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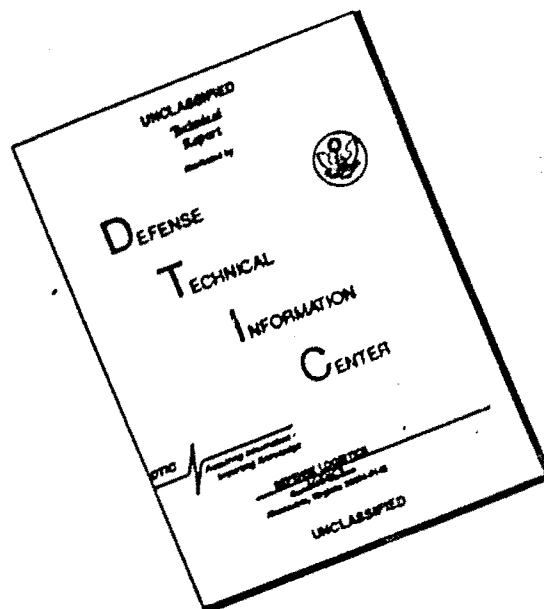
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SOME PERSONALITY CORRELATES OF PERCEPTIONS OF  
AND REACTIONS TO TASK CHARACTERISTICS

Eugene F. Stone

Purdue University

Technical Report No. 11

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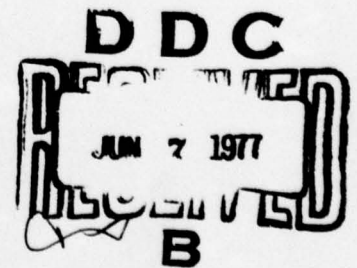
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Abstract

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The degree to which individual differences variables influence perceptions of and reactions to task characteristics was examined in the present study. Subjects ( $N=46$ ) were administered Jackson's (1967) Personality Research Form and the Group Embedded Figures Test of Witkin et al. (1971) in group administration sessions. They then performed an assembly task in a laboratory setting and completed measures of: (a) perceived task characteristics, and (b) immediate and projected task satisfaction. Correlational analyses showed that both perceptions of and reactions to task characteristics were influenced by the measured individual differences variables. The study's findings were related to previous theory and research on task design.

A

Some Personality Correlates of Perceptions of  
and Reactions to Task Characteristics

In their monograph on employee reactions to task characteristics, Hackman and Lawler (1971) noted the need to study both characteristics of jobs and characteristics of individuals if a fuller understanding of the manner in which individuals react to jobs is to be achieved. Although more than five years have passed since Hackman and Lawler cited this need there is still a paucity of research on how individual differences variables influence perceptions of and reactions to task characteristics. The present study's purpose was to explore individual differences variables thought to determine how individuals perceive and react to characteristics of tasks.

The bulk of previous research on task characteristics and their correlates has been of the field study variety (Alderfer, 1967; Blauner, 1964; Cummings & El Salmi, 1970; Hackman & Lawler, 1971; Hall & Lawler, 1970; Lawler & Hall, 1970; Shepard, 1969, 1971; Stone, 1975, 1976; Stone & Porter, 1975; Turner & Lawrence, 1965; Wanous, 1974; etc.). Among such field studies are reports of task characteristics-task attitude relationships assessed at both the level of the job (e.g., Stone & Porter, 1975; and Turner & Lawrence, 1965) and the level of the individual (e.g., Hackman & Lawler, 1971; Stone, 1975, 1976; and Wanous, 1974). Studies using the individual as the unit of analysis have reported results of both within-job (e.g., Hackman & Lawler, 1971; and Wanous, 1974) and across-job (e.g., Hackman & Lawler, 1971; and Stone, 1975, 1976) correlations among task characteristics and affective reactions to tasks.

The finding of non-zero relationships among perceptions of task characteristics and affective reactions to tasks appears reasonable in studies where the data have been analyzed at the level of the job, since

as the mean level of such task characteristics as variety, autonomy, task identity and feedback increase, the average level of such affective responses as satisfaction with the work itself should also increase. This finding should obtain irrespective of the nature of task characteristics-task attitude relationships computed (at the level of the individual) on a within-job basis.

The finding of non-zero relationships among perceptions of task characteristics and affective responses to such characteristics also appears reasonable in studies where data are analyzed at the level of the individual on an across-job basis. To the extent that there are meaningful (perceivable) differences among jobs and reactions to such jobs differ, across-job (individual level) correlations among task characteristics and affective responses to tasks should be of approximately the same magnitude as those computed at the level of the job on an across-job basis.

The finding of non-zero relationships among perceived task characteristics and affective reactions to such characteristics on a within-job basis (using an individual-level analysis), however, is cause for concern. Consider, for example, the study of Wanous (1974). He studied relationships among perceived task characteristics, individual differences variables, and affective responses to tasks for a group of 80 newly hired female telephone operators. For those in a "high"



higher order need strength subsample, global job satisfaction was found to correlate significantly with subjects' perceptions of variety ( $r = .50$ ), autonomy ( $r = .59$ ), task identity ( $r = .30$ ) and feedback ( $r = .41$ )! If one assumes that the objective amount of variety, autonomy, task identity, and feedback on these jobs did not differ, even if meaningful differences existed on global job satisfaction -- then there should have been no systematic variance on the perceptions of task attributes and thus Wanous should have found zero or near zero relationships between measures of task attributes and self-reports of global satisfaction. The reported relationships between these measures, however, were substantial. How can they be explained?

There are at least three possible explanations for the within-job correlations reported by Wanous (1974) and others (e.g., Hackman & Lawler, 1971). First, such relationships might be the result of common methods variance. This explanation seems especially likely when affective reactions to tasks are assessed with such measures as the "work" subscale of the Job Descriptive Index (Smith, Kendall, & Hulin, 1969). In one study (Umstot, Bell, & Mitchell, 1976) the investigators made specific mention of common methods variance as an explanation for at least some of the variability shared by measures of task characteristics and measures of job satisfaction. Other researchers, however, have discounted the common methods variance explanation of job characteristics-job attitude relationships (cf., Oldham, Hackman, & Pierce, 1976).



A second explanation is that even though job title is held constant in an analysis, the objective characteristics of jobs done by various job incumbents may differ somewhat (cf., Porter, Lawler, & Hackman, 1975). Jenkins, Nadler, Lawler, and Camman (1975) (following Hackman, 1969) have, for example, argued that "Employees who hold the same 'jobs' may in fact perform very different 'jobs' (p. 172)."

The "same job title - different objective task characteristics" explanation would appear to be more plausible in the case of such research as that of Hackman and Lawler (1971) than that of Wanous (1974), since all else equal the shorter the period of exposure of a person to a task the lesser the extent to which objective task demands will be "redefined" (Porter et al., 1975) by the job incumbent.

A third explanation is that such relationships stem from the interaction of individual differences and task characteristics: Stated differently, individual differences variables (e.g., differing needs, values, and perceptual styles) cause both differential perceptions of and reactions to a given set of task characteristics. While not discounting the first and second of the above explanations, research reported in the present paper focuses on assessing the validity of this third explanation.

Figure 1 shows a simple model relating objective task characteristics, individual differences variables, and reactions to task characteristics. The task may be looked upon as a bundle of stimuli ( $S_1, S_2, S_3 \dots S_k$ )

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Insert Figure 1 about here  
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to which the individual is exposed. Individual differences in needs, values, etc., ( $O_1, O_2, O_3, \dots O_l$ ) influence which of the stimuli will be attended to and how such stimuli will be perceived. Outcomes of the perceptual process are perceptions of task characteristics ( $R_{a1}, R_{a2}, R_{a3}, \dots R_{am}$ ) and affective responses to task characteristics ( $R_{b1}, R_{b2}, R_{b3}, \dots R_{bn}$ ).

#### Previous Research

Evidence bearing upon the validity of the model shown in Figure 1 is briefly reviewed below. The evidence comes from both experimental and non-experimental investigations of relationships among organismic variables, perceptions of stimuli, and reactions to such stimuli.

#### Experimental Investigations

Experimental investigations of individual differences correlates of perceptions of and reactions to various stimuli have taken the form of both laboratory experiments and field experiments. Among such experimental investigations are the researches of Sweeney and Fine (1965), Crowne and Marlowe (1964), Organ (1975), Barrett and Thornton (1968), Long, Ambler, and Guedry (1975), Blasi, Cross, and Hebert (1972), and Robey (1974).

The first group of studies we consider here used field independence (FI) as the individual differences variable of interest. Sweeney and Fine (1965) immersed the little fingers of male subjects in 400(F) water for 10 minutes and recorded their subjective reports of pain at 30 second intervals. Results showed that the greater the degree of field independence (FI), the greater the reported level of pain. Barrett and Thornton (1968) studied the relationship between FI and (automobile) simulator-induced "motion" sickness. Results of their study showed that the greater the degree of FI, the greater the level of experienced "motion" sickness. In a related study, Long et al. (1975) showed that field independence was negatively related to feelings of discomfort following exposure to actual motion (i.e., exposure of subjects to a Brief Vestibular Disorientation Test device). Blasi et al. (1972) asked subjects to estimate the weight of a stimulus object after having lifted an object of known weight. Results of the study showed that FI had a reliable relationship with "errors" in estimating the weight of the weight of unknown value; field dependent individuals were more influenced by the "context" of their weight judgments than field independent individuals.

The second group of studies used individual differences variables other than FI. Two studies (Crowne & Marlowe, 1964; and Robey, 1974) were laboratory experiments, the other (Organ, 1975) was a field experiment.



Crowne and Marlowe (1964) had individuals perform a repetitive, simple, and seemingly boring task. Subjects then were asked to indicate their degree of liking for the task. Results showed that degree of task liking was significantly related to scores on a measure of social desirability. Robey (1974) examined the reactions of individuals with "extrinsic" or "intrinsic" work values to tasks that were "simple" or "complex." The study's dependent variable was "job satisfaction." Results of the study showed no main effect for either task complexity or work values. There was, however, a marginally significant ( $p = .06$ ) interaction effect between complexity and values.

Organ (1975) exposed graduate students to structured or unstructured examinations under conditions of low or high pressure. He found that the unstructured task led to reports of stress only for students who were "high" on a measure of neuroticism.

As a group these studies show strong support for the position that individual differences influence the manner in which stimuli are perceived. There is also support for the argument that affective reactions to stimuli are at least in part determined by individual differences variables.

#### Non-experimental Investigations

A number of non-experimental investigations have dealt with the role individual differences variables may have in influencing perceptions of and reactions to various stimuli. Studies of this nature have been

conducted by Gruenfeld and Arbuthnot (1969), Aldag and Brief (1975), Brief and Aldag (1975), Hackman and Oldham (1975), Gruenfeld and Weissenberg (1970), Hill (1975), Barrett, Cabe, Thornton, and O'Connor (1975), and Stone, Mowday, and Porter (in press). The first set of studies reviewed here used higher order need strength (growth, achievement, autonomy, etc.) as the individual differences variable of interest.

Brief and Aldag (1975) using data from a study of employees in a correctional facility, reported that individual differences in "higher-order need strength" moderated relationships between task characteristics and task attitudes. Hackman and Oldham (1975) report numerous statistically significant relationships among perceptions of task characteristics and a measure of "growth-need strength," suggesting that individual differences may influence perceptions of task characteristics. Aldag and Brief (1975) studied relationships among work-related values, perceptions of task characteristics, and several other variables. They found a non-Protestant Ethic dimension to correlate (between  $-.179$  and  $-.289$ ) with perceptions of numerous task characteristics. They were careful to note that if work values influence not only affective reactions to tasks, but also perceptions of task dimensions then "findings of task-dimension-affective-response relationships may be spurious (p. 759)." Finally, Stone et al. (in press) tested

need for achievement and need for autonomy for their moderating effect on the relationship between job scope and satisfaction with the work itself. Results of the study showed that the personality variables operated more as independent predictors of satisfaction with the work itself than as moderator variables.

The second group of studies examined the influence field independence (FI) may have on perceptions of and reactions to various stimuli. Gruenfeld and Arbuthnot (1969) studied the relationship between FI and variability in the ratings of others (stimulus persons). The study showed that FI was related to "variability" and that sex of the rater moderated this relationship. Gruenfeld and Weissenberg (1970) studied the impact of FI on relationships individuals perceived existed between intrinsic and extrinsic sources of job satisfaction. They found that field independent persons could better distinguish between intrinsic and extrinsic sources of job satisfaction than field dependent persons: Intrinsic and extrinsic factors were more highly correlated for field dependent than for field independent individuals. Barrett et al. (1975) studied the relationships between FI and the duration of affective reactions to changes in job characteristics. They speculated that field independent persons are more likely than field dependent persons to perceive the ramifications of job changes. Results of their study showed that FI as measured by the Rod and Frame Test correlated significantly with reports of the duration of affective reactions to "positive" and "negative" changes in job characteristics.



The final study reviewed in this section (Hill, 1975) used age and neuroticism as independent variables and boredom on a job as the dependent variable. Subjects in the study were female press operators doing simple, repetitive work. Results of the study showed that feelings of boredom were related to both ages ( $r = -.26$ ) and degrees of neuroticism ( $r = .34$ ) of the individuals studied.

Taken as a group, these non-experimental studies suggest that individual differences may be important determinants of how people perceive stimulus objects. In addition, individual differences may influence reactions to such stimulus objects.

#### Method

In the present study subjects completed a battery of individual differences measures in groups, performed a task in a laboratory setting, subsequent to which they provided reports of task perceptions and affective responses to the task.

#### Subjects

Study participants were students enrolled in an undergraduate psychology course at a large midwestern university. Of the 53 students enrolled in the course, 46 agreed to participate in the study. Complete data sets were obtained from 41 subjects.

The sample contained 21 males and 25 females. The average age of study participants was 23.2 years.

Procedure

Subjects completed the Group Embedded Figures Test (Witkin, Oltman, Raskin, & Karp, 1970) and the Personality Research Form (Jackson, 1967) in groups during two regularly scheduled periods of the class from which subjects were recruited. The Group Embedded Figures Test (GEFT) was administered in the first of these sessions, the Personality Research Form (PRF) in the second.

Approximately four weeks after the GEFT and PRF's were completed subjects were required to report for a laboratory session in which they performed an experimental task and completed measures of reactions to the task. There were ten experimental sessions spread over a nine day period. The number of subjects handled in each session ranged between three and six.

Upon reporting to the room in which the experiment was conducted subjects were asked to sit at one of six tables spread about the periphery of the room. On each table was a correctly assembled cyclohexane molecule made of parts from Framework Molecular Model (FMM) kits of Prentice-Hall. In addition, on each table the subject found a plastic container with enough plastic tubes and (tetrahedron) metal connectors to assemble five additional cyclohexane molecules. Tables were spaced sufficiently far apart from one another to preclude interaction among subjects and were arranged so that subjects faced the walls of the room.

After all subjects scheduled to report for a session were seated they were told that (a) the task they were to perform was similar, in terms of its characteristics, to many that might be found in industrial organizations; (b) they would be given 15 minutes to correctly assemble replicas of the model in front of them; (c) they were to complete as many molecules as possible in the allotted time; (d) they were to work independently while completing the task; and (e) any questions about the task would be answered prior to their actually performing it.

After answering any questions that subjects raised, the experimenter told subjects to begin work. Fifteen minutes later subjects were told to stop work on the task. They were then given and asked to complete a three-section questionnaire designed to assess their perceptions of and affective reactions to the task. After all subjects had completed this questionnaire it was collected by the experimenter and the subjects were given a second questionnaire to complete.

The second questionnaire was identical to the first in all but one important respect: in the case of the second questionnaire subjects were asked to respond to questionnaire items "on the basis of how you would rate the task after having done it for a normal work week (i.e., 40 hours)."

After all subjects had completed the second questionnaire it was picked up by the investigator. Subjects were thanked for their



participation in the study and informed that results of the investigation would be provided to them (on a group basis) once all individuals had completed all phases of the study. They were then dismissed.

#### Measures

As mentioned earlier each subject completed the Group Embedded Figures Test (Witkin et al., 1971) and the Personality Research Form (Jackson, 1967) prior to doing the experimental task. After completing the task each subject completed a two part questionnaire tapping "immediate" and "projected" perceptions of and reactions to task characteristics.

Personality Research Form. The Personality Research Form (Jackson, 1967) is a non-clinical instrument for the assessment of personality. Form AA of the PRF was used in the research reported here. The instrument has subscales for abasement, achievement, affiliation, aggression, autonomy, change, cognitive structure, defence, dominance, endurance, exhibition, harmavoidance, impulsivity, nurturance, order, play, sentience, social recognition, succorance, and understanding. In addition there are scales to measure random responding (infrequency scale) and responding motivated by the desire to present the self in a socially desirable manner (social desirability scale). Reliability and validity data are presented in the instrument's test manual (Jackson, 1967).

Group Embedded Figures Test. Field independence was assessed in the present study with the Group Embedded Figures Test (Witkin et al., 1971). This is a paper-and-pencil measure of the field independence that has been shown to have acceptable convergent validity with other commonly employed measures of field independence. FI scores from the two non-practice sections (i.e., II and III) of the test and a total score (II + III) were used in the present study. Data on the validity and reliability of the GEFT are presented in the instrument's test manual (Witkin et al., 1971).

Perceptions of Task Characteristics. A 13-item questionnaire was used to assess perceptions of task characteristics. The instrument yields scale scores for variety, autonomy, task identity, feedback, and interaction. Reliability and validity evidence are presented in Stone (1974).

Reactions to the Task. Satisfaction with the task was assessed using 10 items included in a 30-item semantic differential. The bipolar adjectives comprising the satisfaction scale were "frustrating-gratifying, satisfying-dissatisfying, boring-interesting, good-bad, liked-disliked, pleasant-unpleasant, nice-awful, sad-happy, pleasurable-painful, and pleasing-annoying." Coefficient alpha (Cronbach, 1951) for the satisfaction scale was .93 for immediate reactions to the task and .90 for projected reactions to the task.

Satisfaction was also assessed with the GM Faces scale (Kunin, 1955). Semantic differential and faces satisfaction scales correlated .68 for immediate and .75 for projected reactions to the task.

#### Analyses

To assess the extent to which perceptions of task characteristics and reactions to such characteristics were influenced by individual differences variables, product-moment correlations were computed between the study's independent variables (EFT and PRF scale scores) and the dependent variables (perceived task characteristics and semantic differential and faces satisfaction scale scores).

#### Results

Correlations among independent and dependent variables are shown in Table 1.

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Insert Table 1 about here  
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Results associated with immediate perceptions of and reactions to the task are first considered. Subsequently, results related to projected reactions are presented.

#### Immediate Task Reactions

Perceptions of task variety are related to age, achievement, cognitive structure, defence, dominance, play, social recognition, and EFT-Total. Task autonomy perceptions correlate with affiliation, harm avoidance, EFT-II,



and EFT-Total. Perceptions of task identity are associated with age, cognitive structure, succorance, social desirability, EFT-II, and EFT-III. Feedback perceptions are related to age, affiliation, social recognition, and EFT-Total. Perceptions of interaction correlate with age, cognitive structure, play, and succorance. Satisfaction, as measured by the semantic differential, has non-zero relationships with affiliation and impulsivity. Satisfaction, as assessed by the faces scale, correlates with achievement, change, harmavoidance, nurturance, and understanding.

#### Projected Task Reactions

Variety correlates with age and the autonomy scale of the PRF. Task autonomy perceptions are related to defence, harmavoidance, social desirability, EFT-II, and EFT-III. Task identity has non-zero relationships with age, abasement, achievement, defence, dominance, play, social recognition, social desirability, EFT-II, EFT-III, and EFT-Total. Feedback perceptions are associated with endurance, sentience, social desirability, EFT-II, EFT-III, and EFT-Total. Perceived interaction correlates with endurance and social desirability. Satisfaction, as measured by the semantic differential, is related to age, change, defence, endurance, order, sentience, social recognition, social desirability, EFT-II, EFT-III, and EFT-Total. Satisfaction, assessed with the faces scale, correlates with age, achievement, dominance, endurance, sentience, social recognition, social desirability, EFT-II, EFT-III, and EFT-Total.

## Discussion

In a review of the literature on tasks it was noted by Hackman (1969) that individuals often substantially redefine tasks they are asked to perform and that this redefinition is at least in part caused by differences in individuals' needs, values, and past experiences. Similar positions on the importance of individual differences in task redefinition are taken by Hackman and Lawler (1971) and Porter et al. (1975). The present study's results appear to provide clear empirical support for the arguments advanced by Hackman (1969), Hackman and Lawler (1971), and Porter et al. (1975).

An examination of relationships reported in Table 1 reveals that field independence (EFT-II, EFT-III, or EFT-Total) correlates significantly with (a) immediate variety, autonomy, and task identity, and (b) projected autonomy, task identity, feedback and satisfaction. The present study's results are consistent with the results of numerous other investigations in which it has been shown that field independence is a determinant of both perceptions of and reactions to various types of stimuli (Sweeney & Fine, 1965; Barrett & Thornton, 1968; Long et al., 1975; Blasi et al., 1972; Gruenfeld & Arbuthnot, 1969; Gruenfeld & Weissenberg, 1970; and Barrett et al., 1975).

The data in Table 1 also show that the social desirability scale of the PRF correlates significantly with (a) immediate task identity and (b) projected autonomy, task identity, feedback, interaction and satisfaction. The findings associated with satisfaction are consonant with results of previous laboratory (Crowne & Marlowe, 1964) and field (Wall,

1972) studies. Relationships between social desirability and perceived task characteristics suggest that this response style influences not only affective responses to tasks, but also the manner in which individuals describe tasks.

An alternative interpretation of the present study's results is that the correlations reported in Table 1 reflect nothing more than evidence of common methods variance among the various measures used in the study. At least two factors would appear to lessen the plausibility of this explanation. First, while all of the measures used were of the self-report, paper-and-pencil type, they differed considerably from one another in several respects. The GEFT called for the subject to find and outline simple figures that were embedded in more complex figures. The PRF required the subject to indicate whether a number of statements were descriptive of him or her. Task characteristics were assessed by the subject reporting the frequency of various task behaviors. Finally, affective reactions to the task were measured by two different methods (semantic differential and faces scales). The diversity of stimulus materials and response formats associated with these several measures would seem to argue against common methods variance as a reasonable explanation of the correlations found in Table 1.

Second, the measures, while all of the paper-and-pencil, self-report type, were administered on three separate occasions. The GEFT was completed a week prior to the PRF. And, the PRF was completed more than three weeks



prior to the time subjects participated in the task and provided data on perceived task characteristics and task satisfaction. The temporal spacing of questionnaire administrations would also seem to argue against common methods variance as an explanation of the present study's results.

Additional research aimed at replicating and/or extending the present study's findings is needed if we are to develop a fuller understanding of the influence individual differences have on perceptions of and reactions to task characteristics. Such research should involve a wider set of individual differences variables than that considered in the present study. It may, for example, be worthwhile to employ such measures as the PRF (Jackson, 1967), the "growth need scale" of the Job Diagnostic Survey (Hackman & Oldham, 1975), and the Survey of Work Values (Wollack, Goodale, Wijting, & Smith, 1971) to predict perceptions of and reactions to task characteristics.

The sample size for the proposed study should be large enough to allow for multivariate data analysis (i.e., multiple regression/correlation). A sufficiently large sample would, for example, make it possible to (a) examine standard regression coefficients to assess the relative importance of various individual differences variables in predicting perceptions of and reactions to task characteristics and (b) assess the stability of these regression coefficients.

The present study's findings suggest that the "fuller understanding" (alluded to by Hackman, 1969, and Hackman & Lawler, 1971) of the role

played by individual differences variables as determinants of perceptions of and reactions to task characteristics is indeed achievable. Research such as that proposed here should greatly contribute to this "fuller understanding."

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Footnotes

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Table 1

Correlations Between Individual Differences and Perceptions of and Reactions to Tasks

| Independent<br>(Individual<br>Differences) | Dependent Variables |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |        |
|--------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------|
|                                            | Variety             |                     | Autonomy            |                     | Task Identity       |                     | Feedback            |                     | Interaction         |                     | Satisfaction: S.D.  |                     | Satisfaction: Faces |        |
|                                            | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected | Immediate Projected |        |
| Age                                        | .42***              | .21*                | .08                 | .10                 | -.33**              | -.26**              | -.01                | .28**               | .35***              | .16                 | .09                 | .23*                | .01                 | .10**  |
| Sex                                        | .10                 | .10                 | .09                 | .03                 | -.14                | -.12**              | .01                 | -.18                | .03                 | .11                 | -.09                | -.01                | -.09                | -.09   |
| Abstemious                                 | -.15**              | .02                 | -.03                | .15                 | -.05                | -.42**              | .04                 | .04                 | -.04                | -.12                | .04                 | .10                 | .02                 | .06*   |
| Achievement                                | .25**               | -.03                | -.09**              | .03                 | -.01                | .22*                | .07                 | .08                 | .03                 | -.09                | .16**               | .12                 | .28                 | .20    |
| Affiliation                                | .04                 | .02                 | -.28*               | -.11                | .11                 | -.09                | -.02                | -.19                | -.11                | .03                 | -.32                | -.02                | -.08                | -.08   |
| Aggression                                 | .13                 | -.04*               | .14                 | .14                 | .01                 | .12                 | -.03                | .07                 | .05                 | .01                 | .06                 | -.15                | -.10                | -.05   |
| Autonomy                                   | .06                 | -.22                | -.01                | -.04                | -.12                | .10                 | .00                 | .15                 | .11                 | -.01                | .03                 | .02                 | .04                 | .15    |
| Change                                     | -.01                | .05                 | -.12                | .07                 | -.05**              | -.11                | .14                 | .06                 | .07                 | .05                 | .12                 | .19                 | .24                 | .10    |
| Cognitive Structure                        | -.26                | .00                 | .15                 | -.09                | .34***              | .12**               | .09                 | .12                 | -.28**              | -.09                | .08                 | .09**               | .12                 | -.03   |
| Defence                                    | -.10                | -.07                | .07                 | -.19                | .06                 | .26**               | -.18                | -.02                | .01                 | -.09                | -.18                | -.24                | -.14                | -.15*  |
| Dominance                                  | .29                 | -.10                | .01                 | -.02                | -.09                | .25                 | .16*                | .10                 | .10                 | .06*                | .05                 | .14                 | -.04                | .24    |
| Endurance                                  | .03                 | -.14                | -.03                | .01                 | -.10                | .16                 | .19                 | -.04                | -.03                | -.19                | .05                 | .19                 | .15                 | .23*   |
| Exhibition                                 | .13                 | -.04                | -.01                | .06                 | .02                 | .17                 | -.08                | .05                 | -.09                | -.09                | -.04                | .12                 | -.18                | .13    |
| Extroversion                               | .05                 | .08                 | -.20                | -.21                | .09                 | .13                 | -.04                | .01                 | .09                 | -.01                | .08                 | -.14                | .25                 | -.03   |
| Harmavoidance                              | .18                 | .08                 | .05                 | .08                 | -.12                | -.11                | .04                 | .07                 | .01                 | .06                 | .21                 | .05                 | -.07                | .24    |
| Impulsivity                                | .05                 | .16                 | -.10                | .15                 | -.10                | -.09                | .06                 | .11                 | -.14                | -.09                | .10                 | .08*                | .24                 | .15    |
| Nurturance                                 | -.14**              | .15                 | -.06                | .03                 | .15                 | -.04*               | .15                 | .07                 | .31**               | .00                 | .04                 | .20                 | .16                 | .11    |
| Order                                      | -.25                | -.02                | .01                 | .02                 | .15                 | -.04*               | .16                 | -.10                | -.16                | -.04                | .09                 | .01                 | .04**               | .04**  |
| Play                                       | -.11                | .16                 | .10                 | .13                 | -.01                | -.15*               | .20                 | .10                 | -.07                | .14                 | .02                 | -.30*               | -.01                | -.27** |
| Sentience                                  | .24**               | .07                 | -.05                | -.04                | .06**               | .22                 | .05                 | .22                 | .07                 | .18                 | .03                 | .20                 | .01                 | .28**  |
| Social Recognition                         | .11                 | .08                 | .07                 | .04                 | .25                 | .03                 | .08                 | .04                 | -.21                | -.10                | .03                 | .03                 | .07                 | -.09   |
| Successance                                | -.02                | -.18                | -.06                | -.05                | .00                 | .11**               | .10                 | .10                 | .10                 | -.06                | .09                 | -.04                | .22                 | -.05*  |
| Understanding                              | -.09                | .01                 | .13                 | .21                 | -.27**              | -.24**              | .34***              | -.09                | -.12                | -.21                | -.02                | .30**               | .03                 | .24**  |
| E.F.T.: Pt. I                              | .11                 | .06                 | .19                 | .23                 | -.27**              | -.28**              | .36***              | .12                 | -.11                | -.17                | .06                 | .32**               | -.05                | .27**  |
| E.F.T.: Pt. II                             | -.08                | .03                 | .10                 | .20                 | -.29                | -.30**              | .41**               | .14                 | -.11                | -.14                | .30**               | .27**               | -.05                | .27**  |
| E.F.T.: Total                              | -.19                | .04                 | .20                 | .18                 | -.15                | -.25                | .28                 | .22                 | -.17                | -.14                | -.08                | .26                 | -.04                | .26    |

\*  $p < .10$ \*\*  $p < .05$ \*\*\*  $p < .01$ 

For correlations between the EFT and other measures the N is 41.



Figure 1

Objective Task Characteristics  
Individual Differences, and Reactions to Tasks

