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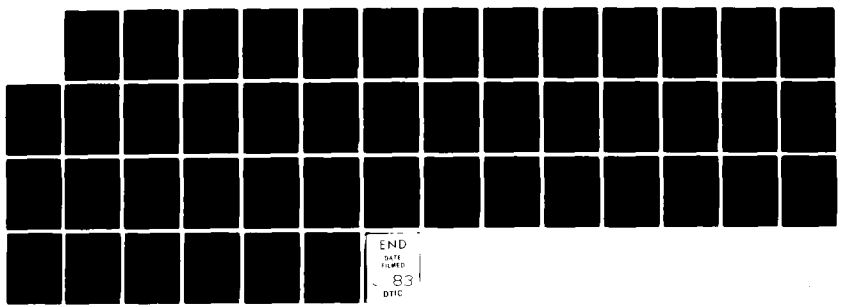

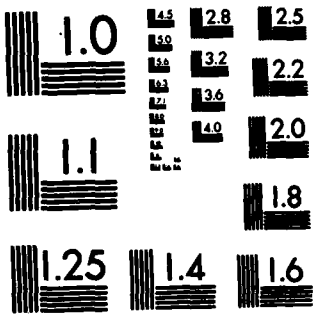

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The Social Information Processing Model of Task Design: A Review of the Literature

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and
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This paper reviews ten studies dealing with the effects of social and information cues in the workplace on employee task perceptions, evaluations, and reactions. The review employs both judgmental and meta-analytic approaches to interpreting the findings. The two basic conclusions of the review are that social and information cues have been shown to consistently influence perceptions and affect, but that the area needs additional theoretical articulation and integration. Unanswered questions and suggestions for future research are identified.

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The Social Information Processing Model of Task Design: A Review of the Literature

Task design was a primary topic of research in organization science during the 1970's and all signs indicate a continued interest for the 1980's. Much of this research was developed from the task attributes framework (Hackman & Lawler, 1971). Essentially, this framework suggests that: (1) jobs can be characterized by a number of objective attributes such as variety, autonomy, feedback, identity, and significance, (2) employees perceive and react to these objective attributes and, (3) affect, motivation, and perhaps performance are positively correlated with the presence of these objective attributes. This body of literature has been reviewed in depth by Aldag & Brief (1979), Griffin (1982), Hackman & Oldham (1980), and Roberts & Glick (1981).

In recent years, however, another framework has emerged which examines task design processes from an alternative point of view. This framework, referred to as the social information processing (SIP) model, was developed by Salancik & Pfeffer (1977, 1978). The SIP model argues that the salient content and dimensions of jobs may be partially the result of perceptions that are subject to social influences. In particular, Pfeffer (1981, p. 10) notes the four basic premises of the SIP model:

> 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 weight 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 dimensions, leaving it to the indivi-

dual to construct a rationale to make sense of the generally shared affective reactions.

Thus, the SIP model provides a perspective on task design processes that questions the theoretical underpinnings of the task attributes framework. In addition to assuming that employees perceive and react to an objective workplace reality, the argument suggests that workplace realities are also partially constructed from information provided by the social context of the workplace.

Blau and Katerberg (1982) recently provided a brief overview of the SIP literature. Their primary objective was to critically analyze unresolved issues regarding the SIP approach and to suggest avenues for future research. The purpose of this paper is to provide a broader review of the SIP literature and to include a number of studies not summarized by Blau and Katerberg. In addition, a more detailed synthesis of the literature is provided in an effort to develop a roadmap for future theory and research. There is a clear need for such a review and synthesis so that researchers in the field can determine: (1) the efficacy of the SIP framework, (2) the extent to which research strategies to this point have proven fruitful and, (3) future research needs and directions. Hence, the purpose of this paper is to review the empirical laboratory and field research conducted to date derived from the social information processing framework.

Scope of the Review

The literature review includes empirical studies relating various forms of social information about a task to employee perceptions of the task. To be included in this review, a study had to (1) recognize the input of social information into the assessment of task characteristics and (2) empirically test the degree of association between the informational cues and attitudin-

al and/or behavioral repsonses. Studies which were designed to measure the effects of individual differences without providing informational cues to the subjects (e.g., Wanous, 1974; Stone, Mowday, & Porter, 1977) were not included in the review.

While both socialization and environmental enactment do relate to reality construction, their literature is also not included here for a variety of reasons. The socialization literature is not included because it has recently been reviewed elsewhere (Fisher & Weekly, 1982) and because its boundaries extend far beyond those of the SIP framework. The enactment literature is not included because it has primarily focused on macro processes and has yet to be translated to the individual level. We will, however, attempt to relate these bodies of literature to the SIP framework at the conclusion of the review.

Results of the Review

A total of ten studies were located which met the criteria specified above. The essential characteristics of the ten studies are summarized in Table 1. The table indicates the type of study, size and nature of the sample, independent variable(s), moderating variable(s), dependent variable(s), and results. The results, in turn, are summarized as providing support, mixed support, or no support for the presumed independent-dependent variable(s) linkages. Research finding positive and significant main effects for social cues are called supportive. Mixed support is provided by those studies which identified few significant effects, found results that were not as predicted, or reported contradictory findings. Studies finding no significant main or interactive effects are summarized as providing no support for the SIP.

Insert Table 1 About Here

Types of Studies

The most frequently used methodology to test the SIP model to date has been the laboratory experiment. Seven of the studies were laboratory experiments, while two were field surveys and one was a field experiment. Only one paper reported using more than one method of studying the relationships between independent and dependent variables. Griffin (1983) used both a laboratory and a field experiment to assess the influence of the leader on subordinates' perceived task characteristics.

All of the experiments which manipulated both objective task characteristics and social information cues about the task found significant main effects for both factors on perceived task characteristics. Interactions were observed in some experiments, although their influence was not subject to consistent interpretation. A more thorough discussion of the variables and their consequences for the objective-perceived task characteristics relationship will be presented later.

Both field surveys (O'Reilly, Parlette, & Bloom, 1980; Oldham & Miller, 1979) and one other laboratory experiment (Slusher & Griffin, 1980) focused on inferred comparison processes rather than a systematic and observable manipulation of informational cues. While the results found in these studies are generally less consistent than those obtained in the experiments which directly manipulated informational cues, the fact that they are generally in the predicted directions lends indirect support to the consistent findings obtained in the remaining laboratory experiments and the field ex-

periment.

Sample Characteristics

Sample sizes ranged from 41 to 658. Seven of the studies used students as subjects, two used production workers, and one used nurses. The hazards of using students as representative of "real" people representing actual work situations need not be repeated here. The three studies based on non-student samples were the field experiment and field surveys. The results of the field research do not provide the strength of support for the social influencing of perceptions found in the laboratory experiments in which student subjects were used. One explanation for this, as suggested by White & Mitchell (1979) and Shaw & Weekley (1981), is that familiarity with the task may reduce the influence of and need for social information.

Independent Variables

The most common methods for varying informational cues in the ten studies were to manipulate the source of the cues and the media for transmitting those cues. Cues were provided by the leader (Griffin, 1983), researcher (O'Connor & Barrett, 1980), or confederate co-workers (O'Reilly & Caldwell, 1979; Shaw & Weekley, 1981; Weiss and Shaw, 1979; White & Mitchell, 1979). The co-workers gave verbal cues in two studies, written comments in one study, and recorded comments in one study. All types and sources of information studied appear to influence the perceptions of the task in the laboratory. The frequency and salience of social cues may differ between the laboratory and job, however. Salient cues may have greater impact on attitudes and behavior on an actual job where continued employment and promotions are contingent on at least partially accurate perceptions of

tasks than in the laboratory where most of the current research was conducted. White & Mitchell also state that the effect of cues from "an unknown co-worker in a short work (experimental) session would intuitively seem to be less important than the comments of a co-worker with whom one works 8 hours a day, 5 days a week, because the ad hoc nature of the present group probably produced far less social pressure to conform (than long term work groups)" (1979, p. 8). However, in a test of individuals with work experience, Shaw & Weekley found that when a task consisted of characteristics which were similar to characteristics of a previously performed task, it became more difficult for social influence processes to change perceptions of task characteristics (1981, p. 65). Given the conflicting findings, it seems that the extent to which findings regarding sources of social cues will generalize to an actual job is not yet clear.

Four of the seven experiments altered objective elements of the task in addition to social cues. That is, the task was either enriched (e.g. decide about acceptability of applicant, receive feedback from job) or unenriched (e.g. record information). In all instances, variations in objective task characteristics were reflected in subjects' perceptions of the tasks.

Two of the studies used self-report measures of the subject's job scope relative to another's job scope as the independent variable influencing perceived task characteristics. One field survey (Oldham & Miller, 1979) found jobs of greater complexity than the comparison other's produced lower satisfaction and higher performance. Jobs with less complexity than the comparison other's produced mixed results. A laboratory experiment (Slusher & Griffin, 1980) found no effects on satisfaction and mixed results on task characteristic measures when job scope varied relative to another's job

scope. The current research seems to raise some interesting questions about the comparison of jobs and the consequences for perceptions of tasks. For example, what mechanisms do people use in seeking out information, how do verbal cues compare with nonverbal cues in influencing perceptions, and so forth?

Individual Differences

Four of the studies reviewed explored the effects of individual differences on the objective-perceived task characteristic relationship. These variables are presumed to influence the extent to which different kinds of individuals perceive and react to different kinds of information. Some studies treat these as moderating variables, whereas others examine main effects. Field dependence was the only individual difference variable examined in more than one study. In both cases (Weiss & Shaw, 1979; O'Connor & Barrett, 1980), field dependent individuals were found to be more receptive to social cues than were field independent subjects. Other individual differences that were found to moderate the perception of task characteristics were self-esteem (low self-esteem individuals were more suceptible to social information) (Weiss & Shaw, 1979) and individual characteristics (e.g. age, total income, job tenure, education, frame of reference, and job attitudes) (O'Reilly et al., 1980).

Individual differences which showed inconclusive evidence of influencing the perception of task characteristics include the needs for autonomy, achievement, affiliation, and dominance (O'Reilly & Caldwell, 1979), and mental ability and intrinsic work motivation (O'Connor & Barrett, 1980). O'Reilly & Caldwell specifically found inconclusive results for a variety of individual needs. O'Connor & Barrett (1980) found moderating effects for

ability and motivation using one measure of perceived task characteristics but not on an alternative measure.

O'Reilly et al. (1980) examined the effects of attitudes toward the profession on task perceptions among nurses. Professionalism was defined as the degree to which individuals used their professional group as a major referent, believed in public service, believed in self-regulation, and reported a sense of calling to the field. The professionalism variables explained 24 percent of the variation in assessments of task significance. Significant beta coefficients were also reported for task identity and motivating potential scores.

The limited number of studies examining the effects of individual differences seem to indicate support for the efficacy of such variables. However, more studies of individual differences also seem necessary to better determine the degree to which the reported differences enter into the perceptual process.

Dependent Variables

A variety of dependent variables have been evaluated in the ten studies. The variables most frequently measured were task characteristics (9 studies), satisfaction (7 studies), and performance (4 studies). Measures of intention to quit and role ambiguity were each included in one study.

Task Characteristics Perceptions. The Job Diagnostic Survey (JDS) (Hackman & Oldham, 1975) was used to measure task characteristics in six studies. The Job Characteristics Inventory (JCI) (Sims, Szilagyi, & Keller, 1976) was used as a measure of task characteristics in four studies. Table 2 summarizes the extent to which objective task attributes and/or informational cues affect task perceptions as measured by the two widely-used

instruments.

Insert Table 2 About Here

The literature suggests that some task characteristics are more susceptible (as dependent variables) to social influence than are other characteristics. O'Reilly & Caldwell (1979), for example, found that informational cues were more influential in determining perceptions of task significance, skill variety, and autonomy than were the more objective task characteristics. Unfortunately, it is difficult to intuitively discern from the studies exactly which job characteristics are most readily influenced by task characteristics or by social cues. Hence, a meta-analysis was conducted in an effort to develop additional insights.

Meta-analysis is a statistical method for numerically combining the results of independent studies for purposes of integrating findings and theory development (Cooper, 1979; Cooper & Rosenthal, 1980). Meta-analysis provides a more rigorous and systematic method for making inferences from empirical studies than the intuitive methods frequently used in literature reviews. Meta-analysis may be conducted on a group of studies when "(a) they share a common conceptual hypothesis or (b) they share operations for the realization of the independent or dependent variables" (Cooper, 1979, p. 133). The studies reviewed in Table 2 meet these criteria by (a) examining the changes in perceived task characteristics which result from (b) the manipulation of social cues and/or differences in objective characteristics of the task.

The meta-analysis procedure used was outlined by Cooper (1979). The

probability levels from appropriate studies were transformed to Z scores (standard normal deviates) and then related to the number of studies reviewed. The formula for combining studies is:

$$Z_m = \frac{Z_1 + Z_2 + \ldots + Z_n}{\sqrt{N}}$$

where Z_m = the standard normal deviate for the meta-analysis; $Z_1 \ldots Z_n$ the standard normal deviate for each study included; and N = the total number of studies included (Cooper, 1979, p. 134). According to Cooper, the procedure is more precise than counting probability levels and utilizes data reported by the authors of the original studies.

The results of this analysis are shown in the final column of Table 2. Comparing the four dimensions of the JCI and the five dimensions of the JDS reveals a striking difference in the variance in perceived task characteristics which can be attributed to variations in task characteristics and social cues. Of the nine measures, four are significantly influenced by objective task variations at the .05 level. Seven of the nine measures show significant variations as a result of manipulation of social cues. The two remaining measures, task identity and feedback, are shown to be significant by the JCI but only approach significance ($p = .13$) for the JDS.

It is also interesting to note from the meta-analysis results that the common dimensions of the JCI and JDS differ in their levels of significance. In all but one instance (autonomy resulting from manipulation of task characteristics), the JCI showed smaller probability levels than the JDS. While the differences are not especially large, they suggest that

there are different results obtained regarding social information cues when the JCI is utilized to measure task characteristics. The differences in feedback and task identity variations would not be significant using JDS measures. Other task characteristics would be only moderately significant using JDS measures. The differences are more sizeable when comparing the effects of social information cues, perhaps indicating that perceived task characteristics as measured by the JCI are more sensitive to influence by social information.

Satisfaction. Of the seven studies which measured aspects of job satisfaction, five different measures were used. Subscales of the JDS were used in three studies. The Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967) was used in two studies. Study-specific instruments were utilized in two instances. In all studies where social information cues were manipulated, perceived job satisfaction was influenced. In the two studies in which the job complexity/scope was varied relative to a job being performed by a fellow worker, no effect on satisfaction was observed in one instance (Slusher & Griffin, 1980) and decreased satisfaction was found in one study, if one's job complexity was greater than the job complexity of a comparative other (Oldham & Miller, 1979).

A number of recent studies have questioned the ability of current instruments (e.g., JCI, JDS, MSQ) to discriminate between task design constructs and/or facets of satisfaction (Aldag, Barr, & Brief, 1981; Roberts & Glick, 1981). Ferratt, Dunham, & Pierce (1981) demonstrated empirically this lack of discriminant validity and further questioned the ability of commonly used instruments to distinguish between the description of task characteristics and the evaluation of jobs as measured by job satisfaction.

These authors suggest that results which show changes in job satisfaction associated with changes in task design must be interpreted with caution. Studies which measure task characteristics and satisfaction by the same method (i.e., a questionnaire) are especially subject to confounding as a result of common method variance. Similarly, correlations between task perceptions and satisfaction could also be the result of a common causal variable. Again, the result would be a spurious upward biasing of the perception-satisfaction correlations.

Performance. The influence of task characteristics on performance is a study in contradictions. Of the four studies assessing performance, one (Griffin, 1983) found evidence of a main effect for objective task characteristics. Two of the four studies found no main effects for informational cues on performance (Shaw & Weekley, 1981; Griffin, 1983). White & Mitchell (1979) showed an increase in productivity related to social cues. Oldham & Miller (1979) reported that individuals with jobs of greater complexity than their comparison other showed higher productivity while those employees with lower job complexity relative to others were lower producers. A thorough discussion of the relationship between task characteristics and performance was recently completed by Griffin, Welsh, & Moorhead (1981) and will not be repeated here. What does seem to be evident, however, is that a more precise formulation of task design and performance relationships is needed.

In summary, the dependent variables most commonly studied in association with variations in objective task characteristics and social information cues are perceived task characteristics, satisfaction, and performance. Meta-analysis suggests that both objective characteristics of the

task and informational cues may influence satisfaction, although common method variance may have inflated the relationships in the field surveys. Meta-analysis also suggests that task characteristics and social cues influence perceived task characteristics. The relationships between informational cues, task characteristics, and performance, however, are ambiguous and contradictory.

Conclusions

The preceding review leads to a number of conclusions that can be drawn from the social information processing literature. On the one hand, social information does seem to play a role in shaping employee perceptions of and reactions to task characteristics. These results have been demonstrated to hold using different methodologies (laboratory experiment, field survey, field experiment), different sources of information (co-workers, leaders), and different channels of transmission (oral, written, role models). Hence, the pattern of results appears to be generally consistent. Therefore, one may conclude that one of the primary contributions of the SIP approach is that it questions the notion of imposed task models and suggests as an alternative the notion of socially constructed realities. That is, the task attributes framework implies that essentially all jobs can be described and characterized by a specified set of attributes. The SIP perspective suggests, however, that the relevant attributes and their importance may, in part, be socially constructed for different job settings. Unfortunately, such a viewpoint also increases the difficulty of identifying appropriate variables and then describing nomological networks among these variables for purposes of field research.

The results of the field research do not provide the strength of support for the influence of social cues that are suggested by experimental research. The findings, then, indicate the need for a critical assessment of the generalizability of the experimental findings. Katz states that experiments control the information available and show "how people might respond when they are subjected to unfamiliar but highly salient information cues or treatments in a fairly strange environment. In fact, some social psychological experiments have clearly shown that if people are put in a rather atypical and absurd situation, they can be made to respond in a rather atypical and absurd fashion." (1980, p. 113) While it is felt that the SIP laboratory experiments are neither highly atypical nor absurd, they cannot be considered to be "real" jobs. The studies deprived the participants of alternative information sources, such as experience, and tasks were frequently structured to limit the degree to which subjects could use prior knowledge and experience to define the situation. What is needed, then, is additional research to systematically investigate the effects of experience on social information processes.

A further limitation on experimental generalizability relates to the strength of manipulation of information cues within experiments. In addition to general comments about the task and feedback concerning performance, one experiment operationalized cues "as part of the written instructions reinforced by message cards inserted in the equipment decks and further emphasized by tape recorded comments inserted within the maintenance task training instructions" (O'Connor & Barrett, 1980, p. 704). Given the strength and variety of social cues given subjects, it should not be surprising to find that individuals responded to the cues, especially when

other sources of information regarding the task were controlled by the design of the experiment.

Questions to be Answered

Dealing specifically with the literature summarized earlier, three major sets of unanswered questions emerge. The first of these pertains to the actual nature of the relationships among objective task characteristics, informational cues, and affect. The traditional task attributes view essentially assumes that the perceived task is a function of objective task elements and that such perceptions are related to satisfaction. Further, while a variety of moderating variables have been posited, the primary variables are the objective task which results in the core job dimensions. The dimensions, in turn, influence personal and work outcomes (Hackman & Oldham, 1980). While authors in the task design field have generally avoided stating that measures are of objective jobs, Hackman, Oldham, Jansen and Purdy did state that the JDS "gauges the objective characteristics of the job" (1975, p. 61). Most other researchers have not explicitly stated that they were measuring the objective task; however, the assumption was made implicitly. The redesign of the work as diagnosed by the task design measures results in change to the objective job.

The social information processing model described by Salancik & Pfeffer (1977, 1978) argues that individuals perceive and respond as much to the social cues as to the objective task. The distinction between objective and perceived measures of tasks may provide partial explanation for the weak convergence between incumbents', supervisors,' and researchers' evaluations of tasks. Hackman and Oldham (1975) reported a median correlation between

incumbent and supervisor ratings of task characteristics of .51. The median correlation for incumbent and researcher ratings was .61. From the social information processing perspective, the objective task is assumed to be an antecedent construct, but a construct that plays a limited role in influencing task perceptions or satisfaction. The assumption is that cues (e.g., social information as filtered by social reality construction and enactment processes) serve to define the salience of the objective tasks and the manner in which it is perceived and reacted to. That is, there is no strong linear relationship between the objective task and perceptions and reactions; the relationship depends on what social information tells the individual it should be.

A fundamental difference between the task attributes approach and the SIP viewpoints, then, appears to be a disagreement regarding the influence of objective task characteristics and social cues provided to individuals. In reality, of course, the individual worker would seem to use both objective and social information to construct his/her perception of the task environment. As supported by a portion of the research reviewed here, some elements of the task environment appear to not be subject to social influence but are predominantly determined by the objective task (Griffin, 1983; O'Reilly & Caldwell, 1979; Weiss & Shaw, 1979; White & Mitchell, 1979). Other elements of the perceived task environment are influenced primarily by social cues (Griffin, 1983; O'Connor & Barrett, 1980; O'Reilly & Caldwell, 1979; Shaw & Weekley, 1981; Weiss & Shaw, 1979; White & Mitchell, 1979). Finally, other elements are influenced by both social cues and the objective task (Griffin, 1983; White & Mitchell, 1979).

The importance of the analysis of these differing viewpoints becomes apparent when the ten studies reviewed here are considered. Each of these studies was directly or indirectly developed from a social information processing framework. The social information processing framework, in turn, was offered as an alternative framework to the task attributes view. Yet, none of the ten studies serves to even minimally refute the task attributes view. Further, none of the ten studies provides specific and exact support for the SIP framework. In fact, the majority of the research reviewed here offers more support for an overlapping viewpoint than for either of the other models. For example, O'Reilly and Caldwell (1979), Weiss and Shaw (1979), White and Mitchell (1979), and Griffin (1983) all found clear evidence that both objective task attributes and social cues independently influenced both task perceptions and satisfaction.

The second major set of questions identified in the review follows from this point, but is also somewhat more complex. These questions pertain to the mechanisms individuals use in perceiving, evaluating, and reacting to social cues in the workplace. In other words, how is the perceived task environment developed? Four related questions will be addressed in the following paragraphs.

First, what are the roles of different sources of information? Clearly, both co-workers and leaders have the potential for providing meaningful cues to individuals. The co-workers of the individual, for example, will be in frequent contact with the person and will likely be a constant source of informational cues. The supervisor is uniquely a part of both the objective and the social work environment and is in a powerful position to alter task perceptions. In the context of the formal role as leader, an individual can

alter the objective task by changing work assignments, procedures, etc. As an individual, however, the leader can also provide the same kinds of cues as co-workers.

A variety of individual differences may also influence the kinds of sources people look to for task-related information. For example, if individuals have a strong need for affiliation, they may be more motivated to interact with co-workers and therefore be influenced by their cues. Similarly, a person who has a high level of authoritarianism may respond more to a leader. People with an external locus of control might be more receptive to social information than would internals. Finally, self-monitoring would also be a potentially revealing individual difference construct worthy of investigation from the SIP framework.

Second, the effects of differences in how cues are obtained are currently unknown. The typical employee probably has some preconceptions about a task before beginning a new job (e.g., societal cues, experience, etc.). Other cues are sought proactively by an employee by asking evaluative questions of others in the workplace. Finally, cues may also be imposed in an obtrusive fashion by others. For example, a new employee may be told by a co-worker that the job is boring and routine without asking for an evaluation. A body of research which could potentially advance our understanding of these processes is that dealing with enacted environments (cf., Weick, 1977, 1979). The enactment process, for example, has been described as a bracketing activity (Weick, 1979, p. 153). In a similar fashion, reality construction as described by the SIP framework would also be a bracketing activity. When forming perceptions of and reactions to a task, an individual will have an almost infinite set of cues available for use. The issue, then, is how individuals bracket these cues so as to retain a salient set

which can be used to construct their particular reality of the workplace.

Third, little is known about how employees process conflicting cues. It is not likely that all co-workers have the same perception of a particular task. Therefore, the cues they provide will likely range from moderately inconsistent to completely contradictory in nature. How then do employees decide who to "believe" in forming their perceptions and evaluations? Here again, one potentially fruitful area for investigation would be individual differences. Personality traits such as authoritarianism and dogmatism could well be important. Similarly, attributes of the source of the cues such as credibility and status could determine which cues might be most "believed."

Finally, nothing is known about the dynamics of social and informational cues over time. From one perspective, it could be argued that they operate from an operant framework in which employees learn to perceive and react to reinforcing cues. That is, if an employee's leader keeps saying, "Your job has a lot of variety, and that's good," the cue may be perceived as a reinforcer. Hence, the operant framework might be a useful source for acquiring answers about the dynamics of cues over time. Socialization might also come into play. For example, socialization could explain the roles that different sources of information play and how the individual responds to that information over time as important norms are recognized and internalized.

The final set of issues currently not addressed by the SIP framework pertain to managerial practice. Essentially, until more is known about how social processes occur in organizations, managers should simply be aware that social factors may be important determinants of the success or failure

of a task redesign effort. In addition, Griffin (1982) has also offered three general guidelines for installing task changes with consideration for social processes: (1) commitment and open communication channels from those in charge of the change may facilitate employee interest in the change and focus attention as its positive attributes, (2) the enhancement of work group cohesiveness and performance norms and the minimization of role dynamics difficulties may foster a more generally positive atmosphere for the change and should serve to focus attention on and enhance interpersonal discussion of salient aspects of the task changes and, (3) diffusion of the task change throughout the organizational system will serve to reinforce and maintain patterns of interpersonal discussion, thereby increasing the likelihood of a successful task redesign change (p. 179).

When the focus is on existing jobs which are not being changed, the effects of social cues are likely to be less obvious over short time intervals. Over time, however, their effects are likely to be quite powerful. In particular, important dimensions of groups and group dynamics, such as cohesiveness, assembly effects, norms, and role structures may all come into play. The result may be a group mind-set of how jobs should be perceived and evaluated by individuals. This mind-set, in turn, may be difficult to alter.

Future Research Needs and Directions

In order to address the questions and concerns about the task design paradigm raised by the SIP literature and confirmed by this review, a number of future research needs and directions are apparent. Clearly, the area of

greatest deficiency is that of theoretical explication and refinement. Researchers need to first clarify exactly what task design means. It is possible, for example, to describe task design as the perceived work environment, perceived role, expected role, objective role; as an individual, group, or organization element; or, as an objective, perceptual, or enacted phenomena. The development of such a unifying definition would greatly enhance the development of meaningful theory. Meaningful theory, in turn, will facilitate improved construct validity and measurement.

Focusing specifically on the measurement issue, care must also be taken to not allow measurement techniques to drive or constrain theory development processes. For example, even though the SIP framework was derived from a critique of the task attributes literature (Salancik & Pfeffer, 1978), all but one of the studies in this review used measurement scales based on the task attributes literature. Theory and measurement must begin to look beyond the traditional concepts of variety, autonomy, feedback, identity, and significance if meaningful strides in understanding task design processes in organizations are to be made.

In a related vein, the social information processing area could perhaps realize additional development through an integration with complementary schools of thought. Socialization processes, for example, are in many ways a function of social and informational cues in the workplace. Indeed, there is a trend among organizational theorists to increasingly focus on information processes as a basis for understanding organization design (e.g., Weick and Daft, 1983). The other areas identified earlier may offer equally strong potential for integration.

To conclude, it is instructive to consider a comment made in the first literature review of contemporary task design research. Pierce and Dunham (1976, p. 95) note that "task design research has generally been conducted without considering the contextual, structural, or configurational character of the social system that houses the tasks and role occupants under investigation." While the inclusion of social information cues into the task design paradigm certainly represents a meaningfully step toward correcting this deficiency, much remains to be done.

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Table 1 Summary of Studies Relating Objective and Perceived Task Characteristics

Authors	Type of Study	Sample	Independent Variable	Individual Differences	Dependendent Variables	Results
O'Reilly and Caldwell (1979)	Lab Experiment	75 Graduate students	Task design Information cues	Need for: autonomy; achievement; affiliation; dominance	Job characteristics[a,b] General job satisfaction[c] Satisfaction with pay and growth[b]	Main effects found for task design and information Moderator effects inconclusive
Weiss and Shaw (1979)	Lab Experiment	88 undergraduates	Information cues Task design	Field dependence Self-esteem	Motivating Potential Score[b]	Main effect for task design and information cues Information cues stronger with field dependent and low self-esteem
White & Mitchell (1979)	Lab Experiment	41 undergraduates	Task design Social cues	None	Perceived enrichment[b] Role ambiguity[d] Job satisfaction[b] Task characteristics[b] Productivity[e]	Main effect for task design and social cues Some interaction effects
Oldham and Miller (1979)	Field Survey	658 employees 62 job classes	Job complexity of self vs. comparative other	None	Growth satisfaction[b] Evaluation of performance[f]	Jobs of greater complexity than other's yield lower satisfaction and higher performance Jobs of less complexity than other's produced mixed results
O'Connor and and Barrett (1980)	Lab Experiment	90 undergraduates	Information cues	Field dependence Mental ability Intrinsic Work Motivation	Task characteristics[g,h]	Main effect supported Field dependence accounted for additional variation Mixed results for other individual difference variable
O'Reilly, Parlette, & Bloom (1980)	Field Survey	76 Public Health Nurses	Same job	Demographic variables Professional attitude Affective orientation	Task characteristics[b] General satisfaction[i] Intent to quit[j]	Individual characteristics, satisfaction, and concepts of professionalism bias perceived task characteristics Task identity, task significance, feedback most susceptible to influence
Slusher & Griffin (1980)	Lab Experiment	80 undergraduates	Own job scope Other's job scope	None	Task characteristics[a,b] Job satisfaction[k]	Mixed results on task characteristics No effects on satisfaction measures
Shaw & Weekley (1981)	Lab Experiment	189 undergraduates	Information cues Number of confederates giving cues	None	Task satisfaction[i] Task characteristics[b] Performance[e]	Main effect for information cues on satisfaction No effects on task characteristics or performance Number of confederates made no difference

Griffin (1983)	Lab Experiment	50 undergraduates	Information cues	None	Task characteristics[a] Job satisfaction[k]	Main effect on satisfaction and task characteristics
	Field Experiment	351 production workers	Task design Information cues	None	Task characteristics[a] Interpersonal task attributes[g] Satisfaction[k] Productivity[e]	Main effects and some interaction on task characteristics Main and interaction effects all significant on interpersonal task attributes Main effects on satisfaction Main effect for task design on productivity

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a[a] Job Characteristics Inventory

b Job Diagnostic Survey

c Brayfield Rothe (1951)

d Rizzo, House, and Lirtzman (1970)

e Count of items produced

f Supervisor

g Attribution Description Sheet

h Work Itself/Work Environment Description Questionnaire

i Own Measure

j Kraut (1975)

k Minnesota Satisfaction Questionnaire

Table 2 Summary of Task Characteristics Measures

	O'Reilly & Caldwell (1980)		White & Mitchell (1979)		Slusher & Griffin (1980)		O'Reilly, Parlette & Bloom (1980)		Griffin (1983) (Lab Experiment)		Griffin (1983) (Field Experiment)		Meta-analysis	
Job Characteristics Inventory	Task	Cues	Task	Cues	Task	Cues	Task	Cues	Task	Cues	Task	Cues	Task	Cues
Task Variety	NS	.01	NA	NA	.05	NS	NA	NA	NA	.01	.001[X]	.001[X]	.01	.001
Autonomy	NS	.01	NA	NA	NS	NS	NA	NA	NA	NS	.001	.001	.06	.01
Feedback	NS	NS	NA	NA	NS	NS	NA	NA	NA	.001	.001[X]	.001[X]	.06	.001
Task Identity	NS	NS	NA	NA	.01	NS	NA	NA	NA	.05	.001[X]	.001[X]	.01	.05
Job Diagnostic Survey														
Skill Variety	NS	.05	NS	.01	.10	NS	NA	.05	NA	NA	NA	NA	.24	.01
Autonomy	.05	.05	.05	NS	NS[X]	NS[X]	NA	.05	NA	NA	NA	NA	.05	.05
Feedback	NS	NS	NS[X]	NS[X]	NS	NS	NA	.01	NA	NA	NA	NA	NS	.13
Task Identity	NS	NS	.01	NS	.05[X]	NS[X]	NA	.01	NA	NA	NA	NA	.05	.13
Task Significance	NS	.05	.05	NS	NS	NS	NA	.01	NA	NA	NA	NA	.17	.05
Motivating Potential Score	NA	.10	.01	.07	NA	NA	NA	.01	NA	NA	NA	NA	.13	.05
Satisfaction	.01	.01	NS	.05	NA	NA	NA	NA	NS	.001	.001	.001	.001	.001

NA Not applicable or not reported for study

NS Not signifcant

X Significant interaction reported

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