A   B    (circle one)

Age: ________
A. PROCEDURES AND INSTRUCTIONS

For the following question, circle the appropriate number.

In each of the following, indicate which best corresponds to your feelings during the no interaction context.

(a) Oral instructions were:

| clear | 1 | 2 | 3 | 4 | 5 | 6 | confusing |

(b) Computer instructions were:

| clear | 1 | 2 | 3 | 4 | 5 | 6 | confusing |

(c) Using the mouse to respond to questions was:

| clear | 1 | 2 | 3 | 4 | 5 | 6 | confusing |

B. IMPRESSIONS OF THE NO INTERACTION WORK CONTEXT

For each of the following items, circle the number that best represents your feelings. While working on the contrast sensitivity task in this context I felt:

| interested | 1 | 2 | 3 | 4 | 5 | 6 | uninterested |

| confident | 1 | 2 | 3 | 4 | 5 | 6 | unconfident |

| motivated | 1 | 2 | 3 | 4 | 5 | 6 | unmotivated |

| patient | 1 | 2 | 3 | 4 | 5 | 6 | impatient |

| tense | 1 | 2 | 3 | 4 | 5 | 6 | relaxed |

| decisive | 1 | 2 | 3 | 4 | 5 | 6 | indecisive |

| involved | 1 | 2 | 3 | 4 | 5 | 6 | uninvolved |
C. IMPRESSIONS OF THE CONTRAST SENSITIVITY TASK

(1) For each pair of opposite words below, please circle the number which best corresponds to your feelings. Contrast sensitivity is:

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difficult
routine
unimportant
learned
feminine
related to a wide variety of abilities
enjoyable
undemanding
Imagine a group of 100 people about your age. How many of these people do you think would achieve a high ranking contrast sensitivity score - that is, a score between 67% and 100%. Similarly, how many would achieve a middle ranking score - that is a score between 34% and 66% OR a low ranking score - that is a score between 0% and 33%. Answer for all 3 categories of people below by entering numbers in each of the blanks. There are 50 people in each subcategory (i.e. in CATEGORY 1 there would be 50 high school students and 50 university students).

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**CATEGORY 2:**

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**CATEGORY 3:**

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<th>Level of Achievement</th>
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<td><strong>TOTAL:</strong> 50</td>
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D. CONTEXTUAL EFFECTS ON PERFORMANCE

In this section we would like to find out how this no interaction work situation affected your performance. Please answer all of the following questions as accurately as possible.

(1) Out of the 20 trials:

(a) I made ______ correct choices.

(b) My partner made ______ correct choices.

(2) Now, rate these performances:

(a) I believe my performance on the 20 trials was:

   poor 1 2 3 4 5 6 excellent

(b) I believe my partner's performance on the 20 trials was:

   poor 1 2 3 4 5 6 excellent

(3) Referring to (1) above, check one of the following conditions, then follow the instructions as they apply to you.

   ( ) If your score on these trials was higher than your partner's, answer questions a(i) and a(ii) below.

   ( ) If your score on these trials was lower than your partner's, answer questions b(i) and b(ii) below.

   ( ) If your score on these trials was the same as your partner's, answer all the questions below, that is a(i), a(ii), b(i), and b(ii).
The full test for contrast sensitivity consists of 100 trials. For this section, imagine that you and your partner here today have completed the full test. Answer only those questions below which apply to you as you have indicated on the previous page.

(a) (i) I would have to make ___ or more correct choices out of 100 to conclude that I definitely have contrast sensitivity.

(ii) My partner would have to make ___ or fewer correct choices out of 100 in order for me to conclude that he/she definitely does not have contrast sensitivity.

(b) (i) I would have to make ___ or fewer correct choices out of 100 to conclude that I definitely do not have contrast sensitivity.

(ii) My partner would have to make ___ or more correct choices out of 100 in order for me to conclude that he/she definitely has contrast sensitivity.

E. IMPRESSIONS OF PERFORMANCE

(1) I felt that I had (check one of the following):

(a) ( ) total control over my performance  
(b) ( ) some control over my performance  
(c) ( ) little control over my performance  
(d) ( ) no control over my performance  

(2) In this work context, how hard did you find it to:

(a) evaluate your own performance?
   easy 1 2 3 4 5 6 difficult

(b) evaluate your partner's performance?
   easy 1 2 3 4 5 6 difficult
(3) As mentioned earlier, the full test for contrast sensitivity consists of 100 trials but we have asked you to work on only 20 today. We are interested in knowing if, in your opinion, this is an adequate number of trials for you to arrive at a conclusion about your level of ability (regardless of whether high or low).

If you were to choose the number of trials you could complete between 1 and 100, how many would you require in order to be convinced about what your level of ability is? Check either (a), or (b), or (c) below and then complete the question where appropriate.

   ___ (a) Between 1 and 19 trials. If so, how many?_______
   ___ (b) 20 trials
   ___ (c) Between 21 and 100 trials. If so, how many?_______

(4) Would you like to work more closely with your partner on the contrast sensitivity task?

   Yes _____   No _____   Does not matter _____
APPENDIX C

OPINION QUESTIONNAIRE
NO INTERACTION CONTEXT
(No Scores Conditions)
OPINION QUESTIONNAIRE

No Interaction Context

You have just finished working in a no interaction context and now we would like to learn about your impressions of this work situation. We will be asking you a variety of questions, all of which are important to this job performance study. Please answer each question below, giving us your true feelings. Remember, this is not a test, and there are no right or wrong answers.

All the information you provide us with is confidential; it will never be associated with you individually. However, your impressions are important as this is the only way we can learn how working in certain contexts affects people.

Participant: A B (circle one)

Age: ________

DO NOT WRITE YOUR NAME ON THIS QUESTIONNAIRE
A. PROCEDURES AND INSTRUCTIONS

For the following question, circle the appropriate number.

In each of the following, indicate which best corresponds to your feelings during the no interaction context.

(a) Oral instructions were:
   clear 1 2 3 4 5 6 confusing

(b) Computer instructions were:
   clear 1 2 3 4 5 6 confusing

(c) Using the mouse to respond to questions was:
   clear 1 2 3 4 5 6 confusing

B. IMPRESSIONS OF THE NO INTERACTION WORK CONTEXT

For each of the following items, circle the number that best represents your feelings. While working on the contrast-sensitivity task in this context I felt:

interested 1 2 3 4 5 6 uninterested
confident 1 2 3 4 5 6 unconfident
motivated 1 2 3 4 5 6 unmotivated
patient 1 2 3 4 5 6 impatient
tense 1 2 3 4 5 6 relaxed
decisive 1 2 3 4 5 6 indecisive
involved 1 2 3 4 5 6 uninvolved
C. IMPRESSIONS OF THE CONTRAST SENSITIVITY TASK

(1) For each pair of opposite words below, please circle the number which best corresponds to your feelings. Contrast sensitivity is:

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- easy 1 2 3 4 5 6 difficult
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- masculine 1 2 3 4 5 6 feminine
- a specific ability 1 2 3 4 5 6 related to a wide variety of abilities
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- demanding 1 2 3 4 5 6 undemanding
Imagine a group of 100 people about your age. How many of these people do you think would achieve a high ranking contrast sensitivity score - that is, a score between 67% and 100%. Similarly, how many would achieve a middle ranking score - that is a score between 34% and 66% OR a low ranking score - that is a score between 0% and 33%. Answer for all 3 categories of people below by entering numbers in each of the blanks. There are 50 people in each subcategory (i.e. in CATEGORY 1 there would be 50 high school students and 50 university students).

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**TOTAL: 50**

**TOTAL: 50**

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**TOTAL: 50**

**TOTAL: 50**
D. CONTEXTUAL EFFECTS ON PERFORMANCE

In this section we would like to find out how this no interaction work situation affected your performance. Please answer all of the following questions as accurately as possible.

(1) My estimate is that out of the 20 trials:
   (a) I made _____ correct choices.
   (b) My partner made _____ correct choices.

(2) Now, rate these performances:
   (a) I believe my performance on the 20 trials was:
       poor   1   2   3   4   5   6   excellent
   (b) I believe my partner's performance on the 20 trials was:
       poor   1   2   3   4   5   6   excellent

(3) The full test for contrast sensitivity consists of 100 trials. For the following questions, imagine that you and your partner here today have completed the full test.
   (a) I would have to make _____ or more correct choices out of 100 to conclude that I definitely have contrast sensitivity.
   (b) My partner would have to make _____ or more correct choices out of 100 in order for me to conclude that he/she definitely has contrast sensitivity.
   (c) I would have to make _____ or fewer correct choices out of 100 to conclude that I definitely do not have contrast sensitivity.
   (d) My partner would have to make _____ or fewer correct choices out of 100 for me to conclude that he/she definitely does not have contrast sensitivity.
E. IMPRESSIONS OF PERFORMANCE

(1) I felt that I had (check one of the following):

(a) ( ) total control over my performance
(b) ( ) some control over my performance
(c) ( ) little control over my performance
(d) ( ) no control over my performance

(2) In this work context, how hard did you find it to:

(a) evaluate your own performance?
   easy 1 2 3 4 5 6 difficult
(b) evaluate your partner's performance?
   easy 1 2 3 4 5 6 difficult

(3) As mentioned earlier, the full test for contrast sensitivity consists of 100 trials but we have asked you to work on only 20 today. We are interested in knowing if, in your opinion, this is an adequate number of trials for you to arrive at a conclusion about your level of ability (regardless of whether high or low).

If you were to choose the number of trials you could complete between 1 and 100, how many would you require in order to be convinced about what your level of ability is? Check either (a), or (b), or (c) below and then complete the question where appropriate.

   (a) Between 1 and 19 trials. If so, how many? ______

   (b) 20 trials

   (c) Between 21 and 100 trials. If so, how many? ______

(4) Would you like to work more closely with your partner on the contrast sensitivity task?

   Yes _____ No _____ Does not matter _____
APPENDIX D

OPINION QUESTIONNAIRE
LIMITED INTERACTION CONTEXT
(Scores Conditions)
You have just finished working in a limited interaction context (where you and your partner had no direct contact but did have indirect exchange of choices), and now we would like to learn about your impressions of this work situation. We will be asking you a variety of questions, all of which are important to this job performance study. Please answer each question below, giving us your true feelings. Remember, this is not a test, and there are no right or wrong answers.

All the information you provide us with is confidential; it will never be associated with you individually. However, your impressions are important as this is the only way we can learn how working in certain contexts affects people.

Participant:  A  B  (circle one)
A. PROCEDURES AND INSTRUCTIONS

For the following question, circle the appropriate number.

In each of the following, indicate which best corresponds to your feelings during the no interaction context.

(a) Oral instructions were:
   clear 1 2 3 4 5 6 confusing
(b) Computer instructions were:
   clear 1 2 3 4 5 6 confusing
(c) Using the mouse to respond to questions was:
   clear 1 2 3 4 5 6 confusing

(2) Please indicate what best expresses your opinions in each of the following statements:

(a) I feel this study is:
   unimportant 1 2 3 4 5 6 important
(b) I feel the laboratory used in today's study is set-up:
   efficiently 1 2 3 4 5 6 inefficiently
(c) I feel the computer program used in this study is _________ to follow:
   easy 1 2 3 4 5 6 difficult
(d) I feel the research assistant who gave the instructions for the task is:
   knowledgeable 1 2 3 4 5 6 not knowledgeable
   qualified 1 2 3 4 5 6 not qualified
(e) I feel the delivery of today's instructions was done:
   efficiently 1 2 3 4 5 6 inefficiently
This question is about your impression of the research assistant who gave the instructions for today's study.

Relative to me, the standing of the research assistant is

1 2 3 4 5 6
Inferior Peer/Equal Superior

B. IMPRESSIONS OF THE CONTRAST SENSITIVITY TASK

(1) For each pair of opposite words below, please circle the number which best corresponds to your feelings. Contrast sensitivity is:

- easy 1 2 3 4 5 6 difficult
- creative 1 2 3 4 5 6 routine
- important 1 2 3 4 5 6 unimportant
- intuitive 1 2 3 4 5 6 learned
- masculine 1 2 3 4 5 6 feminine
- a specific ability 1 2 3 4 5 6 related to a wide variety of abilities
- frustrating 1 2 3 4 5 6 enjoyable
- demanding 1 2 3 4 5 6 undemanding

(2) In the following question, please circle the category or categories that you feel apply. From my experience today, I feel that contrast sensitivity ability is related to:

(a) Reasoning ability  (e) artistic talent  (i) Gender
(b) Life experience  (f) family environment  (j) all of a – i
(c) Intelligence  (g) age  (k) none of a – i
(d) mathematical skill  (h) educational level
C. IMPRESSIONS OF THE LIMITED INTERACTION WORK CONTEXT

For each of the items below, circle the number that best represents your feelings.

(1) While working on the contrast sensitivity task I felt:

- interested: 1  2  3  4  5  6  uninterested
- confident: 1  2  3  4  5  6  unconfident
- motivated: 1  2  3  4  5  6  unmotivated
- patient: 1  2  3  4  5  6  impatient
- tense: 1  2  3  4  5  6  relaxed
- decisive: 1  2  3  4  5  6  indecisive
- involved: 1  2  3  4  5  6  uninvolved

(2) In this work context how hard did you find it to:

(a) evaluate your own performance?
   easy: 1  2  3  4  5  6  difficult

(b) evaluate your partner's performance?
   easy: 1  2  3  4  5  6  difficult

(3) Overall, how do you feel your ability at contrast sensitivity compares with that of your partner?

I feel that my partner's ability is:

- (a) ( ) much better than mine
- (b) ( ) better than mine
- (c) ( ) slightly better than mine
- (d) ( ) the same as mine
- (e) ( ) slightly worse than mine
- (f) ( ) worse than mine
- (g) ( ) much worse than mine
In the next two questions, circle the ONE number that applies:

(4) In the 25 trials, approximately how many times did you take into account (i.e. consider) your partner's initial choice before making your final choice?
   
   1 2 3 4 5 6 7 8 9 10 11 12 13
   14 15 16 17 18 19 20 21 22 23 24 25

(5) In the 25 trials, approximately how many times did you go along with (i.e. accept) your partner's initial choice?

   1 2 3 4 5 6 7 8 9 10 11 12 13
   14 15 16 17 18 19 20 21 22 23 24 25

D. CONTEXTUAL EFFECTS ON PERFORMANCE

In the next two questions, check the ONE option that best represents your feelings:

(1) How confident were you that your partner's choices were correct?
   
   (a) very confident  ( )
   (b) quite confident  ( )
   (c) confident      ( )
   (d) unconfident    ( )
   (e) quite unconfident ( )
   (f) very unconfident ( )

(2) Answer the following by circling the number that best represents your feelings:
   (a) my partner was likeable 1 2 3 4 5 6 not likeable
   (b) this test is valid 1 2 3 4 5 6 not valid
   (c) my own record of performance on similar tests had been successful 1 2 3 4 5 6 unsuccessful
   (d) my partner's choices were mostly correct 1 2 3 4 5 6 mostly incorrect
(3) When making your final choice for each trial, what did you rely on? For a) to h) below, circle the number which best indicates how important each item was in helping you make your final decisions.

(a) how likeable my partner was

important 1 2 3 4 5 6 not important

(b) the fact that my partner was a man/woman (circle "man" or "woman" as appropriate)

important 1 2 3 4 5 6 not important

(c) how valid this test is

important 1 2 3 4 5 6 not important

(d) my scores and my partner’s scores on the task, as given by the experimenter

important 1 2 3 4 5 6 not important

(e) how difficult I found the task to be

important 1 2 3 4 5 6 not important

(f) the number of trials my partner and I completed

important 1 2 3 4 5 6 not important

(g) my own record of performance on similar tasks

important 1 2 3 4 5 6 not important

(h) my partner’s choices

important 1 2 3 4 5 6 not important
(4) For each of questions a) to g) below, circle the number which best represents your general impressions of the context you worked in today.

(a) While working as a team on the contrast sensitivity task, it is best to consider the other person's choices carefully.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(b) I lost interest in working hard at the task.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(c) Agreeing as a team regarding the correct decision was more important to me than my own choice.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(d) Even when one person does better or worse than another on contrast sensitivity, most of the time it is just due to chance.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(e) My partner was very serious about doing the task well.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(f) I was very serious about doing the task well.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(g) It was really too difficult to try to figure out which pattern had more of a certain colour, so I chose randomly.
   
   strongly agree  1   2   3   4   5   6  strongly disagree

(h) I felt we had a good chance of getting a high team score.
   
   strongly agree  1   2   3   4   5   6  strongly disagree
E. FINAL IMPRESSIONS

In the next two questions, circle the ONE number that you feel most applies:

(1) Overall, how similar or different do you think you and your partner were on each of the following items?

<table>
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<tr>
<th>Item</th>
<th>different</th>
<th>don't know</th>
<th>similar</th>
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</thead>
<tbody>
<tr>
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<td>2</td>
<td>3</td>
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<tr>
<td>(b) sex</td>
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<td>3</td>
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<tr>
<td>(c) languages</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>(d) marital status</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>(e) education level</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>(f) ethnic background</td>
<td>1</td>
<td>2</td>
<td>3</td>
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(2) This question is about the research assistant who gave the instructions for the task.

My impression was that the research assistant has the following level of education:

1. Bachelor's degree in progress
2. Bachelor's degree completed
3. Master's degree in progress
4. Master's degree completed
5. Doctorate degree in progress
6. Doctorate degree completed

(3) Assume that a 2-hour workshop on improving contrast sensitivity were to be offered in connection with preparing to write a graduate student admissions exam. In your opinion, how much should be charged for such a workshop? Circle one of the following amounts:

$30  $40  $50  $60  $70  $80  $90
(4) Please give us your comments on the study's procedures and your experience here today.
APPENDIX E

OPINION QUESTIONNAIRE
LIMITED INTERACTION CONTEXT
(No Scores Conditions)
You have just finished working in a limited interaction context (where you and your partner had no direct contact but did have indirect exchange of choices), and now we would like to learn about your impressions of this work situation. We will be asking you a variety of questions, all of which are important to this job performance study. Please answer each question below, giving us your true feelings. Remember, this is not a test, and there are no right or wrong answers.

All the information you provide us with is confidential; it will never be associated with you individually. However, your impressions are important as this is the only way we can learn how working in certain contexts affects people.

Participant:  A   B   (circle one)
A. PROCEDURES AND INSTRUCTIONS

For the following question, circle the appropriate number.

In each of the following, indicate which best corresponds to your feelings during the no interaction context.

(a) Oral instructions were:
    clear 1 2 3 4 5 6 confusing

(b) Computer instructions were:
    clear 1 2 3 4 5 6 confusing

(c) Using the mouse to respond to questions was:
    clear 1 2 3 4 5 6 confusing

(2) Please indicate what best expresses your opinions in each of the following statements:

(a) I feel this study is:
    unimportant 1 2 3 4 5 6 important

(b) I feel the laboratory used in today's study is set-up:
    efficiently 1 2 3 4 5 6 inefficiently

(c) I feel the computer program used in this study is _________ to follow:
    easy 1 2 3 4 5 6 difficult

(d) I feel the research assistant who gave the instructions for the task is:
    knowledgeable 1 2 3 4 5 6 not knowledgeable
    qualified 1 2 3 4 5 6 not qualified

(e) I feel the delivery of today's instructions was done:
    efficiently 1 2 3 4 5 6 inefficiently
(3) This question is about your impression of the research assistant who gave the instructions for today's study.

Relative to me, the standing of the research assistant is

1 2 3 4 5 6

Inferior Peer/Equal Superior

B. IMPRESSIONS OF THE CONTRAST SENSITIVITY TASK

(1) For each pair of opposite words below, please circle the number which best corresponds to your feelings. Contrast sensitivity is:

easy 1 2 3 4 5 6 difficult
creative 1 2 3 4 5 6 routine
important 1 2 3 4 5 6 unimportant
intuitive 1 2 3 4 5 6 learned
masculine 1 2 3 4 5 6 feminine
a specific ability 1 2 3 4 5 6 related to a wide variety of abilities
frustrating 1 2 3 4 5 6 enjoyable
demanding 1 2 3 4 5 6 undemanding

(2) In the following question, please circle the category or categories that you feel apply. From my experience today, I feel that contrast sensitivity ability is related to:

(a) Reasoning ability (e) artistic talent (i) Gender
(b) Life experience (f) family environment (j) all of a – i
(c) Intelligence (g) age (k) none of a – i
(d) mathematical skill (h) educational level
C. IMPRESSIONS OF THE LIMITED INTERACTION WORK CONTEXT

For each of the items below, circle the number that best represents your feelings.

(1) While working on the contrast sensitivity task I felt:

<table>
<thead>
<tr>
<th>Emotion</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>interested</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>interested</td>
</tr>
<tr>
<td>confident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>unconfident</td>
</tr>
<tr>
<td>motivated</td>
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<td></td>
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<td></td>
<td></td>
<td>unmotivated</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>impatient</td>
</tr>
<tr>
<td>tense</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>relaxed</td>
</tr>
<tr>
<td>decisive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>indecisive</td>
</tr>
<tr>
<td>involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>uninvolved</td>
</tr>
</tbody>
</table>

(2) In this work context how hard did you find it to:

(a) evaluate **your own** performance?

<table>
<thead>
<tr>
<th>Degree of Difficulty</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>easy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>difficult</td>
</tr>
</tbody>
</table>

(b) evaluate **your partner's** performance?

<table>
<thead>
<tr>
<th>Degree of Difficulty</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>easy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>difficult</td>
</tr>
</tbody>
</table>

(3) Overall, how do you feel your ability at contrast sensitivity compares with that of your partner?

I feel that my partner's ability is:

(a) ( ) much better than mine
(b) ( ) better than mine
(c) ( ) slightly better than mine
(d) ( ) the same as mine
(e) ( ) slightly worse than mine
(f) ( ) worse than mine
(g) ( ) much worse than mine
In the next two questions, circle the ONE number that applies:

(4) In the 25 trials, approximately how many times did you take into account (i.e. consider) your partner's initial choice before making your final choice?

1 2 3 4 5 6 7 8 9 10 11 12 13
14 15 16 17 18 19 20 21 22 23 24 25

(5) In the 25 trials, approximately how many times did you go along with (i.e. accept) your partner's initial choice?

1 2 3 4 5 6 7 8 9 10 11 12 13
14 15 16 17 18 19 20 21 22 23 24 25

D. CONTEXTUAL EFFECTS ON PERFORMANCE

In the next two questions, check the ONE option that best represents your feelings:

(1) How confident were you that your partner's choices were correct?
   (a) very confident ( )
   (b) quite confident ( )
   (c) confident ( )
   (d) unconfident ( )
   (e) quite unconfident ( )
   (f) very unconfident ( )

(2) Answer the following by circling the number that best represents your feelings:

(a) my partner was
   likeable 1 2 3 4 5 6 not likeable

(b) this test is
   valid 1 2 3 4 5 6 not valid

(c) my own record of performance on similar tests had been
   successful 1 2 3 4 5 6 unsuccessful

(d) my partner's choices were
   mostly 1 2 3 4 5 6 mostly incorrect
(3) When making your final choice for each trial, what did you rely on? For a) to h) below, circle the number which best indicates how important each item was in helping you make your final decisions.

(a) how likeable my partner was
   important 1 2 3 4 5 6 not important

(b) the fact that my partner was a man/woman (circle "man" or "woman" as appropriate)
   important 1 2 3 4 5 6 not important

(c) how valid this test is
   important 1 2 3 4 5 6 not important

(d) my estimate of how my partner and I performed
   important 1 2 3 4 5 6 not important

(e) how difficult I found the task to be
   important 1 2 3 4 5 6 not important

(f) the number of trials my partner and I completed
   important 1 2 3 4 5 6 not important

(g) my own record of performance on similar tasks
   important 1 2 3 4 5 6 not important

(h) my partner's choices
   important 1 2 3 4 5 6 not important
For each of questions a) to g) below, circle the number which best represents your general impressions of the context you worked in today.

(a) While working as a team on the contrast sensitivity task, it is best to consider the other person's choices carefully.

strongly agree 1 2 3 4 5 6 strongly disagree

(b) I lost interest in working hard at the task.

strongly agree 1 2 3 4 5 6 strongly disagree

(c) Agreeing as a team regarding the correct decision was more important to me than my own choice.

strongly agree 1 2 3 4 5 6 strongly disagree

(d) Even when one person does better or worse than another on contrast sensitivity, most of the time it is just due to chance.

strongly agree 1 2 3 4 5 6 strongly disagree

(e) My partner was very serious about doing the task well.

strongly agree 1 2 3 4 5 6 strongly disagree

(f) I was very serious about doing the task well.

strongly agree 1 2 3 4 5 6 strongly disagree

(g) It was really too difficult to try to figure out which pattern had more of a certain colour, so I chose randomly.

strongly agree 1 2 3 4 5 6 strongly disagree

(h) I felt we had a good chance of getting a high team score.

strongly agree 1 2 3 4 5 6 strongly disagree
E. FINAL IMPRESSIONS

In the next two questions, circle the ONE number that you feel most applies:

(1) Overall, how similar or different do you think you and your partner were on each of the following items?

<table>
<thead>
<tr>
<th>Item</th>
<th>different</th>
<th>don't know</th>
<th>similar</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) age</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(b) sex</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(c) languages</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(d) marital status</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(e) education level</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>(f) ethnic background</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) This question is about the research assistant who gave the instructions for the task.

My impression was that the research assistant has the following level of education:

1. Bachelor's degree in progress
2. Bachelor's degree completed
3. Master's degree in progress
4. Master's degree completed
5. Doctorate degree in progress
6. Doctorate degree completed

(3) Assume that a 2-hour workshop on improving contrast sensitivity were to be offered in connection with preparing to write a graduate student admissions exam. In your opinion, how much should be charged for such a workshop? Circle one of the following amounts:

$30  $40  $50  $60  $70  $80  $90
(4) Please give us your comments on the study's procedures and your experience here today.
APPENDIX F

CONSENT FORM AND
DEBRIEFING STATEMENTS
(Scores and No Scores Conditions)
CONSENT FORM

THE UNIVERSITY OF BRITISH COLUMBIA
VANCOUVER, B.C., CANADA
V6T 1Z1

DEPARTMENT OF ANTHROPOLOGY
AND SOCIOLOGY

SMALL GROUPS LABORATORY

Name: ____________________________ U.B.C. Student #: ________________

The above named person agrees to participate in a study at the Small Groups Laboratory of the U.B.C. Department of Anthropology and Sociology with the understanding:

(a) that there are no physical or psychological risks involved,
(b) that his/her participation will last for approximately one hour and 30 minutes.
(c) that he/she may terminate participation and withdraw from the study at any time without having to account for the reasons for such action,
(d) that confidentiality will be kept by the members of the research team regarding any identifying information about the participants in the study, and
(e) that all reports of the results will preserve the participants' anonymity.

Date: ____________________________

Signature: ____________________________

* THANK YOU FOR YOUR PARTICIPATION *
DEBRIEFING STATEMENT - SCORES CONDITIONS

POST EXPERIMENTAL EXPLANATION

Now that the first 2 parts of the study are over, we want to give you more information with regards to its purpose and answer any questions you might have.

While we are interested in job performance, the principal focus of our project is to study the factors involved in the decision making process. This is difficult to do in a natural work setting thus it was necessary to create an artificial situation in which a person is required to make a decision. The laboratory setting allows us to do this and to control the information that all participants receive.

With respect to the contrast sensitivity task, we actually had no intent of measuring anyone's contrast sensitivity ability. In fact, there is no such ability. The patterns you were shown exist to create a situation in which judgements have to be made. Social scientists use these patterns to examine how people come to resolutions when they have disagreements with others. Although there are no correct answers for the task used in today's study, it is virtually impossible for any participant to notice this given the short amount of time you have to submit your answers.

The scores you received in the first part of today's session were actually pre-arranged. Everyone is given a computer printout which is designed to have participants believe that they have received a higher or lower score than their partner on the contrast sensitivity task. In this way, we are able to discover how knowledge of your own and your partner's apparent scores influenced the choices you made when you disagreed during the second part of the study.

In order to see how your decisions were affected by disagreements between you and your partner, we controlled the feedback you received about your partner's choices. The computer processed your answers and gave you an agreement or a disagreement in a pre-arranged order that was completely independent of what your partner actually answered. Everyone who takes part in this study receives the same set of 20 disagreements and 5 agreements. In addition, we are interested in how people make decisions when their partner is someone of the same sex.
There are many reasons why you could not be informed of these things before the study began. For example, if you had known that contrast sensitivity is not a real ability, it is unlikely that you would have paid much attention to the task or tried to get the correct answers. Since we are interested in how people resolve disagreements, it is important that all participants take the contrast sensitivity task seriously.

Everyone who takes part in this study receives false information. This is the only way we can objectively determine how certain types of disagreements are resolved. Minor deceptions, such as what you experienced today, are commonly used in social science research to create controlled experimental settings. By "controlled" we mean that all external factors are carefully monitored so that they remain constant across all participants. Otherwise, many things could be responsible for the participants' behaviour and we would be unable to draw any definitive conclusions. For example, everyone who participates knows that their partner is of the same sex, but no one actually sees their partner - in this way, we are able to control for the different impressions that might be formed on the basis of physical appearance.

During the study you were told that there would be a cash prize of $20 for the team with the highest score. The real purpose of this was to motivate you to perform well and since the task we used is fictitious, no such prize can be awarded. You will, of course, still receive $10 for participating in our study.

We hope that you have found this to be an interesting experience. If you have any questions, please feel free to ask them now.

THANK YOU AGAIN FOR YOUR PARTICIPATION!
DEBRIEFING STATEMENT - NO SCORES CONDITIONS

POST EXPERIMENTAL EXPLANATION

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While we are interested in job performance, the principal focus of our project is to study the factors involved in the decision making process. This is difficult to do in a natural work setting thus it was necessary to create an artificial situation in which a person is required to make a decision. The laboratory setting allows us to do this and to control the information that all participants receive.

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