Source and Time of Social Cue Delivery: A Social Comparison Approach to Social Information Processing

Steven Michael Madenberg
College of William & Mary - Arts & Sciences

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APPROVAL SHEET

This thesis is submitted in partial fulfillment of the requirements for the degree of

Master of Arts

[Signature]

Author

Approved, August 1986

[Signature]
John B. Nezlek, Ph.D.

[Signature]
Deborah A. Foss-Goodman, Ph.D.

[Signature]
Kelly G. Shaver, Ph.D.
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Source and Time of Social Cue Delivery:
A Social Comparison Approach to Social Information Processing

ABSTRACT

The effects of time of social cue delivery, similarity of cue source, and experience of cue source, on measures of job satisfaction were assessed in an extended laboratory experiment. Eighty-two college females participated in a 2 x 2 x 2 x 2 mixed model design. Social cues were given either early or late in an Erector Set construction task, by sources who were either similar or disimilar, as well as either experienced or inexperienced. Measures of job satisfaction were taken twice during the study. Results showed that subjects who received social cues earlier in the task showed greater increases in satisfaction. Subjects who received social cues from similar sources also showed significant increases in satisfaction. Task experience did not have the predicted effects on satisfaction. Results are discussed in terms of the social information processing approach to job satisfaction, and social comparison theory.

Steven Madenberg
Department of Psychology
The College of William and Mary in Virginia
Source and Time of Social Cue Delivery:
A Social Comparison Approach to Social Information Processing
INTRODUCTION

Prior Research

In the 1970s, much of the research on job satisfaction was guided by need-satisfaction models, among which the Job Characteristics Model (Hackman & Lawler, 1971) was the most predominant. This framework suggests that objective characteristics of a job (variety, autonomy, task identity, feedback, significance) directly influence the formation of work attitudes. In the 1980's, an opposing viewpoint, best represented by the Social Information Processing (SIP) model (Salancik & Pfeffer, 1977; 1978), has been challenging the need-satisfaction models. The SIP model suggests that job characteristics do not directly influence worker attitude formation; rather attitude formation is mediated by the social context in the work place.

Reviews of the SIP literature (Blau & Katerberg, 1982; Thomas & Griffin, 1983) reveal that the majority of the studies done have pitted the effects of objectively changing the experimental task against the effects of social cue manipulations, thus comparing the Job Characteristics model to the SIP model. The SIP model has consistently received empirical support, and is now in a position to be developed further.

As Thomas and Griffin (1983) conclude, "... the social information processing area could realize additional development through an integration with complimentary schools
of thought (p. 681)." The theory of social comparison, originally developed by Festinger (1954) appears to be a logical theory to integrate with the SIP model, because it offers specific suggestions for when, and under what conditions, individuals will look to the social context to facilitate attitude construction. The present research is an attempt to integrate social comparison theory with the SIP model.

The SIP. As mentioned earlier, the SIP model posits that job characteristics are not fixed and objective, but are instead social constructs, defined through informational social cues. Pfeffer (1981) describes the SIP as follows:

First, the individual's social environment may provide cues as to which dimensions might be used to characterize the work environment . . . Second, the social environment may provide information concerning how the individual should weigh the various dimensions—whether autonomy is more or less important than variety of skill, whether pay is more or less important than social usefulness or worth. Third, the social context provides cues concerning how others have come to evaluate the work environment on each of the selected dimensions . . . And fourth, it is possible that the social context provides direct evaluation of the work setting along positive or negative dimen-
sessions, leaving it to the individual to construct a rationale to make sense of the generally shared affective reactions. (Pfeffer, p. 10)

In one of the first studies to test the SIP, O'Reilly and Caldwell (1979) manipulated social cue delivery and objective task characteristics. Results indicated that providing social cues was a more effective method of improving worker attitudes than was objectively enriching the task situation. A similar study done by White and Mitchell (1979) also found social cues to be an effective means of changing worker attitudes. Subjects who received positive social cues from coworkers were more satisfied, and more productive than those who received negative social cues from coworkers.

Shaw and Weekly (1981) varied the number of people giving the social cues, and found not only a main effect for social cues on task satisfaction, but that the number of individuals delivering the cues was of no consequence. Additionally, the source of the social cues seems to be relatively unimportant, whether given by the leader (Griffin, 1983), the researcher (O'Conner & Barrett, 1980), or confederate coworkers (O'Reilly & Caldwell, 1979; Shaw & Weekly, 1981; Weiss & Shaw, 1979; White & Mitchell, 1979), social cues have significantly affected job attitudes.

A number of researchers have looked at individual differences in reactions to social cues (O'Reilly & Caldwell, 1979; Weiss & Shaw, 1979; O'Connor & Barrett, 1980). The
principal finding of these studies has been that field
dependent subjects are more influenced by social cues than are
field independent subjects.

One study that broke new ground in SIP research was done
by Vance and Biddle (1985). They varied the valence of the
social cues (i.e., positive, negative, or mixed), and these
cues were delivered to the workers either early or late in the
simulated work session. This enabled the researchers to study
the interactive effects of task experience and social cue
delivery. Vance and Biddle found that the effects of social
cues on subjects' attitudes decreased as the subjects gained
more task experience. This suggests the possibility that
social cues are relatively ineffective if the recipient of the
cues has already formed stable opinions based on the task's
objective characteristics.

In Salancik's and Pfeffer's (1978) model, worker
attitudes are based on both objective task characteristics and
the subjective social evaluations. The social evaluations are
based on the objective task characteristics. If social cues
are not available to recently hired workers, they may have no
alternative to basing his/her early attitudes on objective
characteristics alone. What Vance and Biddle's study suggests
is that early attitudes are relatively stable, whether based
on objective characteristics alone, or on social cues
incorporating objective task information.

In real job situations, social cue information is usually
available from a variety of sources, from coworkers to superiors. Given the knowledge that social information is available to the workers, and that prior research has shown it to be an effective means of influencing worker attitudes, the following questions need to be answered: (1) From which individuals will social information have the most influence on worker attitudes? (2) When will such information be the most effective in influencing?

**Social Comparison Theory.** For answers to these questions, industrial/organizational psychology should consider its roots in social psychology; more specifically social comparison theory, originally conceived by Festinger (1954). Festinger postulated three points that are relevant to understanding worker opinions. First, people have a drive to evaluate their opinions (from Hypothesis I). Second, in the absence of objective, nonsocial criteria, people seek others' opinions for comparison with their own (from Hypothesis II). Thirdly, as a result of such comparisons, opinions tend to change in the direction of conformity.

In their reconceptualization of social comparison theory, Baron, Sanders, and Baron (1975) label the social comparison of opinions as **accuracy evaluation.** The primary distinguishing characteristic of accuracy evaluation is that "prior to comparison, the various beliefs involved do not differ in social value and after evaluation, deviation from others is not valued" (p.408). The result of accuracy
evaluation is proposed to be an averaging of the opinions in question. Put in the context of the workplace, a new employee, with neutral opinions regarding a new job, would be swayed in a positive direction by positive social cues, or in a negative direction by negative social cues.

The possibility exists, and is addressed by the social comparison literature, that individuals will heed information from some sources more than others. One of social comparison theory's primary tenets is that people seek to compare themselves with similar others rather than dissimilar others. Festinger's Corollary IIIA states: "Given a range of possible persons for comparison, someone close to one's own ability or opinion will be chosen for comparison" (1954, p. 121).

Several researchers, initially Wheeler, et al. (1969), suggested a break from a literal interpretation of Corollary IIIA. They suggested that rather than simply choosing for comparison someone who is similar on the opinion in question, we choose for comparison an entity who "ought to have by virtue of similarity to us on attributes related to the opinion issue, a similar opinion" (p. 231). This eliminates the need for prior knowledge of the comparison of other's opinions, which was the basis for comparison in the first place. Goethals and Darley (1977) restate the similarity corrollary as follows: "Given a range of possible persons for comparison, someone who should be close to one's own performance or opinion, given his standing on characteristics
related to and predictive of performance or opinion, will be chosen for comparison" (p. 265).

To the new employee on the workshift then, what are the referrent attributes that would cause him or her to heed the opinions of one co-worker over another? Perhaps to the new employee, who knows little or nothing about his coworkers, any aspects of similarity would seem relevant. Consider a college student, just starting his/her work as a school teacher for the Peace Corps, in the Fiji Islands. Upon arrival at the school, he/she meets fellow teachers, one of whom happens to be an American, and a recent graduate of our student's university. Social comparison theory would predict that the student would seek to compare his/her early opinions and experiences on the island with those of fellow Americans, rather than with those of the native Fijians.

Present Research

The present study has much in common with past research on the SIP model of job attitudes, in general. Similar to prior research, subjects were given social cues in an effort to alter attitudes toward the experimental task. As in past research, dependent measures assessed worker attitudes toward the experimental task. Also, the present study was a laboratory experiment, rather than a field experiment.

The present study has much in common with Vance and Biddle's (1985) study. More specifically, the effects of task experience and social cues were examined. As in the earlier
study, cues were delivered early or late in the experimental task. Similar to the Vance and Biddle study, subjects believed the social cues to come from fellow workers. With these points, however, the similarity between the present study and prior studies ends.

**Extended Task Situation.** The experimental task in Vance and Biddle's study consisted of a single task, which was completed in a single 35 minute session. The present study used a task that was spread out over the course of four nights, with subjects working for 20 minutes per night. This was done for two reasons.

First, it must be remembered that job attitude studies are done with the goal of applying the results to actual work situations. A small number of field surveys on the SIP have been conducted (Oldham & Miller, 1979; O'Reilly, Parlette & Bloom, 1980) and Slusher and Griffin (1983) conducted a field experiment. As Thomas and Griffin (1983) point out, however, the results of these studies are generally less consistent than the results of those studies in which the social cue information is directly manipulated. For this reason, many more laboratory studies have been conducted than have field studies. For the sake of generalizability, laboratory studies should make every attempt to achieve high external validity. One simple means of increasing external validity, and thus generalizability to the workplace in studies utilizing experimental tasks, is to extend the length of the task.
This, in effect, transforms the "task" into a "job." The first reason for extending the experimental task over four nights then, was to increase the external validity of the task.

The second reason for extending the task was to increase the power of the task experience manipulation. In Vance and Biddle's study, social cues were given after either 7 or 25 minutes of the 35 minute task. The experimenters assumed that subjects felt themselves to be still relatively inexperienced after working for 7 minutes, but experienced after working for 25 minutes. In the present study, extending the task over four nights was intended to increase the probability that subjects, given social cues late in the task, would feel experienced.

**Addition of Similarity and Experience Variables.** According to Salancik and Pfeffer (1978), social cues must be salient if they are to be effective in communicating information about the task characteristics. Vance and Biddle (1985) suggested that social cues would be more salient early in the task "and hence have greater impact on attitudes when they occur early, because subjects may be in adaptive, information seeking modes when they are less experienced" (p. 254).

Social comparison theory would also predict that social cues would have greater impact early in the task. Festinger (1954) postulated that in the absence of objective nonsocial criteria, individuals are driven to compare their opinions
with the opinions of others. Early in a task, individuals would not have spent enough time working on the task to form stable opinions based on its objective characteristics. In this case, the opinions of others would be used to facilitate opinion formation. Late in the task, however, individuals would be less likely to utilize social cues, because they would have had enough experience with the task itself to have formed more stable opinions based on the objective characteristics alone.

Social comparison theory further suggests that similarly valenced social cues, given at the same relevant point in time, but by different sources, could have differential effects. The more similar the source of the information is to the receiver of the information, the more likely it is that the information will be heeded.

Thus, similarity may be an important variable in studies of the SIP model. Newly hired employees in the actual workplace may seek and heed opinions from their coworkers as a function of the similarity between them and the coworkers. To study this possibility, the present study included similarity of the social cue source as a second independent variable.

The third independent variable was the relative amount of task related experience held by the social cue source. In the workplace, employees have differing amounts of job experience. Worker A might have spent five years putting together widgets; Worker B might have spent five weeks. Obviously Worker A is
the more experienced worker. In regard to social cues, the question is whether social cues given by Worker A would be more effective than those given by Worker B, in influencing worker attitudes. To test this possibility, the present study varied the amount of task experience held by the source of the social cue.

**Design.** There were three independent variables: time of social delivery (early, late); similarity of the social cue source to the social cue receiver (similar, dissimilar); and amount of experience held by the social cue source (experienced, inexperienced). All independent variables were crossed.

The dependent measures were a series of five-point scale questions, designed to measure different aspects of subjects' satisfaction with the task. These questions were given to the subjects twice during the experiment, once before the manipulations, and once after. The design of the study then, was a 2 (experience) × 2 (time of cue delivery) × 2 (similarity) × 2 (repeated measures) design; with an additional group serving as a control group.

All subjects worked for three consecutive nights, 20 minutes per night. They returned for a fourth night to evaluate each others' work. Positive social cues were given either before the start of work on the second night (early condition), or after the conclusion of the third night of work (late condition). Dependent measures were taken after the
conclusion of the first night of work, and on the fourth night.

Hypotheses

Hypothesis 1. As shown by their responses to administrations of the dependent measure, those groups of subjects receiving social cues early in the task will express greater increases in task satisfaction than those groups of subjects receiving social cues late in the task.

Hypothesis 2A. As shown by their responses to administrations of the dependent measure, those groups of subjects receiving social cues from similar sources will express greater increases in task satisfaction than those groups of subjects receiving social cues from dissimilar sources.

Hypothesis 2B. Social cues given early in the task, by similar sources, will effectively increase task satisfaction; however, the same cues from dissimilar sources will not increase task satisfaction. Early in the task, similarity of the social cue sources will not delimit one group from another.

Hypothesis 3A. As shown by their responses to administrations of the dependent measure, those groups of subjects receiving social cues from experienced sources will express greater increases in task satisfaction than those groups of subjects receiving social cues from inexperienced sources.

Hypothesis 3B. Social cues given early in the task by
experienced sources will effectively increase task satisfaction; however, the same cues from inexperienced sources will not increase task satisfaction to the same extent. Late in the task, the experience held by the social cue source will not delimit one group from another.
METHOD

Subjects

Subjects were 83 undergraduate females enrolled in introductory psychology courses. Participation in the experiment fulfilled a research participation requirement. Subjects had the opportunity to sign up on any one of nine identical sign-up sheets, corresponding to one of the weeks in the bounds of the study. Each sign-up sheet was then randomly matched with one of the nine conditions.

Apparatus

Twelve Erector 375 Kits were used as the experimental task.

Task

All subjects worked to complete the building of a Deep Space Radar Station, one of the models specified in the Erector Set construction manual. The task was divided into three, twenty-minute sessions, one session on each of three consecutive nights. Each night, subjects continued construction at the point where they had stopped on the previous night. Pretesting had determined that the average subject could complete the construction of model by the end of the third night. In fact, by the end of the third night, all of the subjects except for two were able to complete the model. The remaining two subjects completed 95 percent of the model. The subjects worked in individual rooms that bordered on a much larger main room.
Forms and Measures

Three forms were used during the study. The independent measures were manipulated through the Initial Intake Form (see Appendix A). Based on the Initial Intake Form that the subjects completed on the first night, the experimenter completed a phony Initial Intake Form, one for each subject, to reflect experience/inexperience, and similarity/dissimilarity, depending on the subjects' cell assignments.

Manipulation of the experience variable was accomplished in the "Experience" section of the Initial Intake Form. The experimenter circled "1" (none) or "5" (very much), depending on whether the subject was in the inexperienced or experienced condition, respectively. Additionally, if the form was completed to reflect an experienced source, the phrase "I worked with Erector Sets a lot which I was a kid" was entered in the space for listing relevant experience.

Manipulation of the similarity variable involved nine items on the Intake Form. All six of the items in the section titled "Job Enrichment Information" were involved in the similarity manipulation. To reflect similarity on all of these items, the experimenter circled the same selections on the phony forms as the subjects did on their forms.

To reflect dissimilarity on the "Job Enrichment Information" items, the following method was employed. Under "Educational Degree Aspirations," the experimenter circled "Doctorate" if the subject had circled "Bachelor's". The
experimenter circled "Bachelor's" if the subject had not.
Under "Career Aspirations," the experimenter circled "White
Collar" if the subject had not, or "Homemaker" if the subject
had. Under "Political Orientation" and "Party Orientation"
the experimenter circled the choice which the subject had not.
Under "Choice of RCE" (required company exercise), the
experimenter circled "abstention" if the subject had not, or
both "Nautilus" and "Aerobics" if the subject had. Under
"Choice of Background Music" the experimenter circled "Top
Forty" if the subject had not, or "Classical" if the subject
had.

Manipulation of the similarity variable also involved
three items in the section titled "Personal Information."
Under "Do you currently work to help finance your education?"
the experimenter circled the same choice the subject had, or
the choice the subject had not, depending on whether the
subject was in a similarity or dissimilarity condition,
respectively. Under "Home Address (City, State)" the
experimenter wrote in locations, depending on the size of the
subject's city, and depending on whether or not the subject
resided in Virginia. For example, if a subject was in the
dissimilar condition, and she resided in "Williamsburg,
Virginia," the phony Intake Form would list either "New York
City, New York" or "Boston, Massachusetts." If the subject
was in the similar condition, and she resided in
"Williamsburg, Virginia," the phony Intake Form would list
either "Chesapeake, Virginia" or "Yorktown, Virginia," etc. For those subjects living in small, out of state cities, and who were in similar conditions, a Rand McNally (1984) Road Atlas was used to find a nearby similar, small, out of state city.

Under "Please describe the nature of your three most recent salaried positions", the following guidelines dictated how the experimenter filled out the phony form. Each of the subject's responses were placed into one of three categories: clerical, service (e.g., hostess, waitress, bank teller), or other. If the subject was in the similar condition, the experimenter matched each of the subject's position listings with a position listing from the same category. If the subject was in a dissimilar condition, the subject matched each of the subject's position listings with a position listing from a different category.

Dependent measures were taken on the Task Evaluation form (see Appendix 3). This form was a combination of items adapted from the Job Descriptive Index (Bowling Green State University, 1975), the Job Diagnostic Survey (Hackman & Oldham, 1975), a question used by Vance and Biddle (1985), and two items created for the present study. Unless otherwise noted, all items took the form of five-point scales, with endpoints "not at all" and "very", and a "somewhat" midpoint.

The following descriptors from the Job Descriptive Index were adapted for use: fascinating, routine, pleasant,
challenging, frustrating, boring, simple, satisfying, and gives a sense of accomplishment. The items "How much personal satisfaction did you get from this task?" and "How much would your feelings be affected if you found out that you did poorly on this task?" were adapted from the Job Diagnostic Survey. The item "Would you return for another session of the task as part of a follow-up investigation?" was used by Vance and Biddle, and was accompanied by five response choices: "yes", "probably", "maybe", "probably not", and "no".

The items on the final form, the Employee Evaluation form (see Appendix C), were used to check the manipulations of similarity and experience. All of these items were created by the experimenter for the present study.

Procedure

First Night. Upon entering the main room, the subjects were seated and given both Erector Set instruction manuals and Initial Intake Forms. Subjects were then given some rationale before they filled out the Intake Forms. Subjects were told that the purpose of the experiment was to study some newer managerial techniques, specifically a technique whereby managerial candidates are put to work on a company's product, without the benefit of prior training or instruction, but with the aid of production manuals. In this way, subjects were told, new ways of performing and evaluating production could be discovered. After this initial orientation, subjects were
asked to fill out the Initial Intake Forms. When all forms had been completed, and a brief explanation of the task had been given, the subjects were sent into their individual rooms to work for 20 minutes on the task.

After working for 20 minutes, subjects left their rooms and completed Task Evaluation Forms. After completing these forms, the subjects were dismissed.

Second Night. On the study's second night, subjects went into their individual rooms to continue construction of the Deep Space Radar Station. Subjects in the Early Social Cue Delivery condition were told that upon entering their rooms they would find the Initial Intake and Task Evaluation Forms. These had been completed on the first night, by the subject whom they would be evaluating on the fourth night. They were instructed to study this material carefully before beginning to work. Subjects were told that they would be asked questions pertaining to these forms during the evaluation process on the fourth night. As on the first night, subjects worked for 20 minutes and then were excused.

Third Night. On the third night of the study, the subjects were again sent into the rooms to resume work on the task. After 20 minutes, subjects in the Early Social Cue Delivery groups were dismissed. Subjects in the Late Cue remained in the rooms after the 20 minutes had passed. At the end of the 20-minute session, the experimenter distributed the Initial Intake and Task Evaluation Forms to the subjects in
their rooms, and they were given instructions concerning the forms, identical to the instructions given to the subjects in the Early conditions. After the subjects had studied the forms, they were dismissed.

**Fourth Night.** On the study's fourth night, the subjects were seated as a group in the main room. They were asked to fill out the Task Evaluation Form a second time, "In order to get an idea of their final thoughts regarding the task."

They were then told to wait outside the main room; that they would be called in individually to view the work of the subjects whose forms they had studied. Upon reentering the main room, each subject was led to one of the individual rooms, containing a model completed by the experimenter prior to the start of the experiment. (The subjects, however, believed that they were viewing the work of one of the other subjects.) After viewing the work in the individual room, each subject was given an Employee Evaluation Form, and was told to complete it in a classroom across the hall from the main room. After all subjects had gone through this process, and had completed the Employer Evaluation Forms, the experimenter entered the classroom and debriefed the subjects.
RESULTS

Two types of analyses were conducted. For those variables measured once, at the end of the fourth day, the analyses were 2 (time of cue delivery) x 2 (source similarity) x 2 (source experience) between subjects, analyses of variance (ANOVAs). These variables were involved in manipulation checks. For variables measured twice, once after the first night, and again after the fourth night, the analyses were 2 (time of cue delivery) x 2 (similarity) x 2 (experience) x 2 (time on task), mixed model ANOVAs, with time on task being the repeated measure.

The data from all of the subjects who completed the four nights were involved in the analyses, N=72. Cell sizes ranged from n=8 to n=10.

Manipulation Checks

The Initial Intake and Task Evaluation Forms shown to the subjects were intended to create conditions of similarity and dissimilarity; experience and inexperi ence. In their responses to the five-point scale item, "How similar to yourself was this employee?", subjects in the similar source conditions perceived the source to be more similar to themselves (M_sim = 4.05; M_dissim = 2.05), F (1,64) = 59.96, p < .001, than did subjects in dissimilar source conditions. In support of a manipulation of similarity, subjects in the
similar source conditions felt the source of cues to be more, "similar to their friends" (M_{sim} = 3.48; M_{dissim} = 2.40), \( F \) (1,64) = 24.81, p < .001, and felt that they would "get along better" with the source (M_{sim} = 4.18; M_{dissim} = 3.18), \( F \) (1.64) = 32.55, p < .001, than did subjects in the dissimilar source conditions. There were no significant interactions on these variables. These results indicated that the conditions of similarity/dissimilarity were created.

In response to, "How experienced at such tasks was this employee?", subjects in experienced source conditions perceived the source to be more experienced (M_{Exp} = 4.43, M_{Inexp} = 1.40), \( F \) (1.64) = 257.03, p < .001, than did subjects in the inexperienced source conditions. Subjects in experienced source conditions expected the source to be better at performing such tasks (M_{Exp} = 4.60, M_{Inexp} = 3.18), \( F \) (1,65) = 45.70, p < .001, than did subjects in the inexperienced source conditions. There were no significant interactions on these variables. These results indicated that the desired conditions of experience/inexperience were created.

**Dependent Variables**

Nine out of sixteen dependent variables showed a significant change on the time on task (repeated measure) variable. Reactions on these variables became more positive
over time. These variables, and their accompanying $F$ values are displayed in Table 1. In the analysis of many of these variables, there was an interaction of time on task with similarity, time of cue delivery, and experience. These interactions are discussed in terms of the relevant hypotheses.

**Hypothesis 1.** The results supported the hypothesis that subjects who received social cues early in the task would show a greater increase in measures of satisfaction than would subjects who received social cues late in the task. The following results are summarized in Table 2. A significant two-way interaction was found between time of social cue delivery and time on task, for subjects' satisfaction with the task, $F(1, 64) = 8.94$, $p < .01$. The increase in task satisfaction, from the first measure to the second, was greater for subjects who received social cues early in the task than for subjects who received social cues late in the task.

A similar significant interaction between time of cue
delivery and time on task, for the measure of personal satisfaction, was found, with $F (1,64) = 4.08$, $p < .05$. Subjects who received social cue information early in the task showed a greater increase in personal satisfaction than did subjects who received social cue information late in the task.

Two supplementary measures also supported the first hypothesis. A significant interaction was found between time of social cue delivery and time on task, in the analysis of subjects' sense of accomplishment, $F (1,64) = 7.29$, $p < .01$. Subjects who received early social cues increased their sense of accomplishment due to the task more than subjects who received late social cues.

Finally a significant interaction was found between the time of social cue delivery and time on task in the analysis of how much the subjects' feelings would be affected if they found out that they had done poorly on the task, $F (1,64) = 9.12$, $p < .005$. Subjects who received social cues early in the task expressed an increase in the belief that their feelings would be affected, while subjects who received social cues late in the task expressed a decrease in this belief.

**Hypothesis 2A.** The results supported the hypothesis that those subjects who received social cues from similar sources would show a greater increase in task satisfaction than would those subjects who received social cues from dissimilar
The following results are summarized in Table 3. A significant interaction was found between the similarity of the social cue source, and time on task, in the analysis of subjects' perceived task satisfaction, $F(1, 64) = 11.59$, $p = .001$. Subjects who received social cues from similar sources showed a greater increase in task satisfaction than did subjects who received cues from dissimilar sources.

A similar interaction was found between similarity of cue source and time on task in the analysis of personal satisfaction, $F(1, 64) = 3.38$, $p = .07$. Subjects who received social cues from similar sources showed a greater increase in personal satisfaction than did subjects who received social cues from dissimilar sources.

**Hypothesis 2B.** The results did not support for the hypothesis that social cues given early in the task by similar sources, would serve to increase task satisfaction, but such cues delivered late in the task would have less of an effect. The $F$ values testing the interactions between similarity, time of cue delivery, and the time on task variable, were not significant in the analysis of all the dependent measures ($F$'s $< 0$).

**Hypothesis 3A.** No support was found for the hypothesis that subjects who received social cues from experienced
sources would show a greater increase in satisfaction than would those subjects who received social cues from inexperienced sources. The interactions between the experience variable and the time on task variable, were not significant for all of the dependent measures (F's < 1).

**Hypothesis 3B.** No support was found for the hypothesis that level of experience would interact with the time of cue delivery. It was predicted that social cues, given early in the task by experienced sources, would serve to increase task satisfaction, but such cues given late in the task would have less of an effect. The interactions between level of experience, time of cue delivery, and time on task, were not significant in the analysis of all the dependent measures (F's < 0).

**Additional Findings.** There were two significant three-way interactions that did not test any of the hypotheses. The first involved the similarity, experience, and time on task variables. In response to, "How much would your feelings be affected if you found out that you did poorly on this task?", subjects in the experienced source conditions showed a decrease in the belief that their feelings would be affected if the source was similar, but no change in this belief if the source was dissimilar. Subjects in the inexperienced source conditions showed an increase in the belief that their feelings would be affected if the source were similar, but a slight decrease in this belief if the
source was dissimilar, $E (1,64) = 10.29, p < .005$. Cell means for this interaction are displayed in Table 4.

Insert Table 4 about here

In response to, "Would your opinion of yourself go up if you found out that you did well on this task?", subjects in experienced source groups showed a decrease in the belief that their opinions of themselves would go up if they received the cue information early in the task, but showed an increase in this belief if they received the cue information late in the task. Subjects in the inexperienced source conditions showed an increase in the belief that their opinions of themselves would go up if they received the cue information early in the task, but showed no change in this belief if they received the cue information late in the task $E (1,64)=4.00, p = .05$. Cell means for this interaction are displayed in Table 5.

Insert Table 5 about here
DISCUSSION

The data supported the Social Information Processing (SIP) model of job satisfaction. More specifically, the results supported Vance and Biddle's (1985) contention that the effects of social cues vary as a function of the time frame in which they are delivered. Finally, the results indicated that social cue impact depends on the similarity of the source and receiver of the cues.

The core of Salancik and Pfeffer's (1978) SIP model is that attitude formation is mediated by the social context of the workplace. In the workplace created in this study, the social context was extremely positive. The social cues given to each subject were from a worker who was completely satisfied with the task. Examination of Table 1 reveals that subjects' attitudes towards the task were significantly altered. Because objective task characteristics remained relatively constant, it is safe to assume that the positive social cues were responsible for the positively valued opinion changes.

It might be argued that the objective task characteristics of the Erector Set task changed over time, thus confounding the social cue manipulation. Examination of the task requirements, however, suggests that the task was nearly identical for each of the three sessions during which subjects were building their models. The same types of nuts were
screwed into the same types of bolts.

Another possibility that must be recognized is the possibility that the task became more intrinsically satisfying as it neared completion. This possibility does not account, however, for the differential changes in satisfaction experienced by subjects in different experimental conditions. Again, it is safe to assume that the social cues, rather than the changes in objective task characteristics, were responsible for the positively valenced opinion changes.

Vance and Biddle's (1985) extended the boundaries of SIP research by finding that the amount of time the subjects had spent on a task, prior to the delivery of the social cues, would determine the effect (or lack of effect) of the cues. They suggested that early attitudes are relatively stable, whether based on objective task characteristics alone, or on social cues incorporating objective task information. The results of this study corroborate Vance and Biddle's findings, but suggest that the earliest attitudes are not stable.

Table 2 displays the interaction between time of social cue delivery and time on task (repeated measure), for measures of subjects' task satisfaction, personal satisfaction, sense of accomplishment, and belief that their feelings would be affected if they were to find out that they had done poorly on the task. Subjects who received the social cue information early in the task showed significant, positively valued changes on these measures, however subjects who received cues
late in the task showed no such changes. This suggests that subjects' initial opinions regarding the task, which were assessed after the first night, were not stable, but were subject to significant changes.

Such changes are likely to occur if subjects receive positive social cues early enough in the task. In the absence of these cues, subjects' initial opinions, based primarily on task characteristics, become more stable. This crystalizing of opinions seems to occur quickly, as evidence by both this study and the Vance and Biddle study.

Interestingly, this pattern is predicted by social comparison theory. Festinger (1954) postulated that in the absence of objective, nonsocial, criteria, individuals are driven to compare their opinions with the opinions of others. Early in the task, subjects had not spent enough time working to have formed stable opinions based on objective task characteristics. Subjects who received social cues early in the task used this information as they formed more stable, crystallized opinions. Subjects who received social cues late in the task had adequate time to form and stabilize their opinions using objective nonsocial criteria, and so they did not need to use the subjective opinion of others.

The major purpose of this study was to extend research on the SIP model by examining the influence of similarity and experience of the social cue source as variables, within the context of social comparison theory. Of these two variables,
strong support was found for the differential effects of similarity and dissimilarity. Table 3 displays the interaction between similarity and time on task for measures of task satisfaction and personal satisfaction. Social cues given by similar sources increased satisfaction, but social cues given by dissimilar sources did not. These results are consistent with social comparison theory, which posits that people prefer to seek and heed the opinions of others who are similar on relevant attributes.

Of interest is the lack of interaction between time of cue delivery, and similarity of cue source. As stated earlier, according to social comparison theory, the opinions of others are predicted to have greater impact early in a task. In the present study, however, similar sources had a greater effect than dissimilar sources regardless of whether these cues were delivered early or late. One plausible explanation for this lack of interaction may be inadequate power, due to too small a sample size. Firm conclusions regarding the interaction (or lack thereof) between time of cue delivery and similarity of cue source should be based on a larger sample size.

In this study, however, the time of cue delivery and similarity variables functioned independently of each other, but both were capable of producing social cue effects. It is not possible to determine with certainty whether these variables function according to the rules of social comparison
theory, but the pattern of data fits those suggested by social comparison theory.

For both similarity and time of social cue delivery variables, those dependent measures which were more closely tied to the task itself were not as sensitive to change. No effects were found for how fascinating, routine, pleasant, challenging, frustrating, boring or simple the subjects found the task to be. All of the effects were found for measures which were less tied to the task, measures which might be described as affective measures: task satisfaction, personal satisfaction, sense of accomplishment, and effects of personal performance on subjects' feelings.

One interpretation of these results is that subjects may have been able to quickly determine whether or not the task was boring, fascinating, simple, etc. Subjects in the early cue conditions worked on the task for twenty minutes before receiving social cues. This short amount of time may have been long enough for subjects to form relatively stable opinions regarding the task oriented variables. Subjects may have required more time to form opinions on the more affective measures, such as satisfaction, thus allowing for the potential influence of the social cues.

A second interpretation follows directly from the SIP, which postulates that the social context can function in a variety of ways. The social environment can provide information on specified task dimensions (boring, fascinating,
challenging), and/or it can simply provide direct evaluation of the work setting along positive or negative dimensions (Pfeffer, 1981). In the context of this study, perhaps the social cues provided information on the task as a whole, i.e., that it was satisfactory, rather than specific task related dimensions. This might result in changes in the more affective measures, but less change in specific task related measures.

Although conditions of experienced/inexperienced sources were created, the experience variable, unlike the similarity and time of cue delivery variables, failed to yield the predicted effects. Contradictory to the hypothesis, subjects who received social cues from experienced sources did not show increases in satisfaction any greater than did subjects who received social cues from inexperienced sources.

Furthermore, experience was predicted to interact with time of cue delivery. It was postulated that by the time subjects in the late cue delivery conditions received the cues, they would have had enough experience of their own that experience of the source, in itself, would not cause changes in opinion. This interaction, too, failed to be supported by the data, because apparently subjects in early conditions did not view source experience as cause for changes in opinion.

One possible explanation for the inability of experienced cue sources to affect subjects' attitudes may be related to the similarity variable. Since the vast majority of the
subjects had never had experience with the Erector Sets, perhaps they viewed experienced cue sources as quite different from themselves. It has already been stated that cues delivered by dissimilar sources were not influential.

The data do not support this explanation however. Subjects who received cues from experienced sources did not rate the source as more dissimilar than did subjects who received cues from inexperienced sources. A more plausible explanation for the lack of experience effects is that subjects may not have believed that experience was a relevant characteristic on which to base opinions, in the domain of "Erector set model construction."

Although the experience variable was not capable of producing social cue effects, the present study did extend the parameters delimiting social cue effects, to include similarity of the social cue source. Further, the study presented an alternative to prior laboratory research done on the SIP model. While not a field study, the present study used a work setting extending over four days. This was done in order to improve the external validity of the research, while maintaining the internal validity of a laboratory setting.

The purpose of attempting to increase the external validity was to facilitate the application of this research to actual work settings. The results of this study have practical implications. First, it seems obvious that when new
employees enter the workplace, the chances of their forming positive opinions will be increased if they encounter a positive social context. Second, it would appear that the sooner the new employee encounters a positive context the better, especially if actual job characteristics are less than satisfactory. Third, it might prove beneficial for the new employee to be introduced to similar coworkers (but only if these coworkers harbor favorable attitudes).

Social Information Processing theory is proving to be a complex set of ideas, in need of further clarification. First, what would the effects be of similar or dissimilar sources delivering negative or mixed cues? Second, what effects would social cues have if delivered before the worker had any experience with the task in question? Finally, perhaps the variables used in this study could be adapted for use in a field study.

Perhaps the strongest conclusion stemming from this study is that research in the industrial/organizational field should not neglect the wealth of information to be found in the field from which it originated. Social psychology offers a broad theoretical and empirical data base. Social comparison theory is but one of a number of social psychological theories that could be applied to Social Information Processing theory.

In the majority of the laboratory studies on the SIP theory, subjects have had no experience with the idiosyncratic tasks involved. Thus subjects' attitudes regarding the task
are formulated as they experience the task. In studying the principles involved in these tasks, theories geared toward attitude formation (i.e., social comparison theory), may be more appropriate than attitude change theories. In actual work situations, however, it is more likely that some workers would enter into the workplace with stable attitudes. In these situations, social communications might function in attitude change, as well as in attitude formation.

The numerous attitude change theories offer interesting variables for study in the context of SIP theory. These range from communicator credibility and group variables (Hovland, Janis & Kelley, 1953) to congruity between the source and the receiver of the communication (Osgood & Tannenbaum, 1955). If this study is any indication, further studies combining prominent social psychological principles and aspects of SIP theory are called for, and should prove fruitful.
References

Baron, R.S., Sanders, G. S., & Baron, P. H. (1975). Social comparison reconceptualized: Implications for choice shifts, averaging effects, and social facilitation. Unpublished manuscript, University of Iowa.


processing approach to job attitudes and task design.  


APPENDICES
Table 1

**Dependent Measures Showing a Significant Change on the Time on Task Variable Indicating More Positive Reactions to the Task**

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How fascinating did you find this task to be?</td>
<td>11.51**</td>
</tr>
<tr>
<td>2. How pleasant did you find this task to be?</td>
<td>29.41***</td>
</tr>
<tr>
<td>3. How challenging did you find this task to be?</td>
<td>4.54*</td>
</tr>
<tr>
<td>4. Did this task provide a sense of accomplishment?</td>
<td>21.02***</td>
</tr>
<tr>
<td>5. How satisfying did you find this task to be?</td>
<td>27.80***</td>
</tr>
<tr>
<td>6. How much personal satisfaction did you get from this task?</td>
<td>23.12***</td>
</tr>
<tr>
<td>7. In terms of quality, how well do you feel you did on this task?</td>
<td>6.09*</td>
</tr>
<tr>
<td>8. In terms of quantity, do you feel that you made reasonable progress on this task?</td>
<td>17.79***</td>
</tr>
<tr>
<td>9. Do you feel that the credit you receive for participating in this experiment is worth the time you spent as a subject?</td>
<td>13.09**</td>
</tr>
</tbody>
</table>

*p < .05  
**p < .01  
***p < .001
Table 2

Mean Ratings For Dependent Measures as a Function of Time of Cue Delivery and Time on Task

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Time of Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time on Task</td>
</tr>
<tr>
<td>Task Satisfaction</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Personal Satisfaction</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Sense of Accomplishment</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Feelings Affected</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Note. For time on task, 1 = after first night, 2 = after fourth night.
Table 3  

Mean Ratings for Dependent Measures as a Function of Similarity and Time on Task

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Similarity</th>
<th>Time on Task</th>
<th>Similar</th>
<th>Dissimilar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Satisfaction</td>
<td></td>
<td>1</td>
<td>2.9</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>4.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Personal Satisfaction</td>
<td></td>
<td>1</td>
<td>2.7</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3.2</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Note. For time on task, 1 = after first night, 2 = after fourth night
Table 4

**Mean Ratings For Belief That Feelings Would Be Affected As a Function of Similarity and Experience**

<table>
<thead>
<tr>
<th>Experience</th>
<th>Time on Task</th>
<th>Similar</th>
<th>Dissimilar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced</td>
<td>1</td>
<td>3.30</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.84</td>
<td>2.78</td>
</tr>
<tr>
<td>Inexperienced</td>
<td>1</td>
<td>2.33</td>
<td>2.80</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.00</td>
<td>2.69</td>
</tr>
</tbody>
</table>

Note. For time on task, 1 = after first night, 2 = after fourth night
Table 5

Mean Ratings for Belief That Opinion of Self Would Go Up, As a Function of Time of Cue Delivery and Experience

<table>
<thead>
<tr>
<th>Experience</th>
<th>Time on Task</th>
<th>Time of Cue Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>Late</td>
</tr>
<tr>
<td>Experienced</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2.54</td>
<td>3.30</td>
</tr>
<tr>
<td>2</td>
<td>3.30</td>
<td>3.65</td>
</tr>
<tr>
<td>Inexperienced</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2.75</td>
<td>3.60</td>
</tr>
<tr>
<td>4</td>
<td>3.05</td>
<td>3.65</td>
</tr>
</tbody>
</table>

Note. For time on task, 1 = after first night, 2 = after fourth night
TASK EVALUATION

How fascinating did you find this task to be?

1  2  3  4  5
not at all somewhat very

How routine did you find this task to be?

1  2  3  4  5
not at all somewhat very

How pleasant did you find this task to be?

1  2  3  4  5
not at all somewhat very

How challenging did you find this task to be?

1  2  3  4  5
not at all somewhat very

How frustrating did you find this task to be?

1  2  3  4  5
not at all somewhat very

How boring did you find this task to be?

1  2  3  4  5
not at all somewhat very

How simple did you find this task to be?

1  2  3  4  5
not at all somewhat very

Did this task provide a sense of accomplishment?

1  2  3  4  5
not at all somewhat very
How satisfying did you find this task to be?

1 2 3 4 5
not at all somewhat very

How much personal satisfaction did you get from this task?

1 2 3 4 5
not at all somewhat very

In terms of quality, how well do you feel you did on this task?

1 2 3 4 5
not at all somewhat very

In terms of quantity, do you feel that you made reasonable progress on this task?

1 2 3 4 5
not at all somewhat very

How much would your feelings be affected if you found out that you did poorly on this task?

1 2 3 4 5
not at all somewhat very

Would your opinion of yourself go up if you found out that you did well on this task?

1 2 3 4 5
not at all somewhat very

Did you feel that the credit you receive for participating in this experiment is worth the time you spend as a subject?

1 2 3 4 5
not at all somewhat very

Would you return for another session of the task as part of a follow-up investigation?

1 2 3 4 5
yes probably maybe probably not no
EMPLOYEE EVALUATION

How would you rate the overall quality of the work?

1  2  3  4  5
poor quality average high quality

In terms of quantity of work completed, did this employee make reasonable progress on the task?

1  2  3  4  5
not at all somewhat very

Judging from the employee's responses on the Employee Intake Form, how experienced at tasks similar to this one was the employee?

1  2  3  4  5
not at all somewhat very

Judging from the employee's responses on the Employee Intake Form, how good at tasks such as this one would you expect this employee to be?

1  2  3  4  5
not at all somewhat very

How similar to yourself do you think this employee is?

1  2  3  4  5
not at all somewhat very

How similar to your friends do you think this employee is?

1  2  3  4  5
not at all somewhat very

How well do you feel you would get along with this employee?

1  2  3  4  5
not at all somewhat very
**EMPLOYEE INTAKE FORM**

**PERSONAL INFORMATION**

<table>
<thead>
<tr>
<th>Desk Number</th>
<th>School Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School Address (dorm or street)</th>
<th>Home Address (City, State)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Have you ever been convicted of a felon or misdemeanor?</th>
<th>Are you now, or have you ever been married?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Please describe the nature of your three most recent salaried positions:

1) 

2) 

3)

**JOB ENRICHMENT INFORMATION**

<table>
<thead>
<tr>
<th>Educational Degree Aspirations</th>
<th>Career Aspirations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>Blue Collar</td>
</tr>
<tr>
<td>Doctorate</td>
<td>Homemaker</td>
</tr>
<tr>
<td>Master's</td>
<td>White Collar</td>
</tr>
<tr>
<td>Other</td>
<td>Part-Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Orientation</th>
<th>Party Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal</td>
<td>Democratic</td>
</tr>
<tr>
<td>Conservative</td>
<td>Republican</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choice of RCE</th>
<th>Choice of Background Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nautilus</td>
<td>Rock</td>
</tr>
<tr>
<td>2 Mile Run</td>
<td>Classical</td>
</tr>
<tr>
<td>Aerobics</td>
<td>Jazz</td>
</tr>
<tr>
<td>Abstention</td>
<td>&quot;Top Forty&quot;</td>
</tr>
</tbody>
</table>
EXPERIENCE

How much relevant experience do you have with such tasks?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td></td>
<td></td>
<td></td>
<td>very much</td>
</tr>
</tbody>
</table>

If you circled 4 or 5, please list relevant experience:

______________________________

______________________________

______________________________
VITA

Steven Michael Madenberg


In August 1986, the author entered the University of South Florida, doctoral program in Industrial/Organizational Psychology.