AN EXAMINATION OF THE INFLUENCE OF INDIVIDUAL DIFFERENCE VARIABLES AND PERCEIVED JOB STIMULATION ON JOB INVOLVEMENT

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ABSTRACT

AN EXAMINATION OF THE INFLUENCE OF
INDIVIDUAL DIFFERENCE VARIABLES
AND PERCEIVED JOB STIMULATION
ON JOB INVOLVEMENT

By

Samuel Rabinowitz

This study was designed to investigate relationships between individual difference variables and job stimulation (a type of situational measure) with job involvement. Additionally, an hypothesized causal relationship between job involvement and job stimulation was investigated.

Data was collected at three points in time. The initial subject sample consisted of 332 employees of a Canadian government ministry. Of these, 233 responded to the second questionnaire and 162 to the third. Analysis of variance techniques and cross-lagged correlations were employed in testing the hypotheses.

Support was found for hypotheses which predicted relationships between job involvement and job stimulation, age, and years with the organization. An hypothesis predicting no relationship between job involvement and marital

status was also supported. High need strength individuals were more job involved than low need strength persons, but this was not limited to only highly stimulating jobs (as was predicted). Males and females were equally involved in their jobs when job level and years in the organization were held constant.

The remaining hypotheses were not supported in that locus of control, belief in the Protestant ethic, and education did not relate to job involvement. Additionally, no support was found for the predicted causal relationship between job involvement and job stimulation.

The variables found to significantly relate to job involvement did, however, account for only 23.8 percent of the variance in job involvement. Additional work should address itself to other variables which might explain more concerning the nature of job involvement. Finally, attention should be given to recognizing and reconciling differences among measures of job involvement.

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DEDICATION

To Julie, Syd, Joel and Iris:

Thanks for being!

ACKNOWLEDGMENTS

Situational variables are spoken of in this study as being related to job involvement. In my case, encouragement and cooperation by those persons whose help I wish to acknowledge made involvement in this project a beneficial experience.

My committee members, in particular, could be counted on for assistance whenever needed. Dr. Tim Hall, my chairman, successfully convinced me that I could conquer the "unconquerable," if I wanted to. His friendship and ability to know when words of encouragement should be offered will always be remembered. Dr. Neal Schmitt could always be counted on to have an open door whenever his aid was sought. Dr. Carl Frost proved to be a major help in the formative stages of this project turning abstract ideas into practical research.

It is also a pleasure to thank the collectors of the data used in my thesis, Dr. Jim Goodale and Dr. Tim Hall, for allowing me to use it in my study. The cooperation of the ministry workers in responding to three different questionnaires is also appreciated.

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REVIEW OF THE LITERATURE

Introduction

In considering an individual's level of job involvement, various theories have been presented which contend that one's job involvement is primarily influenced by (1) his background and socialization process or (2) the job situation which he is presently in, or (3) a combination of both factors. Evidence has also been presented in defense of each position by various researchers. The purpose of the proposed research is to address the question as to which type(s) of variables influence job involvement. A closer look at the previously cited theories will be presented along with a discussion of empirical work previously performed related to variables in this study.

Job Involvement as an Individual Difference Variable

Job involvement, as conceived by Dubin (1956), is intimately tied up in the Protestant Ethic, the moral character of work and a sense of personal responsibility. Anyone who has internalized these traditional values will

probably be "job involved" regardless of the situational context within which he might be employed (Runyon, 1973).

Lodahl (1964) hypothesized that the main determinant of job involvement is a value orientation toward work that is learned early in the socialization process. Lodahl further believed that job involvement operationalizes the Protestant Ethic is some ways and since it is the result of the introjection of certain values about work into the self, it is probably resistant to changes in the person due to the nature of a particular job.

Siegel (1969) initially concurs with this point of view stating that differences in job involvement can probably be traced back to value orientations toward work learned early in the course of socialization and internalized as determinants of behavior.

Hall and Mansfield (1971) suggested that if job involvement is indeed a personal characteristic, then there would be little change in it under periods of organizational stress.

Hulin and Blood (1968) also focus in on the notion of individual differences in their studies. They feel that as a result of extra-work socialization processes, many blue-collar workers in urban industrial environments have no desire for ego need gratification while on the job. In contrast to the job involved individual, these workers mainly view their jobs as a means to an end. Work enables them to satisfy their main needs off the job. The central

theme of Hulin and Blood (1968) and Blood and Hulin's (1967) work is "alienation from middle class norms." Closely approximating the Protestant Ethic, middle-class norms are beliefs concerning the goodness of work and man's spiritual obligation to partake in hard labor for the glory of God. The authors contend that living in an urban, industrialized, blue-collar environment leads to alienation from these norms, while life in a rural, non-industrial community or other settings does not. As an outgrowth of their thesis we find that for rural workers the more satisfying jobs would demand greater personal involvement, while city workers are more likely to be satisfied when their jobs are less personally involving. Blood and Hulin state that, "At the integrated end of the continuum which ranges from integration with middle class norms to alienation from middle-class norms are individuals who desire personal involvement with their jobs." The job is expected to play a more important central role to the individual at this end of the continuum, while workers at the other end experience only an instrumental involvement. Increased responsibility, autonomy, etc. are not unfulfilled needs; these people have no such needs.

Job Involvement and Individual Difference Variables: An Empirical View

Locus of Control

The relationship of Rotter's (1966) locus of control scale to job involvement has been established in two studies. Evans (1971, cited in Hall and Mansfield, 1971) found job involvement to be significantly related to low dogmatism and internal control on Rotter's scale. Further evidence of the solidarity of this relationship was presented by Runyon (1973) who investigated the interaction between management style and locus of control on job involvement. The job involvement of 110 hourly employees of a major, multiplant chemical company was measured by use of the short form of the Lodahl and Kejner (1965) job involvement scale (α = .73), while locus of control was measured by 26 items from Rotter's scale. Style of management was measured by a scale which consisted of seven Likert-type scales designed to determine whether a supervisor's behavior was directive or participative in nature. Runyon hypothesized that the job involvement of "Internals" ("individuals who perceive a reinforcement as being contingent upon their own actions") would be directly related to the amount of participation afforded by the management style under which they work. In contrast to this hypothesis, Runyon postulated that "Externals" ("individuals who perceive a reinforcement as being contingent upon outside forces") would evidence a low degree of job involvement

regardless of the management style to which they are subjected. Analyzing the data by comparing the mean job involvement scores for each of the test conditions, Runyon stated that the mean scores increased as one moved from the External to the Internal under both management conditions. In viewing the results, it can be seen that the hypothesis regarding the Externals was well supported while the hypothesis regarding the Internals was not. Concluding, Runyon declared that the findings suggested that job involvement was largely a function of the Internal-External dimension of personality and should be considered a "relatively stable personal characteristic."

The Protestant Ethic

Individual differences in what people want from work can perhaps best be reflected in work values, the broadest notion of which possibly being the Protestant ethic (Weber, 1958). This term has been defined by Hulin and Blood (1968) as, "Work hard and you will get ahead. You are responsible for your own destiny. Acceptance into the Kingdom of Heaven is dependent on hard work on this mortal earth." Lodahl and Kejner (1965) discuss job involvement as the internalization of values of the goodness of work in the worth of the person. Bass and Barrett (1972) and Lodahl (1964) believe that job involvement operationalizes the Protestant ethic. It would appear that

if a person is a follower of the Protestant ethic, he would be a job involved person.

To test the relationship between job involvement and the Protestant ethic construct, Ruh and White (1974) administered a questionnaire containing nine job involvement items and eight Protestant ethic items (Blood, 1969) to thirty-one white collar, public, employees who appeared "to represent a reasonable cross section of hierarchial level, salary, age, sex and education." The intercorrelation between the total job involvement score and the total Protestant score was .60 before correction for attenuation (using internal consistency reliabilities) and .87 after. Thus a strong, positive relationship between the two variables was established.

Higher Order Need Strength

An individual difference variable of importance is one of "higher order need strength" or the importance of the individual of satisfying a particular esteem or growth desire. Maslow (1970), in discussing a hierarchy of needs, essentially states that an individual's behavior is motivated by an attempt to satisfy the need that is most important at that point in time. Lawler (1973) points out that large differences exist in the needs people have and organizations should consider these differences when viewing individual motivation in organizations. As proof, he cites a review (Lawler, 1971) of forty-three studies in

which pay ranked anywhere from first to sixth or below in terms of importance. Lawler also discusses a Porter (1963) study where the data presented demonstrated that managers at different organizational levels differed in the degree to which they are motivated by higher order needs. In addition, Lawler discusses other data which show that managers are motivated by different needs; some are motivated by self-actualization, while others are motivated by autonomy. Others, according to Lawler, seem to be desirous of lower order needs such as security.

Lawler added that the design of a job should have its major effect on involvement and satisfaction related to the strength of an individual's higher order needs. Studies to follow demonstrate this point.

Maurer (1969) obtained significant results indicating that work role involvement was positively related to the importance, desired amount, and perceived existence of opportunities for satisfaction of esteem, autonomy, and self-actualization needs for a sample of middle managers in eighteen manufacturing firms.

Mannheim (1975) analyzed the importance of various reward factors for five categories of occupations. Results indicated that those who were professionals, technicians, and scientists (Category 1) placed highest importance on autonomy rewards, followed closely by intrinsic rewards. The least valued rewards for this group were social and hygenic in nature. Category 2 (administrative management)

displayed a similar profile to the previous group, with the differences being that higher importance was placed on most of the rewards with little differentiation between intrinsic and material (extrinsic) rewards. The third group (traders, agents, transportation, communication) placed highest value on autonomy followed by material rewards. The last two categories (construction, production workers, craftsmen, services, recreation) valued most the material rewards of work followed by autonomy. Mannheim, in discussing the results, concluded that social rewards were the least valued and autonomy assigned a high importance value by all groups involved. Further, material (extrinsic) rewards were most important to the fourth and fifth categories and least important to the first group. Intrinsic rewards were valued most by groups one and two and least valued by Category five. Finally, hygiene rewards were valued most highly by Category 4 (blue collar, manual) and least by Category 1.

Hall, Schneider and Nygren (1970) analyzed a sample of 141 professional foresters in terms of their job involvement and higher order need satisfaction. Job attitudes (in particular, job involvement) were measured by a twenty item scale used previously by Hall and Lawler (1970). Need satisfaction was assessed by a questionnaire developed by Porter (1961). Results found job involvement significantly ($p < .01$) related to satisfaction of autonomy

and self-fulfillment needs only and not to satisfaction of security, social or esteem needs.

The evidence presented in this section points to a potential relationship between higher order need strength and job involvement. It would appear that involvement in one's job would only appear if one's esteem and growth needs are important to fulfill and if so, if they are being satisfied.

Relationship of Job Involvement to Age

Schwyhart and Smith (1972) investigated the relationship of job involvement to age among 149 male middle managers in one company. A replication sample of fifty-eight males was also used in this study. Job involvement was measured using the twenty item Lodahl and Kejner (1965) scale. For the primary sample ($N = 149$), age of the middle managers showed a significant ($r = .18$, $p < .05$) correlation with job involvement. However, in the replication sample there was not a significant correlation between the two variables. The authors speculated that the positive relationship of job involvement to age, but lack of a significant relationship of job involvements to promotions or tenure, would indicate that the job may become more important to the self-image of a manager as he approaches age forty (all participants in this study were either at or below this age), no matter what his success in terms of promotions received.

Jones, James, and Bruni (1975) examined the relationship of job involvement to age by administering questionnaires to a sample of 112 civil service and military engineering employees. Job involvement was measured by a six item subset of the twenty item instrument developed by Lodahl and Kejner (1965), $\alpha = .62$. Results found job involvement related to age ($r = .36$, $p < .01$).

Hall and Mansfield (1975) discussed the relationship between age and job involvement by presenting data from two studies of professional scientists and engineers employed in non-managerial positions in research and development (R & D) laboratories carried out under different environmental conditions. Group interviews and individual questionnaires were presented to the participants (N = 290 at Time 1, N = 90 at Time 2; 32 individuals participated in both periods). Job involvement was measured as the sum of six items taken from the measure developed by Lodahl and Kejner (1965). The variation of job involvement with age was examined by computing the zero-order correlation and one-way analysis of variance between the two variables. These results were reported separately for the two samples, thus creating a replication under changed environmental conditions. The Time 1 data ($r = .29$, $p < .01$) and Time 2 data ($r = .40$, $p < .01$) indicated significant positive relationships between age and job involvement. Additional evidence of this relationship was presented in the analysis

of variance when looking at both three (20-34, 35-49, 50+) and four (20-29, 30-39, 40-49, 50+) age groups:

Time 1	Time 2
$F_{4 \text{ groups}} = 5.27, p \leq .01$	$F_{4 \text{ groups}} = 5.61, p \leq .01$
$F_{3 \text{ groups}} = 8.02, p \leq .01$	$F_{3 \text{ groups}} = 7.64, p \leq .01$

These results led the authors to conclude that job involvement increases with age.

Schuler (1975) analyzed the relationship between age and job involvement for 325 employees sampled from all levels of a large manufacturing organization. A positive ($r = .24$) relationship was found for the two variables.

Lodahl and Kejner (1965) discussed a study done with 137 nursing personnel, consisting of head nurses, staff nurses (RN's), partical nurses, nurses aides and orderlies. Total job involvement scores were correlated with age ($r = .26, p \leq .01$) leading to the conclusion that older nursing personnel tend to be more job involved. However, Lodahl and Kejner analyzed a sample of engineers and found no relationship between age and involvement.

Mannheim (1975), in a study of males of all job levels in the labor force of Israel found no significant differences among age groups and their work role centrality scores.

Finally, Gurin, Veroff, and Feld (1960) interviewed 922 employed males comparing the relationship of age and

ego involvement in their job. The authors found no significant relationship between the two variables.

Studies of the relationship between age and job involvement have, in more cases than not, demonstrated that the older the worker, the more involved he is although the information presented here certainly is not conclusive.

Relationship of Job Involvement and Education

Studies reviewed in this section have mixed results in discussing the relationship between education and job involvement.

Schuler (1975) viewed the relationship between relevant education and job involvement. Relevant education was defined as years of education related to present job. The measure of relevant education was used since it reflected the level of skills and abilities of an employee and use of skills and abilities has been positively related to job involvement (Lawler and Hall, 1970). For the sample of 325 employees from all organizational levels of a large manufacturing firm, a significant positive relationship was found between job involvement and relevant education.

In analyzing a related concept of job involvement--that of "work role centrality"--Mannheim (1975) looked at its relationship to education. Defining education as a variable which "reflects the time and skill investments, the deferred gratification, expectations, and chances of

individuals concerning their work (p. 90)," she showed that centrality significantly decreases with decrease in level of education ($F = 5.68$, $p < .001$). Citing the conflicting results between this and past studies, Mannheim stated that it was possible for the cognitive content of the work role centrality score to be more sensitive to educational differences than the Lodahl and Kejner (1965) measure.

Gurin, Veroff, and Feld (1960) similarly declare, based on their interview survey, that the higher educational groups expressed greater ego involvement due to the centrality of the job to their need gratification.

For a sample of 2530 employees of six midwestern manufacturing concerns, Siegel and Ruh (1973) found no direct relationship between education and job involvement. Education, when trichotomized into "high," "medium" and "low" was found to moderate the relationship between job involvement and participation in decision making (PDM). Correlations were positive and significant ($p < .01$) for this relationship under all levels of education. Additionally, there were significant differences between the correlations of job involvement and PDM for the high ($r = .62$) and low ($r = .51$) subgroups.

Jones, James, and Bruni (1975) concluded that there was no relationship between years of education or highest degree obtained and job involvement for a sample of civil service and military engineering employees.

Ruh and White (1974) demonstrated that job involvement was negatively related to education for rank and file workers ($r = -.05$, $p < .05$) and managers ($r = -.10$, $p < .01$) but was not related for the overall sample.

Perhaps a key to this complex relationship lies in the way Schuler (1975) handled the issue. It may be that only those who perceive their education as being applicable to their present job could be job involved. This may be inherent in jobs which possess highly desirable characteristics.

Relationship of Job Involvement to Tenure

Perhaps the length of time that a person has been on a job has something to do with his job involvement. Studies have generally been mixed in this assertion.

Schneider, Hall, and Nygren (1971) used a sample of 141 U.S. Forest Service Professionals as part of a study to look at the relationship of job attitudes to tenure. Job involvement was assessed by using a modified six item version of the Lodahl and Kejner (1965) scale which was scored using a Likert scale format ranging from Strongly Agree = 1 to Strongly Disagree = 7. Correlating at the $p < .01$ level, no relationship was found between the two variables.

In a similar vein, no significant relationships were found between tenure and job involvement for samples of middle managers (Schwyhart and Smith, 1972) and

professional research and development scientists and engineers (Hall and Mansfield, 1975). Jones, James, and Bruni (1975) did, however, find a significant ($p < .01$) relationship between job involvement and years in pay grade among a sample of civil service and military employees. Lodahl (unpublished study; cited in Lodahl and Kejner, 1965) also found a relationship between job involvement and "time on job" for a sample of women in precision electronics assembly work. For purposes of extending the literature, and perhaps to see if the situation involved has anything to do with this relationship, more research is needed.

Relationship Between Marital Status and Job Involvement

One might surmise that there would be a significant relationship between marital status and job involvement. Perhaps a married person with family responsibilities should be less involved in his job than an individual who is single with no family responsibility. This would seem logical in that the involved person places highest regard in matters concerning his job and the married individual might not be able to devote the time necessary to be fully involved in his job. Evidence, however, does not back up this theorizing. Gannon and Hendrickson (1973) present evidence showing that is is quite possible to be involved in both job and family for a sample of sixty-nine clerks and office workers in retail establishments. Lodahl and

Kejner (1965), in the only other study that I discovered which discussed this relationship, found no relationship between marital status and job involvement for separate samples of nursing personnel and engineers. It would be of interest to explore the possible relationships, based on the above theorizing, between this variable and perceived job stimulation and their combined effects on job involvement.

Relationship Between Sex and Job Involvement

It would appear that if the background/socialization theory is correct, men as a group should be more job involved than women. Siegel (1969) adds to this hypothesis by discussing the point that traditionally men would be more likely than women to value work aside from its importance to earning a living. The producing role is important to them for maintaining their sense of general well being. Most women, according to Siegel, have other roles to fulfill besides that of breadwinner as well as having other important routes to deriving personal satisfactions outside of the work environment. I have not come across any studies which have demonstrated whether or not there are sex differences in terms of job involvement.

It has been demonstrated in this section that job involvement and some personality/background variables are related. According to individual difference theorists, these variables alone would be the key to understanding

one's job involvement. This viewpoint has, however, been challenged by a group of researchers who claim that it is the situation, not the personality/background, which is the key. It is these theories which will now be presented.

Job Involvement as a Function of the Situation

Vroom (1962) has suggested that job factors can influence the degree to which an employee is involved in his job. A person becomes ego-involved in his work performance to the extent that performance is perceived to be relevant to certain aptitudes, abilities, or other attributes which are central to his self-conception. It therefore become necessary to take into consideration not only the individual but also the organizational constraints inhibiting this relevancy. Thus we see, with Vroom's theorizing, the possibility that situational factors might influence an individual's job involvement.

Participative management theorists (Argyris and McGregor) place a minimal emphasis on job involvement as a value orientation or motivational set subject to individual differences. They view the organization as blocking the gratification of ego needs, a result which leads to the absence of individual involvement on the job. Specifically, McGregor (1960) places responsibility in the organization for the behavior of its employees, stating that how people behave is in large part dependent on the assumptions management makes about them. Management draws from one of

two sets of assumptions, Theory X or Theory Y. Theory X assumptions hold that people have an inherent dislike for work and must be forced to perform. Additionally, man avoids responsibility, seeking only security. Theory Y, on the other hand, assumes that work is natural for people, that they will exercise self-control without the threat of force. Responsibility is sought rather than avoided. Finally, Theory Y suggests that intellectual potential is only partially expended given the present state of organizational life. McGregor's thesis is that the predominance of Theory X assumptions has caused discontentment of the work force. The more management applies Theory Y assumptions, the more it can expect improved worker performance.

As previously indicated, Argyris (1964) also places the burden on the organization. He argues that although it is normal for individuals, as they mature, to develop desires for independence, more complex behavior, deeper interests, awareness of self, etc., the organization does not recognize this development. In fact, according to Argyris, the organization retards growth by applying controls, demanding passivity, requiring only a few shallow abilities, etc. Thus, if an individual is to meet the demands of an organization, he must, in effect, consent to regress rather than mature. As a result, the individual will become "psychologically" ill unless he finds some way of adaption to conditions. This adaption sometimes takes a form which is detrimental to organizational goals such as

becoming apathetic and lowering work standards. Changes in organizations should, therefore, center around designing work that will allow the individual to mature normally.

Bass (1965) concluded his discussion of job involvement by echoing the feeling that six conditions lead to a strengthening of the variable: (1) opportunity to make more of the job decisions; (2) the feeling that one is making an important contribution to company success; (3) success; (4) achievement; (5) self-determination; (6) freedom to set one's own work pace.

Blauner (1964) in discussing work alienation, related many points to job involvement. Blauner hypothesized that involvement in work may come from control, from association with others, and from a sense of purpose. A man who is in control of his immediate work process--regulating the pace, the quantity of the output, the quality of the product, choosing tools or work techniques--must, according to Blauner, be relatively immersed in the activity of work. The social aspects and meaning the job are also touched upon by Blauner:

> . . . for most employees, when work is carried out by close-knit work groups, especially work teams, it will be more intrinsically involving and rewarding. And involvement and self-fulfillment is heightened when the purpose of the job can be clearly connected with the final end product or the overall goals and organization of the enterprise (p. 28).

The present research project will employ one type of situational variable, that of perceived task

characteristics. Based on the work of Lawler (1969) and Hackman and Lawler (1971), the characteristics are:

1. Autonomy--The extent to which the worker is allowed to determine the scheduling and the nature of the work which he does.

2. Feedback--The extent to which knowledge of what is accomplished is provided to the worker.

3. Variety--The extent to which the task requires the use of a number of different skills by the employee.

4. Task Identity--Another way in which tasks can become meaningful is for the individual to be involved in a significant part of the task. He does a "sufficiently whole piece of work" that he can identify the outcome as a product of his efforts.

Hackman and Lawler (1971) and Brief and Aldag (1975) have demonstrated that perceived levels of these characteristics are significantly related to job involvement for samples of telephone company and corrections employees, respectively. Hackman and Lawler (1971) found job involvement to be significantly correlated ($p < .05$) with variety ($r = .24$), autonomy ($r = .22$), task identity ($r = .12$), and feedback ($r = .24$). Brief and Aldag (1975), in replicating the above study, found somewhat stronger correlations between job involvement and the core task characteristics: variety ($r = .35$), autonomy ($r = .34$), task identity ($r = .20$), feedback ($r = .40$); all at the $p < .05$ level.

For purposes of this paper, a combined score on all four of the core dimensions will be calculated so as to create a dimension of "perceived job stimulation." This

procedure has previously been performed in studies on the relationship of task characteristics to satisfaction, motivation, and performance (Baird, 1975; Hackman and Lawler, 1971).

While material discussed thus far has declared that job involvement is solely (1) an individual difference variable or (2) the result of a specific type of situation, a third group of theorists have taken a middle of the road stance; that is, one of possible interaction between personality and situational variables with job involvement.

Job Involvement as an Individual-Situation Interaction

Lawler and Hall (1970) suggested that the most realistic view of job involvement would be that it is a function of an individual-job interaction. They support the individual difference point of view by expressing the feeling that people probably do differ, in the degree to which they are likely to become involved in their jobs, as a function of their backgrounds and personal situations. However, the situational viewpoint is also alluded to since, according to Lawler and Hall, it is also probably true that other things being equal more people will become involved in a job that allows them control and a chance to use their abilities than will become involved in jobs that are lacking in these characteristics.

Farris (1971) assumed that job involvement was a function of the interaction of a person with his environment, thus not considering it solely an individual characteristic.

Lodahl and Kejner (1965), although initially believing the individual difference viewpoint, nonetheless conclude their study by declaring:

> . . . it seems clear that job involvement is affected by local organizational conditions (mostly social ones), as well as by value orientations learned early in the socialization process (p. 35).

Wanous (1974) recently theorized on the relationship of an individual's socialization process and characteristics of a job. To Wanous, one of the earliest determinants of an individual's work needs is his socialization environment. In the context of an urban or a rural white-collar environment, an individual, according to Wanous, may be more likely to adopt a set of work values similar to those known as the Protestant Work Ethic or middle-class work values. The results of such an upbringing could cause an individual to develop a general value orientation toward work which emphasizes the importance of work in one's total self-esteem and reinforces the belief that work can hold intrinsic satisfaction.

Wanous speculates that the consequence of such values is that an individual (when asked) is likely to state his own particular desires for job characteristics in terms resembling the higher order need concept. More

specifically, this means that an individual will prefer or desire a job to have large amounts of such characteristics as autonomy, variety, challenge, and meaningfulness. The desired job will be one having task identity and providing the persons with feedback. Wanous believes that it is likely that such an individual will respond favorably when holding a job with such characteristics. It would also seem to hold that if an individual's job characteristic desires are not met, there would be an unfavorable (low involvement) reaction.

Ruh and White (1971) view job involvement as others do in this section. A portion of job involvement is a stable value orientation (a measure of individual differences) brought to the job. These differences involve a basic commitment to the work ethic and tend to be related to the Protestant Ethic. However, there is another portion of job involvement, which, according to the authors, like job attitudes is also influenced by the job situation.

Lawler (1973) states that the design of a job should have its major effect on motivation and satisfaction related to the strength of an individual's higher order needs. Those individuals valuing intrinsic outcomes (i.e., feelings of achievement, growth and competence) should respond to jobs that are high on the four core job characteristics with high motivation (i.e., high job involvement). Persons who do not have interest in obtaining these higher order needs should, according to Lawler, respond to jobs

that are high on the core characteristics with frustration and irritation at having too demanding a job.

Three studies have been done which present results in defense of these viewpoints. Lawler and Hall (1970) performed a study designed to investigate the interrelationships among job involvement, intrinsic motivation, and need satisfaction as well as the relationship of these attitudes to job design characteristics. For purposes of this study, the authors used a sample of 291 scientists in research and development laboratories who replied to a questionnaire containing six items (Lodahl and Kejner, 1965) measuring job involvement; six items relating to satisfaction of autonomy and self-actualizing needs; four items measuring intrinsic motivation; five items designed to measure job perceptions dealing with the degree of control over job, degree to which the job was perceived to be a relevant test of one's abilities and degree of influence and control in the department; and two items measuring self-rated effort and performance. Satisfaction was measured by first asking the scientists how much of the factor mentioned in an item (e.g., autonomy) was associated with their position and comparing this response with the rating of how much of the factor they felt should be associated witb the position. Group interviews were also used in order for the investigators to rate the amount of contact the subject had with project clients. Factorial independence of these three attitudes was demonstrated by the authors although

its clarity may have been partly due to the use of different scale types for these attitudes (i.e., minimum-maximum, agree-disagree). Job involvement was found to be significantly related to four of the five self-perceived job design measures and not to the two objective measures (i.e, challenging job and customer contact). The correlations suggest that the more the job is seen to allow the worker to influence what goes on, to be creative, and to use his skills and abilities, the more job involved he will be ($r = .18-.21$). Lawler and Hall suggest that the fact that self-rated design characteristics and not objective design characteristics relate to job involvement may give credence to the individual difference viewpoint first discussed in Lodahl (1964) but they are quick to say that it may also be due to an individual-job characteristic interaction.

Hackman and Lawler (1971) applied their previous theories and past research (Turner and Lawrence, 1965; Hulin and Blood, 1968) in viewing higher order need satisfaction as, essentially, a moderator variable determining the effects of job redesign efforts. They test the hypothesis that if employees are desirous of higher order need satisfaction there should be a positive correlation between the four task dimensions of variety, autonomy, task identity, and feedback and measures of motivation, satisfaction, performance and attendance. Job involvement in this study was measured by three items from Lodahl and Kejner's (1965) scale ($\alpha = .81$) which yielded a score

indicative of the degree employees felt personally involved in their work. Among the sample of 208 telephone company employees, statistically significant correlations were found in support of the authors' hypotheses. A later replication of this study (Brief and Aldag, 1975) using a sample of 104 corrections employees found results similar to this study. In particular, individuals with strong desires for higher order need satisfaction respond much more positively to high level jobs than do individuals who have weaker higher order needs. It should be noted that the mean higher order need strength of the sample was so high (6.01 out of 7.00 maximum) as to suggest a severe restriction of range problem in the study. A major point which does come out of this important study is that the psychological demands of jobs must be matched to the personal needs of workers for optimal results.

Hypotheses

The above point, that of person-situation matching, was the theme on which the present study was based. Evidence presented demonstrated that both individual difference and situation variables could be related to job involvement. The purpose of this study was to focus in on a number of individual difference/background variables and Hackman and Lawler's (1971) core task characteristics (as one type of situational variable) in order to look at their effects on job involvement scores.

A series of hypotheses based on past research findings were tested in this study:

1. Those individuals who perceive their job as highly stimulating will be more job involved than those who view their job as less stimulating.

2. Individuals who are "Internals" will be more highly job involved than "Externals," regardless of level of perceived job stimulation.

3. Individuals who have high belief in the Protestant ethic will be more highly job involved than those who place less value in the Protestant ethic, regardless of level of perceived job stimulation.

4. Individuals perceiving their job as highly stimulating will be job involved if they have high need strength. Low need strength persons will not be job involved, regardless of level of perceived job stimulation.

5. Individuals who are older will be more highly job involved than younger individuals, regardless of level of perceived job stimulation.

6. Individuals perceiving jobs as highly stimulating will be job involved if highly educated. Those with less education will not be job involved, regardless of level of perceived job stimulation.

7. Individuals who have been with the organization for a longer period of time will be more job involved than those who have been with the company for shorter periods, regardless of level of perceived job stimulation.

8. There will be no difference in level of job involvement between single and married individuals, regardless of perceived job stimulation.

9. Males will be more job involved than females, regardless of perceived job stimulation level.

Hackman and Lawler (1971) assume throughout their study that the core job characteristics actually cause observed differences in level of motivation. To test this assumption, the following hypothesis will be tested:

10. There is a causal relationship between job stimulation and job involvement, with perceived level of job stimulation leading to job involvement at a later point in time (4 months lag, 8 months lag).

The above hypothesis was tested for the total sample, the sample moderated by higher order need strength and the sample moderated by locus of control.

METHOD

Subjects

The original sample consisted of 332 employees (76% male) of a Canadian government ministry. Of these, 233 responded to the second questionnaire and 162 to the third. Twenty-seven percent of the sample had been employed in the ministry for five years or less, 23 percent for 6-10 years, and 50 percent for 11 years and above. Approximately 44 percent was 35 years old and under, 37 percent fell into the 36-50 years old range and 19 percent were 51 and above. The vast majority of this sample (71%) were high school graduates or below, with 23 percent having received either some undergraduate education or a degree and 6 percent doing work beyond the undergraduate degree. The subjects spanned seven different job levels as shown in Table 1. Additionally, a large portion of the sample (73%) was married while 21 percent were single at the time of data collection.

Table 1.--Distribution of all employees according to sex and job level.

Job Level	Males (% of sample)	Females (% of sample)
Semi-skilled laborers	24 (7.4%)	0 (0%)
Office & Clerical	19 (5.9%)	59 (18.2%)
Technicians	140 (43.2%)	17 (5.2%)
Skilled Crafts	29 (9%)	0 (0%)
Sales & Business Personnel (with college degrees)	8 (2.5%)	1 (.3%)
Professional	25 (7.7%)	1 (.3%)
Officers & Managers	1 (.3%)	0 (0%)
Missing Data	8	

Data Collection

The method of data collection was a survey run at three points in time approximately four months apart as part of a larger study on psychological success (Hall and Goodale, 1975). The initial questionnaire provided for the measurement of personal-background data. The demographic variables of interest to this study were years in organization, marital status, age, sex, and level of education. A detailed description of the specific items along with the number replying to each is presented below (the mean level of years in organization is shown).

I. Years in organization

To the nearest year, how many years have you been with the Ministry? 11.2 years

II. Marital Status

What is your marital status?

(1) single = 70
(2) married = 238
(3) divorced = 6
(4) separated = 12
(5) widowed = 3
(6) other (please specify) = 0

III. Age

What is your approximate age?

(1) under 20 = 3
(2) 21-25 = 39
(3) 26-30 = 54
(4) 31-35 = 48
(5) 36-40 = 44
(6) 41-45 = 37
(7) 46-50 = 42
(8) 51-55 = 33
(9) 56-60 = 21
(10) 61-65 = 8
(11) over 65 = 0

IV. Sex

What is your sex? Male = 249, Female = 79

V. Education

Check the highest level of education you have completed:

(1) 8th grade or less = 22

(2) some high school = 100

(3) high school graduate = 112

(4) some undergraduate university = 41

(5) university graduate = 33

(6) some graduate university = 7

(7) graduate degree (please specify) = 7

(8) other including professional certification (please specify) = 6

In addition to these demographic items, attitudinal variables relating to employee values and perceptions of the job were measured. Five scales (self-reports) were utilized for the study with questionnaire items and internal consistency reliabilities to be presented here:

Job Stimulation (α = .69)--a sum score of items based on measures of core job characteristics (variety, autonomy, task identity and feedback from the job itself) developed by Hackman and Lawler (1971). Four seven point scale items were used to rate the job dimensions ranging from Very Little (1) to Very Much (7).

How much variety is there in your work?
How much freedom or autonomy do you have on your job; how much are you left on your own to do your own work?
To what extent do you do a "whole" piece of work (as opposed to doing part of a job which is finished by some other employee)?

To what extent do you find out how well you are doing on the job as you are working?

Job Involvement (α = .75) based upon a scale developed by Lodahl and Kejner (1965) as used by Lawler and Hall (1970). The four scale items were measured on a six point scale ranging from Strongly Agree (6) to Strongly Disagree (1).

The major satisfaction in my life comes from my job.
I live, eat and breathe my job.
I am very much involved personally in my work.
The most important things that happen to me involve my job.

Higher Order Need Strength (α = .93)--to obtain a measure of the degree to which subjects were desirous of obtaining higher order need satisfaction from their work, ten items were included which asked how important various opportunities and attributes were to the individual. The scale was based upon Maslow's need hierarchy and adapted items from Hackman and Lawler (1971). In a space below each item, employees circled a number ranging from 1 (not very important) to 7 (very important).

The feeling of self-esteem a person gets from being in my job.
The authority connected with my job.
The opportunity for independent thought and action in my job.
The prestige of my job inside the company.
The opportunity for independent thought and action in my job.
The feeling of self-fulfillment a person gets from being in my job (i.e., the feeling of being able to use one's own unique capabilities, realizing one's potentialities).
The prestige of my job outside the company (i.e., the regard received from others not in the company).
The feeling of worthwhile accomplishment in my job.
The opportunity, in my job, for participation in the determination of methods and procedures.
The opportunity, in my job, for participating in the setting of goals.

Locus of Control (α = .59)--the four scale items were derived from Rotter's (1966) conceptualization of Internal vs. External locus of control. Each item

was measured on a six point scale ranging from Strongly Agree (6), the External measure, to Strongly Disagree (1), which described Internals.

Most people don't realize the extent to which their lives are controlled by accidental happenings.
Many times I feel that I have little influence over the things that happen to me.
Many of the unhappy things in people's lives are partly due to bad luck.
Sometimes I feel that I don't have enough control over the direction my life is taking.

Protestant Ethic (α = .61)--based upon the conventional ethic subscale of the Survey of Work Values (Wollack et al., 1971). Eleven items were scored on a six point scale ranging from Strongly Agree (6) to Strongly Disagree (1). Negatively worded items were first reflected and then added together with the other scale items in order to create a sum score.

Most companies have suggestion boxes for their workers, but I doubt that the companies take these suggestions seriously. (reflected)
A good worker cares about finding ways to improve his job, and when he has an idea, he should pass it on to his supervisor.
A worker who has an idea about how to improve his job should drop a note in the company suggestion box.
A good worker is interested in helping a new worker learn his job.
A man should always be thinking about pulling himself up in the world and should work hard with the hope of being promoted to a higher-level job.
There is nothing as satisfying as doing the best job possible.
A person would soon grow tired of loafing on a job and would probably be happier if he worked hard.
A well paying job that offers little opportunity for advancement is not a good job for me.
A person should try to stay busy all day rather than try to find ways to get out of doing work.
The most important thing a man should feel about his job is that he enjoys working at it.
Doing a good job should mean as much to a worker as a good paycheck.

Data Coding

To investigate the hypothesized relationships, responses to the four scales used as independent measures (job stimulation, higher order need strength, locus of control and Protestant ethic) were split at the median into low and high subgroups. The demographic variables were placed into subgroups as follows: age--20-35, 36-50, 51+; education--below college, college and above; years with organization--1-5, 6-10, 11 and above; marital status--single, married; and sex--males, females.

Data Analysis

A series of 2x2 and 2x3 analyses of variance and analyses of covariance were performed based on the above cited splits, with job involvement as the dependent measure. The advantage of this type of design was that it enabled the researcher to focus in not only on the main effects of personality/background and job stimulation variables on job involvement but also the interaction effects of the various individual difference variables and level of job stimulation on involvement (Issac and Michael, 1971; Glass and Stanley, 1970). Runyon (1973) had previously used this type of design to analyze the relationship between the personality variable "locus of control" and the situational variable "management style" with level of job involvement.

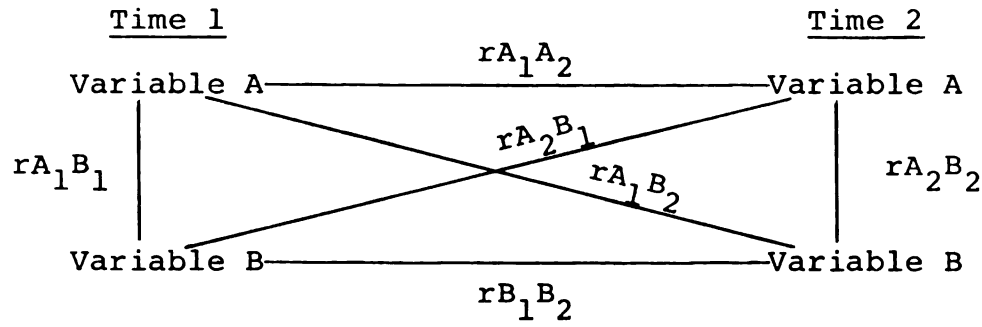
It had been initially proposed to check for a possible correlation between job level and the perceived

levels of job stimulation as previous research (Baird, 1975) had indicated that such a relationship could exist. The purpose of this was to consider holding job level constant throughout the analyses. Job level and job stimulation were not related so most of the analyses were performed as analyses of variance. Analyses of covariance were run when education and sex were independent variables as job level was found to correlate with both and thus was held constant. Additionally, years with the organization was found to correlate with sex and was held constant along with job level in a reanalysis of that relationship.

In an attempt to ascertain the percent of variance in job involvement explained by the various relationships, omega-squared (ω^2) was employed. Through application of this technique it was possible to learn which of the combinations of independent variables is most strongly associated with job involvement (Hays, 1973).

Since the nature of the hypotheses presumes a causal relationship between job stimulation and job involvement, cross-lagged correlations (Lawler, 1968) were applied. The value of this method of analysis is that it yields inferences about which of two correlated variables is the causal agent; this is based on the assumption that if variable A at time 1 is correlated with B at time 2 more strongly than is B at time 1 with A at time 2, then the state of A at time 1 may be influencing the state of B at time 2. Additionally, four other correlations comprise a

typical cross-lagged situation, two of which are static correlations at time 1 and time 2 (rA_1B_1 and rA_2B_2) and the remaining two are essentially test-retest reliabilities (rA_1A_2 and rB_1B_2). This may be illustrated as follows in Figure 1:



In order to infer causality of Variable A by Variable B, the order of correlations should be as follows: $rA_2B_1 > (rA_1B_1 = rA_2B_2) > rA_1B_2$. Similarly, if one were to infer causality of Variable B by Variable A, the order of correlations would be $rA_1B_2 > (rA_1B_1 = rA_2B_2) > rA_2B_1$. In this study, cross-lagged relationships were computed for the total sample, the sample moderated by higher order need strength and the sample moderated by locus of control.

Finally, a stepwise multiple regression analysis was performed with variables found to be related to job involvement. In such an equation, the variable that explains the greatest amount of variance in the dependent measure (job involvement) will enter first; the variable that explains the greatest amount of variance in conjunction with the first will enter second, and so on. Thus

the variable that explains the greatest amount of variance unexplained by the variables already in the equation enters the equation at each step (Nie et al., 1975).

RESULTS

Chapter III will report the results of the test of hypotheses developed in Chapter I. Initially, the hypotheses will be restated. Then the results of the appropriate statistical analyses will be reported. Where there are significant results a brief statement will be included describing them.

Hypothesis 1. Those individuals who perceive their job as highly stimulating will be more job involved than those who view their job as less stimulating.

The summaries of the analyses of variance and covariance for each combination of job stimulation and individual difference measures as well as the mean job involvement scores for different levels of each of the measures are presented in Tables 2-17. The results presented in these tables strongly support hypothesis 1. All of the analyses of variance produced significant results ($p \leq .001$) which demonstrated that differences in job involvement do exist among those who perceive their job as being high on stimulation and those perceiving low stimulation jobs. A check of the tables of cell means revealed

that those who perceive their job as high on stimulation are more job involved than those who perceive their job as low on stimulation. The ω^2 scores shown in these tables range from .028 to .057, which indicated that job stimulation accounted for, at most, 5.7% of the variance in job involvement.

Hypothesis 2. Individuals who are "Internals" will be more highly job involved that "Externals," regardless of level of perceived stimulation.

The results presented in Tables 2 and 3 do not support this hypothesis. The analysis of variance presented in Table 2 indicated that no significant differences exist on job involvement between subgroups based on locus of control. Table 3 illustrated that little difference exists between Internal and External cell means. The ω^2 score of locus of control as presented in Table 2 showed that this variable accounted for 0% of the variance in job involvement.

Hypothesis 3. Individuals who have high belief in the Protestant ethic will be more highly job involved than those who place less value in the Protestant ethic, regardless of level of perceived job stimulation.

This hypothesis was not supported. The results presented in Tables 4 and 5 demonstrated that no significant differences exist on job involvement between believers in the Protestant ethic and those who place less value in it. The Protestant ethic measure accounted for 0% of the variance in job involvement as can be seen in Table 4.

Table 2.--Summary of analysis of variance for the relationship of job stimulation (A) and locus of control (B) to job involvement.

Source	df	F	ω^2
A	1	14.674***	.057
B	1	.412	0
A x B	1	.540	0
(MS Error)	225	(12.166)	

***p < .001

Table 3.--Cell means and numbers of subjects per cell for the relationship of job stimulation and locus of control to job involvement.

		Locus of Control	
		Internal	External
Job Stimulation	Low	11.046 N = 65	10.391 N = 46
	High	12.500 N = 52	12.530 N = 66

Table 4.--Summary of the analysis of variance for the relationship of job stimulation (A) and belief in the Protestant ethic (B) to job involvement.

Source	df	F	ω^2
A	1	16.745***	.047
B	1	.437	0
A x B	1	.117	0
(MS Error)	319	(13.465)	

***$p \leq .001$

Table 5.--Cell means and number of subjects per cell for the relationship of job stimulation and belief in Protestant ethic to job involvement.

		Protestant Ethic	
		Low Belief	High Belief
Job Stimulation	Low	10.835 N = 85	10.976 N = 84
	High	12.361 N = 61	12.785 N = 93

Hypothesis 4. Individuals perceiving their job as highly stimulating will be job involved if they have high need strength. Low need strength persons will not be job involved, regardless of level of perceived job stimulation.

The analysis of variance table presented in Table 6 does not support this hypothesis of significant interaction effects. It can be observed, however, that main effects for higher order need strength were present and statistically significant ($p \leq .01$). Upon checking Table 7, it can be seen that those with high need strength were more job involved than those with low need strength, regardless of level of job stimulation. Need strength accounted for 2.8 percent of the variance in job involvement, as is indicated by the ω^2 score presented in Table 6. The combined relationship of job stimulation and need strength accounted for 7.2 percent of the variance in job involvement.

Hypothesis 5. Individuals who are older will be more highly job involved than younger individuals, regardless of level of perceived job stimulation.

The results presented in Table 8 indicated that significant differences ($p \leq .001$) in job involvement do exist between age groups. In looking at Table 9, it can be observed that job involvement went up as age increased regardless of the level of job stimulation, thus supporting the hypothesis. Table 8 shows that age accounted for 5.5 percent of the variance in job involvement while the

Table 6.--Summary of analysis of variance for the relationship of job stimulation (A) and higher order need strength (B) to job involvement.

Source	df	F	ω^2
A	1	11.164***	.043
B	1	7.547**	.028
A x B	1	.792	.001
(MS Error)	211	(11.086)	

**p $\leq$ .01

***p $\leq$ .001

Table 7.--Cell means and number of subjects per cell for the relationship of job stimulation and higher order need strength to job involvement.

		Higher Order Need Strength	
		Low Need Strength	High Need Strength
Job Stimulation	Low	10.015 N = 66	11.737 N = 38
	High	11.977 N = 44	12.866 N = 67

Table 8.--Summary of analysis of variance for the relationship of job stimulation (A) and age (B) to job involvement.

Source	df	F	ω^2
A	1	13.574***	.035
B	2	10.852***	.055
A x B	2	2.096	.006
(MS Error)	313	(12.525)	

***$p \leq .001$

Table 9.--Cell means and number of subjects per cell for the relationship of job stimulation and age to job involvement.

		Age		
		21-35	36-50	51+
Job Stimulation	Low	9.716 N = 81	11.776 N = 58	12.926 N = 27
	High	12.119 N = 59	12.508 N = 61	13.272 N = 33

combined relationship of age and job stimulation accounted for 9.6 percent of the variance in involvement scores.

Hypothesis 6. Individuals perceiving jobs as highly stimulating will be job involved if highly educated. Those with less education will not be job involved, regardless of level of perceived job stimulation.

The interaction effect predicted by this hypothesis was not supported, as is shown in Tables 10 and 11. Job level was held constant in the analysis of covariance used to test this hypothesis. Education accounted for 0 percent of the variance in job involvement.

Hypothesis 7. Individuals who have been with the organization for a longer period of time will be more job involved than those who have been with the company for shorter periods, regardless of level of perceived job stimulation.

The two-way analysis of variance presented in Table 12 indicated that differences in level of job involvement do exist between various subgroups based on years with organization ($p \leq .001$). Table 13 revealed that the level of job involvement increased with years with organization, thus supporting the hypothesis. Years with organization accounted for 6.9 percent of the variance in job involvement as is indicated by the ω^2 score in Table 12. The combined relationship on job stimulation and years with organization accounted for 10.4 percent of the variance in job involvement.

Hypothesis 8. There will be no differences in level of job involvement between single and married individuals, regardless of level of perceived job stimulation.

Table 10.--Summary of analysis of covariance for the relationship of job stimulation (A) and education (B) to job involvement (job level held constant).

Source	df	F	ω^2
A	1	15.015***	.040
B	1	.334	0
A x B	1	3.121	.006
(MS Error)	313	(13.114)	

***P $\leq$.001

Table 11.--Cell means and number of subjects per cell for the relationship of job stimulation and education to job involvement (job level held constant).

		Education	
		Below College	College and Above
Job Stimulation	Low	11.380 N = 121	11.230 N = 48
	High	12.170 N = 107	12.020 N = 45

Table 12.--Summary of analysis of variance for the relationship of job stimulation (A) and years with the organization (B) to job involvement.

Source	df	F	ω^2
A	1	12.503***	.032
B	2	13.603***	.069
A x B	2	1.468	.003
(MS Error)	314	(12.463)	

***$p \leq .001$

Table 13.--Cell means and number of subjects per cell for the relationship of job stimulation and years with the organization to job involvement.

		Years with Organization		
		1-5	6-10	11+
Job Stimulation	Low	9.308 N = 52	10.341 N = 41	12.384 N = 73
	High	11.486 N = 35	12.379 N = 29	13.133 N = 90

The analysis of variance, as presented in Table 14, showed that no significant differences in job involvement exist between married and unmarried people. Table 15, which examined the cell means, confirmed that no significant differences exist when examining the effects of marital status on job involvement. Thus, the data presented supported this hypothesis. The variable marital status accounted for .3 percent of the variance in job involvement, as is presented in Table 14.

Hypothesis 9. Males will be more job involved than females, regardless of perceived job stimulation level.

A two-way analysis of covariance with job level held constant was initially used to test this hypothesis. Results, as presented in Table 16, showed a main effect for sex ($p \leq .05$). Table 17 revealed that males had higher levels of job involvement than females. The hypothesis was thus supported. Sex accounted for 1.3 percent of the variance in job involvement. When sex was combined with job stimulation, 5.5 percent of the variance was accounted for.

A reanalysis of this hypothesis was performed which held both job level and years with organization constant after a check of the data showed a significant correlation between sex and years with organization. The data presented in Table 18 and 19 demonstrated that no significant sex differences exist when those variables were held constant, thus not supporting the hypothesis. The

Table 14.--Summary of analysis of variance for the relationship of job stimulation (A) and marital status (B) to job involvement.

Source	df	F	ω^2
A	1	15.492***	.046
B	1	2.013	.003
A x B	1	.447	0
(MS Error)	297	(13.338)	

***$p \leq .001$

Table 15.--Cell means and number of subjects per cell for the relationship of job stimulation and marital status to job involvement.

		Marital Status	
		Single	Married
Job Stimulation	Low	10.610 N = 41	11.041 N - 121
	High	11.741 N = 27	12.857 N = 112

Table 16.--Summary of analysis of covariance for the relationship of job stimulation (A) and sex (B) to job involvement (job level held constant).

Source	df	F	ω^2
A	1	15.500***	.042
B	1	5.349*	.013
A x B	1	.489	0
(MS Error)	314	(12.991)	

*$p \leq .05$

***$p \leq .001$

Table 17.--Cell means and number of subjects per cell for the relationship of job stimulation and sex to job involvement (job level held constant).

		Sex	
		Male	Female
Job Stimulation	Low	11.485 N = 128	10.905 N = 40
	High	12.230 N = 138	11.700 N = 36

Table 18.--Summary of analysis of covariance for the relationship of job stimulation (A) and sex (B) to job involvement (job level and years with organization held constant).

Source	df	F	ω^2
A	1	11.305***	.028
B	1	1.229	.001
A x B	1	.094	0
(MS Error)	311	(12.202)	

***$p \leq .001$

Table 19.--Cell means and number of subjects per cell for relationship of job stimulation and sex to job involvement (job level and years with organization held constant).

		Sex	
		Male	Female
Job Stimulation	Low	11.475 N = 128	11.195 N = 40
	High	12.145 N = 118	11.865 N = 36

percent of variance accounted for by sex in the reanalysis is .1 percent. The combination of sex and job stimulation accounted for 2.9 percent of the job involvement variance.

Hypothesis 10. There is a causal relationship between job stimulation and job involvement, with perceived level of job stimulation leading to job involvement at a later point in time (4 month lag, 8 month lag).

This hypothesis, tested by a series of cross-lagged analyses between time 1 and time 2 (Table 20), time 2 and time 3 (Table 21), and time 1 to time 3 (Table 22), was not supported for the total sample, the sample moderated by need strength nor the sample moderated by locus of control over any of the time periods.

Multiple Regression

Upon completion of these analyses, it was decided to place all of the variables showing significant relationships with job involvement into a stepwise multiple regression equation in order to see which of the four variables explained the most variance in job involvement. The order of the variables and their beta weights (in parentheses) were (1) Years with organization (.20), (2) Higher order need strength (.22), (3) Job stimulation (.20), and (4) Age (.11). These four variables combined accounted for 23.8 percent of the variance in job involvement.

Summary

The analyses performed supported the following hypotheses which predicted that:

Table 20.--Causal analysis between job stimulation (A) and job involvement (B) for total sample, the sample moderated by higher order need strength and the sample moderated by locus of control over Time 1 and Time 2 (4 month lag).

Moderator	Reliabilities		Static Correlations		Cross-lagged Correlations	
	rA_1A_2	rB_1B_2	rA_1B_1	rA_2B_2	rA_1B_2	rA_2B_1
Total Sample	.50**	.65**	.31**	.24**	.29**	.22**
High Need Strength	.32**	.66**	.37**	.04	.17	.11
Low Need Strength	.54**	.62**	.26**	.21*	.28**	.19*
Internals	.53**	.61**	.28**	.23*	.28**	.22*
Externals	.48**	.70**	.38**	.26*	.30**	.22*

N = 102 -323

*$p \leq .01$

**$p \leq .001$

Table 21.--Causal analysis between job stimulation (A) and job involvement (B) for total sample, the sample moderated by higher order need strength and the sample moderated by locus of control over Time 2 to Time 3 (4 month lag).

Moderator	Reliabilities		Static Correlations		Cross-lagged Correlations	
	rA_2A_3	rB_2B_3	rA_2B_2	rA_3B_3	rA_2B_3	rA_3B_2
Total Sample	.72**	.69**	.24**	.31**	.21*	.20*
High Need Strength	.74**	.63**	.04	.26*	.09	.09
Low Need Strength	.68**	.70**	.21*	.27*	.16	.19
Internals	.71**	.71**	.23*	.26*	.14	.22
Externals	.71**	.66**	.26*	.40**	.29*	.20

N = 74 -226

*$p \leq .01$

**$P \leq .001$

Table 22.--Causal analysis between job stimulation (A) and job involvement (B) for total sample, the sample moderated by higher order need strength and the sample moderated by locus of control over Time 1 to Time 3 (8 month lag).

Moderator	Reliabilities		Static Correlations		Cross-lagged Correlations	
	rA_1A_3	rB_1B_3	rA_1B_1	rA_3B_3	rA_1B_3	rA_3B_1
Total Sample	.39**	.67**	.31**	.31**	.13	.15
High Need Strength	.32**	.60**	.37**	.26*	.13	.11
Low Need Strength	.39**	.70**	.26**	.27*	.07	.14
Internals	.39**	.69**	.28**	.26*	.07	.17
Externals	.37**	.65**	.38**	.40**	.20	.17

N = 74 -323

*$p \leq .01$

**$p \leq .001$

1. A significant relationship exists between high job stimulation and job involvement

5. Older workers would be more highly job involved

7. The longer a worker has been in the organization, the more job involved he would be

8. No differences exist in job involvement between single and married individuals

A significant main effect exists for the relationship between higher order need strength and job involvement, but not the predicted (hypothesis 4) interaction between need strength and job stimulation on job involvement.

No support was found for the following hypotheses which predicted that:

2. Internals would be more job involved than Externals

3. High believers in the Protestant ethic would be more job involved than low believers

6. The interaction of more education and high job stimulation would relate to job involvement (with job level held constant)

9. Males would be more job involved than females (with job level and years with organization held constant)

10. Job stimulation leads to job involvement

As a final check of the relative importance of those variables (years with organization, age, job stimulation, and higher order need strength) found to be related to job involvement, a stepwise multiple regression was performed which demonstrated that these variables combined accounted for 23.8 percent of the variance in job involvement.

DISCUSSION

General Findings

The data generally seem to support the view of the theorists who espouse the notion that both individual difference and situational variables relate to job involvement. The present study demonstrated that the two types of variables have a joint (additive) effect, as opposed to a contingent effect, in relation to job involvement. It cannot be conclusively stated from this study, however, which of the two types of variables is more strongly associated with job involvement since only 23.8 percent of the variance was accounted for by variables measured.

Results presented here in regard to the relationship of job involvement to demographic characteristics such as age and years with organization do support previous research findings. Many studies (Schwyhart and Smith, 1972; Jones, James, and Bruni, 1975; Hall and Mansfield, 1975; Schuler, 1975; and Lodahl and Kejner, 1965) have demonstrated that older workers are more job involved than

younger employees. The present study is in accord with the literature in this area.

The findings of a positive relationship between years with the organization and job involvement is in agreement with previous studies (Jones, James, and Bruni, 1975; Lodahl and Kejner, 1965) which found positive correlations between job involvement and years in pay grade and time on job respectively for samples of civil service and assembly work employees.

The predicted relationship of an interaction between level of education and job stimulation with job involvement did not occur. Perhaps such a relationship might occur by using only relevant education (Schuler, 1975) as a predictor. Generally though, past research (Siegel and Ruh, 1973; Jones, James, and Bruni, 1975) has not shown a direct relationship between education and job involvement and thus this study adds to the consensus in this area.

The present study eventually did not find significant sex differences in terms of job involvement. Initially with only job level held constant, males appeared more job involved than females, thus giving some support to socialization theory. However, when it was found that males had been in the organization for a longer time than females, this variable was also held constant. Thus, when holding job level and years with the organization constant, sex was not significantly related to job involvement.

Finally, in terms of demographic variables, marital status was not found to relate to job involvement. Previous work (Lodahl and Kejner, 1965) similarly found no relationship between these two variables for separate samples of nursing personnel and engineers.

Turning from background to personality variables, the present research found a significant relationship between higher order need importance and job involvement. This finding supports previous studies (Maurer, 1969; Hall, Schneider, and Nygren, 1970) which found job involvement related only to higher order need importance. The hypothesized interaction between high need strength and high job stimulation with job involvement did not occur. This finding does not support the Hackman and Lawler (1971) finding that individuals with high need strength respond more positively to high stimulation jobs than do individuals who have low need strength. Differences between the two studies may be traced to two areas. The Hackman and Lawler total sample had a mean need strength score of 6.01 out of 7.0 which appears to be unusually high. The sample in the present study had a mean need strength score of 4.4 out of 7.0. Secondly, Hackman and Lawler (1971) trichotomized their sample, designating the upper third as "high need strength" (mean score = 6.78) third as "low need strength" (mean score = 5.09). The present research dichotomized the sample into high (mean score = 5.37) and low (mean score = 3.52) subgroups. Thus Hackman and

Lawler's (1971) low need strength group appears to be virtually equivalent to the present study's high need strength group. It seems evident that the predicted interaction did not occur for this reason.

The lack of a relationship between Internals on the locus of control scale and job involvement did not support previous findings (Runyon, 1973; Evans, 1971). A conclusive finding of the present study, contrary to Runyon (1973), was that job involvement was not primarily a function of the Internal-External dimension of personality. The education level of this sample was not very high and the items presented in this scale were thought-provoking, requiring some degree of comprehension. Such items may not have been fully understood and might have been answered randomly by some people in the sample. The present study's use of a "strongly agree" to "strongly disagree" response format for presenting locus of control items could have also influenced responses. Previous studies (e.g., Baird, 1974) have presented these items in a forced-choice format, which was used in the original presentation of this scale (Rotter, 1966). Finally, cultural differences should be taken into account. It is possible that Canadian workers respond differently to items measuring this dimension of personality.

Some of the above statements can be repeated in discussing the lack of a significant relationship between the Protestant ethic and job involvement. Cultural

differences stand out as a possible reason for lack of significance. The concept of a work ethic may be interpreted differently by people of various cultures. Further, the items were long and may not have been fully understood by the sample. It is also possible some of the scale items measured areas conceptually dissimilar to those of the job involvement scale. The internal consistency level of the Protestant ethic measure is not very high considering the number of items in it and may be tapping different dimensions. A comparison of this measure of the Protestant ethic to the Blood (1969) measure used by Ruh and White (1974) in correlating job involvement with belief in the Protestant ethic might be in order.

Thus, the present study has demonstrated that some individual difference variables do, in fact, relate to job involvement. Additionally, though, data presented here support the notion that perceived job stimulation (a situational variable) relates to job involvement. It was found that those individuals perceiving their job as highly stimulating are job involved. These results support past studies (Hackman and Lawler, 1971; Brief and Aldag, 1975) which found job involvement positively related to perceived levels of the components of job stimulation. It is thus possible that the way in which persons perceive the characteristics of their job gives some indication; although not strong, of whether an individual is job involved.

The final hypothesis tested for a suggested causal relationship (Hackman and Lawler, 1971) with perceived job stimulation causing job involvement. Testing this hypothesis for the sample as a whole, no such relationship was present. The sample was then split into high and low need strength subgroups with no apparent causal relationships present. Finally the sample was split into Internals and Externals based on locus of control scores, with no causal relationship between job stimulation and job involvement found. Thus, for the present sample, such a causal relationship was not present.

To briefly summarize the discussion to this point, it has been found that the job involved worker in the present sample is one who perceives the job as highly stimulating, has a high desire for higher order need satisfaction, has been in the organization for a longer time and is older than non-involved workers. The present findings further indicate that marital status, education (holding job level constant), sex (holding job level and years with organization constant), belief in the Protestant ethic and the locus of control aspect of the personality have no effect on one's job involvement.

Practical Significance

Throughout the present study, statistically significant relationships have been shown to exist between job involvement and various variables. It should not, however,

be assumed that these findings are practically significant. Perhaps the most practically significant finding is that the true nature of job involvement is not solely inherent in the variables tested in the present research. When one considers that only a small (23.8%) portion of the variance in job involvement was accounted for by variables found to statistically significantly relate to it, one must conclude that the answer lies elsewhere.

With this is mind, it would be of interest to consider the making of staffing decisions in industry. Based on findings of the present study, it appears that the business world should think twice about not hiring (or dismissing) a middle-aged individual. Older workers, in this sample, tended to be more job involved than their younger counterparts. Similarly, those workers who had been with the organization for longer lengths of time were more involved in their job than those who had not been in the ministry as long.

If a decision in regard to an open job position must be made, it would be of some help to know how the workers in question perceive their present job. Those who find their present assignment highly stimulating should not be moved if at all possible, while an individual who finds his present position unstimulating should be considered for transfer in the hopes of changing his attitude.

Additionally, the knowledge of an individual's higher order need strength may also give some indications

as to a person's job involvement. Individuals with high need strength may be job involved on their present job and should perhaps remain on it, while those with low need strength might be better candidates for a change of scenery if the opportunity arises in hopes of increasing their involvement.

Of major importance is the finding that, all things being equal, sex differences do not exist in terms of job involvement. The hiring of women into various positions has been a questioned past practice and results presented here show that both sexes may be equally involved in jobs.

Job involvement has been found to be significantly related to both turnover (Farris, 1971; Wickert, 1951; Siegel and Ruh, 1973) and absenteeism (Patchen, 1965), and it would thus make logical sense for an organization to be aware of the job involvement levels of various individuals. Through findings of the present study, it has been seen that the job involved worker is one who:

1. Is older
2. Has been with the organization longer
3. Has high need strength
4. Perceives the job as high stimulating

As was indicated, however, these areas are only a beginning in terms of drawing a sketch of the job involved individual.

Limitations

When interpreting the results of the present study, one must keep in mind the limitations of it. One limitation of this study is narrow range of job levels represented by the sample. As was seen in Table 1, the bulk of the sample fell into two classifications, clerical workers and technical workers. Future studies should aim for good representation from all job levels for purposes of comparison.

Another limitation here is that cultural differences may have occurred in terms of responses to many of the scales. Studies cited throughout this paper have, for the most part, employed samples from the United States while this was a sample of Canadian workers. Perhaps some of the differences could be observed by giving the questionnaire used here to American workers employed in similar positions.

A third limitation is the inability to make a conclusive statement about all the components of job involvement. Only 23.8 percent of the variance in job involvement was accounted for by variables in this study and thus it cannot be definitively stated that job involvement is most affected by individual difference variables or situational variables.

A final limitation of this study may have been in its use of a self-report rather than objective measure of job characteristics. Jenkins et al. (1975) criticize the excessive use of self-report job characteristics in

organizational research due to problems of bias inherent in these methodologies. They suggest on-site observation of job characteristics by trained observers as a feasible alternative. Such objective measures of jobs were not available for this study, but past research (Baird, 1974; Hackman and Lawler, 1971; Hackman and Oldham, 1975) has demonstrated fairly high correlations between perceived and objective reports of job characteristics. Therefore, it is not clear that the use of task perceptions is in fact a problem here.

Future Research

Future research should measure additional variables which may be related to job involvement in order to get a better picture of the job involved worker. Such variables are participation in decision-making (Siegel and Ruh, 1973), supervision (Lodahl and Kejner, 1965) and supervisory style (Runyon, 1973), satisfaction, task repetitiveness and role ambiguity (Schuler, 1975).

Perhaps other forms of involvement may give us a further clue as to the nature of job involvement. Such areas could include family involvement (Gannon and Hendrickson, 1973), company and product involvement (Lodahl, 1964), community, religious and recreational involvement (Bray et al., 1974). It is possible that the job involved person is one who is involved in his work at the cost of all other forms of potential involvement. It is perhaps

the case, though, that one may be job involved because his job relates to outside activities. This areas is worth exploring.

Another area open to exploration is that of reanalyzing measures of job involvement. While Lodahl and Kejner's (1965) scale has been the most widely used measure of job involvement, it may not be the most satisfactory way of looking at this construct. Wood (1974) found this scale to be multidimensional in nature and thus it may be looking at too general an area. A plethora of definitions has been used in past studies in regard to "job involvement." It is perhaps due to the unclarity of the scale applied that such confusion has resulted. A comparison of the Lodahl and Kejner (1965) scale with other measures of involvement such as Dubin's (1956) central life interests scale, Maurer's (1969) work role involvement measure, Faunce's (1959) measure of occupational involvement, Patchen's (1970) "general interest" measure and Mannheim's (1975) work centrality measure might enable researchers to tie together the various elements of job involvement, thus creating more clarity in this area of research.

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