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Abstract	Organizational researchers have long sought methods to increase the likelihood that individuals work hard in organizations. Historically, this problem has been characterized as an issue of work motivation. As a result, motivational research has been one of the most prevalent forms of organizational inquiry. However, as Bhagat and McQuaid (1982) note, most of the research in work motivation has been conducted in Western cultural settings, particularly in the U.S. Little work has been done to investigate work motivation in other cultural settings. Moreover, most of the available theories of work motivation were developed by American researchers using data from U.S. cultural settings. As a result, it is very likely that those theories are laden with implicit assumptions of the American culture. According to Hofstede (1980), the United States is characterized by a very high degree of individualism. As Hofstede himself notes, the dimension of individualism/collectivism is strongly related to "the nature of relationship between a person and the organization to which he or she belongs" (p. 217). Therefore, motivational models which have foundations in individualistic cultures may not be applicable to collectivist cultures. This paper tries to examine the cross-cultural validity of the Job Characteristic Model of Work Motivation developed by Hackman and Oldham (1976, 1980). Some theoretical modifications of the model will be attempted toward extending its applicability to "collectivist" cultural settings.
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Task Interdependence and Internal Motivation: Application of Job Characteristic Model to “Collectivist” Cultures

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Organizational researchers have long sought methods to increase the likelihood that individuals work hard in organizations. Historically, this problem has been characterized as an issue of work motivation. As a result, motivational research has been one of the most prevalent forms of organizational inquiry. However, as Bhagat and McQuaid (1982) note, most of the research in work motivation has been conducted in Western cultural settings, particularly in the U.S. Little work has been done to investigate work motivation in other cultural settings. Moreover, most of the available theories of work motivation were developed by American researchers using data from U.S. cultural settings. As a result, it is very likely that those theories are laden with implicit assumptions of the American culture.

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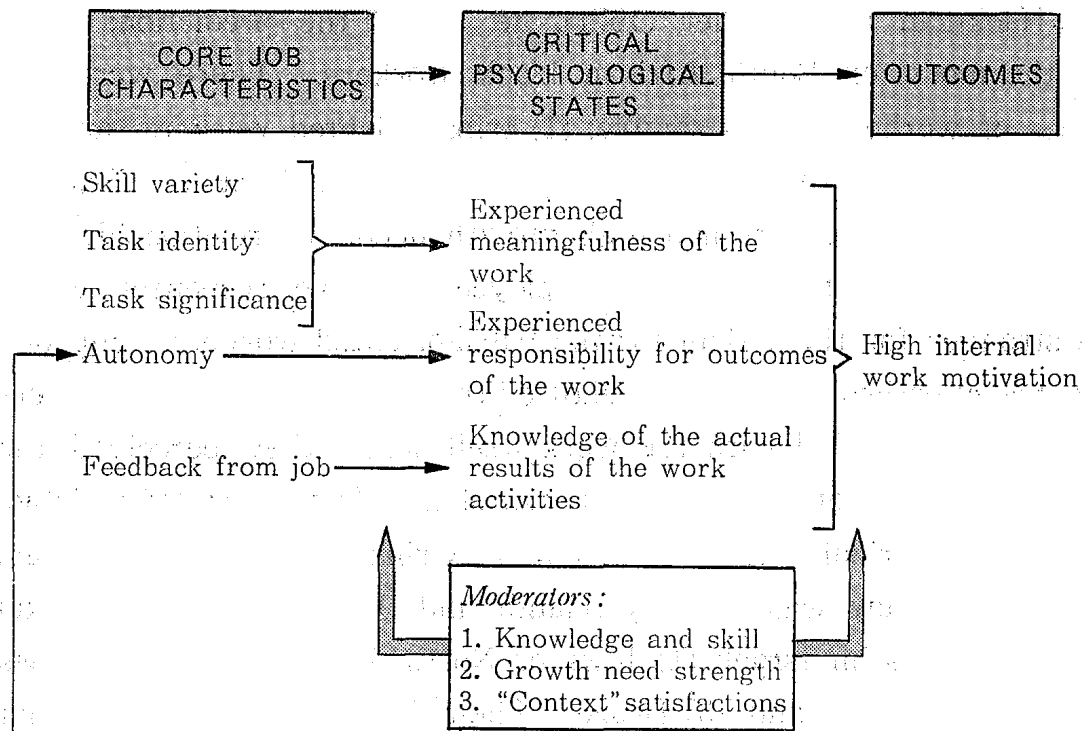
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One of the recent trends in work motivation research is the numerous attempts to motivate individuals through the design of job. Among these attempts, Hackman and Oldham's (1976, 1980) work constitutes one of the most theoretically elaborate and widely accepted models. Drawing on previous research (eg., Hackman and Lawler, 1971), they developed a theory with five core job characteristics -- skill variety, task identity, task significance, autonomy, and feedback from the job. These job characteristics give rise to corresponding critical psychological states experienced by the individuals on the job. Skill variety, task significance, and task identity together lead to the experienced meaningfulness of the work, autonomy leads to experienced responsibility for outcomes of the work, and job feedback leads to knowledge of results. Through these psychological states, jobs which are high on the core characteristics will be associated with employee motivation. Internal motivation, according to Hackman and Oldham (1976), is defined as work motivation powered by self-generated and self-administered rewards. It is conceptually akin to Deci's (1975) intrinsic motivation.

Another feature of this model is the role played by individual differences factor. According to Hackman and Oldham (1976, 1980), individuals high on growth need tend to have strong desire for personal accomplishment, for learning, and for developing themselves beyond where they are now. Therefore, they predicted that, those high on growth need strength (GNS) will react to the five core job characteristics more positively than their low growth need counterparts. In their model, growth need affects the relationship between job characteristics and internal motivation at two points, first at the path from job characteristics to critical psychological states, and second at the path from critical psychological states to internal motivation. The upper half of Figure 1 is a graphic representation of the Hackman-Oldham model.

After its first introduction, this model has been subjected many

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(Adopted from Hackman and Oldham, 1980, p. 83)

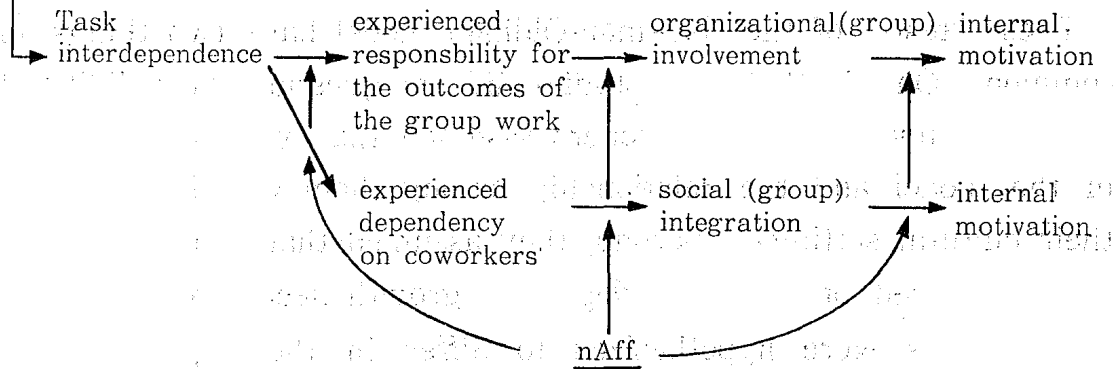


Figure 1. Modified Model of Internal Motivation by Job Characteristics

empirical investigations as well as criticisms. Surprisingly, however, few studies have been conducted to examine this model in cross-cultural settings. A recent review by Bhagat and McQuaid (1982) reports no such research. The present authors found only two studies. One is reported in Orpen (1979). Using the original model

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by Hackman and Lawler (1971), he tested the predictions made by the model on South African black workers. There were two types of workers in his sample; (1) tribal-oriented workers, and (2) Western-oriented workers. He predicted that because Western-oriented black workers had high growth need, the relationship between job characteristics and employee affective responses would be stronger for them than for the tribal-oriented workers. Supporting his hypothesis, the results showed that Western-oriented workers were more satisfied with the work itself when they perceived the job to be high on core job characteristics. The source of satisfaction for the tribal black workers was extrinsic factors, mainly pay.

Another study was done by Shamir and Drory (1981). They had three samples in Israel; (1) Jews of North African origin, (2) Jews of Geogian origin, and (3) Druze. Their hypothesis predicted that North African Jews, because of their high growth need, would react of core job characteristics more positively than the two other groups. Their data supported this prediction.

These "tests" of the Hackman-Oldham model have two things in common. One is that both studies did not question the validity of the model itself. The researchers assumed that variables included in the model and the relationship among them would be valid in their cultural settings. Second, they assumed that cultural impact will be placed only on the degree of growth need strength. Cultural groups were hypothesized to differ in their growth need strength and as a result would differ in their reactions to core job characteristics. Because of these weaknesses these two studies did not constitute a full test of the Hackman-Oldham model in cross cultural settings.

*Modification of the Hackman-Oldham Model**Task Interdependence as a Job Characteristic*

Two modifications seem to be necessary in applying the Hackman-Oldham model to collectivist cultures. First, autonomy on the job may not be a potential motivating factor in collectivist cultures. Autonomy is defined as "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out" (Hackman and Oldham, 1980, p. 79).

This definition has a strong individualistic connotation. Autonomy on the job, in essence, is the degree to which an individual can decide his or her course of action on the job without directions from other individuals. Therefore, in its ultimate form, the motivating potential of autonomy is maximum when the worker is "the boss" on his or her job.

One characteristic of the job which has often been mentioned in the organizational literature is task interdependence. Task interdependence is defined as "the connectedness between jobs such that performance of one depends on the successful performance of the other" (Kiggundu, 1983, p. 196). According to the literature review reported in Kiggundu (1981), there have been a few theoretical elaborations of the role played by task interdependence, one prime example being the sociotechnical school (eg., Trist and Bamforth, 1951). This school emphasized task interdependence as the key determining factor on which success of technological change depends. However, most of the theoretical models which included task interdependence as a factor did not explicitly relate this to individual work motivation.

In collectivist society, task interdependence can be a strong motivating factor in the job. As is apparent from the definition, when

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task interdependence is present in the job, individuals are required to interact with other members of the work group and to contribute to the performance of the group task. From the group's point of view, successful completion of the work depends upon the contributions from individuals among whom work is divided into interdependent pieces.

When the task completion is dependent on the individual's contributions, each individual is likely to experience responsibility for the outcome of the group's work. Recall that in the Hackman-Oldham model autonomy was predicted to lead to experienced responsibility for the outcome of the work. However, responsibility that individuals experience on the autonomous jobs is only for the outcome of his or her own work. Thus, it is predicted that autonomy leads to the experienced responsibility for the outcome of his or her own work, and that task interdependence leads to experienced responsibility for the outcomes of the group's work.

When the outcome of the work depends on the joint contribution of the group members, the reward which is contingent on the successful completion of the work is also dependent on the successful performance of the members. This will enhance the workers' involvement in the work group of which he or she is a member. According to Steiner (1972), the evidence from an individualistic culture (i.e., the U.S.) shows the opposite pattern. He found that group involvement tends to be higher when pay is contingent on the individual performance rather than on the group performance. The prediction made here for the collectivist cultures is opposite to this finding. Group involvement will be higher when rewards are contingent on the successful performance of the group. This enhanced group involvement will lead to higher internal motivation.

There is probably another path which relates task interdependence to internal motivation. In this second path, task interdependence is first hypothesized to lead to experienced dependency of the workers

on their coworkers. When the job is designed in a task-interdependent manner, workers need to depend upon other workers' task performance to complete their work. As a result of this dependent relationship on the job, workers are likely to develop and experience feelings of dependency on other members who share the work.

Doi (1973) argued that feelings of dependency (*amae*) is a critical factor in Japanese interpersonal relationship. According to Triandis and Kashima (1982), *amae* is likely to function in the work organization as well as other social organizations. If their observation is correct, Japanese organizations are successfully making use of *amae* on the job by explicitly building task interdependence in the job. Ishida (1977, 1981) and Yoshino (1968) both argue that one of the characteristics of Japanese work organization is the lack of clear demarcation of jobs among the members of the work group. This may be an example of successful match between cultural orientation of the workers and the organization of work.

When workers in the group develop a feeling of dependence on other workers, it will facilitate the workers' social integration into the work group. In other word, as a result of actual and affective dependency on the other members of the group, members may develop a strong desire to stay in the group and to continue to be the members of the group. Many social psychological studies show that when workers are highly integrated into the group and group cohesion is high, the group's goal is more likely to be assumed by the members as their personal goals. Conformity to the group norms will also be high (cf., Steiner, 1972). The group's goal in the work situation is successful completion of the task. Therefore, when the members assume the group's goal as their goals, it is likely that they are internally motivated to work hard.

Need for Affiliation as a Moderator

Another major modification to the Hackman-Oldham model is the

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moderating effect of need for affiliation (nAff). As was discussed earlier, Hackman and Oldham (1976, 1980) predicted that growth need strength will moderate the relationship between the job characteristics and internal motivation. Growth need, as a theoretical concept, is akin to the need for achievement (nAch). Need for achievement is characterized by aspiration to accomplish difficult tasks, maintenance of high standards, willingness to work for moderately distant goals, willingness to put forth effort to attain excellence, and positive reactions to competition (Steers and Porter, 1979). Compare this to the description of growth need. Both needs involve willingness to attain excellence and to achieve difficult tasks.

Need for affiliation, on the other hand, is rarely mentioned in the (Western) organizational literature. Need for affiliation is characterized by a strong desire to form friendships with others and to maintain association with other people. People high on nAff are more likely to enjoy being with friends and people in general (Steers and Porter, 1979). In the organizational literature, nAff, when mentioned, is not usually associated with effective performance. Rather, it is often assumed to be dysfunctional to performance on the job. The following remarks by Litwin and Stringer seem to represent the role of nAff in U.S. organizational psychology.

While strong n-Affiliation does not seem to be important for effective managerial performance, and might well be detrimental, recent research has suggested that some minimal concern with the feelings of others and with to companiate quality of relationship is necessary for superior managerial and executive capacity. (reprinted in Steers and Porter, 1979, p. 63; emphasis added).

However, in collectivist cultures, it is likely that nAff operates as moderators of the relationship between task interdependence and internal motivation. When the job requires cooperation and coordination among the members and the completion of the task depends on the successful coordination, high nAff individuals are

more likely to be able to perform better. This is because high nAff individuals are more likely to derive satisfaction from the interpersonal relationship required on the job and motivated by the interaction with other members of the group.

As a result, in collectivist cultures, high nAff individuals are more likely to be motivated by the task interdependence in the job. As in the Hackman-Oldham model, nAff can operate at two linkage points in the model, one between task interdependence and experienced responsibility for outcomes of the group's work/experienced dependency on coworkers and another between experienced psychological states and group involvement/social integration.

Empirical Evidence Supporting the Components of the Model

There is no direct empirical support for the model. However, some existing literature has investigated the various components of the model. In the following discussion, empirical studies concerning two components of the model will be reviewed. All studies reviewed used subjects from collectivist cultures in Hofstede's (1970) classification. The main focus will be on Japanese organizational behavior. Japan, according to Hofstede's (1980) data, belongs to the collectivist side, although the degree of collectivism is moderate.

One of the prediction of the model is that in a collectivist culture, individuals with high group involvement and social integration will be internally motivated. There is some literature pertaining to this prediction.

First, Hayashi (1975) reported that the majority of the Japanese in Japan prefer supervisor who "sometimes demands extra work...., but looks after you personally in matters not connected to work" (Hayashi, 1975). According to him, about eighty percent of his national sample prefer this type of manager. There was no variation by sex or age. When he asked the same question of Japanese-

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Americans residing in Hawaii, the percentage dropped to 52%. Japanese-Americans residing in Hawaii can be considered as being in the middle between Japanese and Americans. Therefore, it is likely that by asking Americans in the continental U.S., the percentage would drop some more.

This piece of evidence provides support for the view that Japanese workers prefer a closely-knit, socially-integrated work group, where supervisors act as "fathers" and take care of the member workers. As the preference is often an indication of individual value orientations, it is likely that Japanese workers are motivated by this supervisory style.

Second, another study was conducted by Lincoln, Hanada, and Olson (1981). They investigated the effects of vertical and horizontal differentiation of organizational structure on the affective responses of the workers. Their subjects consisted of both Japanese and American employees working in Japanese-owned firms in the U.S. Their results showed that horizontal differentiation (increased functional specialization among the jobs) contributed to dissatisfaction among the Japanese workers, but not among the American workers. In their further investigation, they found that horizontal differentiation tended to cut the personal ties among employees and that this contributed to dissatisfaction among the Japanese workers. For the American workers, severance of personal ties did not contribute to dissatisfaction. Thus, Japanese employees in this study tended to express greater dissatisfaction when they lost the social integration with other workers.

Third, there is some evidence that other collectivist cultures show the similar pattern of relationship between social integration and motivation. In Hofstede's (1980) classification, France is a collectivist culture. Two studies (McCarry, Edwards, and Jones, 1977; Jain, Normand, and Kanungo, 1979) compared the motivational pattern of Francophone Canadians and Anglophone Canadians. The researchers asked subjects of both cultural origins to rate the importance of

various factors on the job. The results are similar in both studies. The Anglophones considered autonomy and achievement to be of greater importance than the Francophones. The Francophones, on the other hand, rated interpersonal relations, respect, and recognition as more important. The former difference was statistically significant and the latter was not in both studies. But the direction of the latter difference was as predicted. The results are weak and do not reach statistical significance but the overall trend supports the predictions made by the modified model.

Another prediction made by the modified model is the moderating effect of nAff on the task interdependence-internal motivation relationship. In collectivist societies, higher nAff individuals are predicted to be more motivated by task interdependence than their lower nAff counterparts.

In a series of studies on Anglo-American children and Mexican-American children, Kagan and his associates (Kagan and Knight, 1981; Kagan and Madsen, 1972) concluded that Anglo-American children are more competitive and higher in n-Achievement compared to Mexican-American children, who are more cooperative and higher in n-Affiliation. This indicates that in Mexican culture, which is classified as collectivist in Hofstede's (1980) data, nAff and cooperation are positively associated, whereas in American culture (individualistic), competition and nAch are associated. As was discussed earlier, task interdependence on the job requires cooperation and coordination among the members of the work group. The relation between cultural orientation and interdependence in the job may be stronger in collectivist culture, where cooperation and nAff are positively associated.

Another study concerning nAff in collectivist culture is reported by Doi (1982). The nonorthogonal relationship between nAff and nAch has been suggested by DeVos (eg., Caudill and DeVos, 1956; DeVos and Mizushima, 1973). However, there have not been many

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tests of this proposition so far. Doi (1982), using paper-and-pencil measures of nAch, nAff and other needs investigated the structure of interrelations among the various needs. He also included measures of value orientations and correlated them with various needs. In the study, he subjected a set of needs measures and a set of value orientation measures to canonical correlation analysis. Three factors emerged. The first factor loaded high (all positive) on nAch, nAff and value orientation toward cooperation. This indicates that in Japanese culture the structure of nAch-nAff relationship is such that nAch and nAff are positively correlated and this relation itself relate to values emphasizing cooperation. This is opposite to orthogonality of nAch and nAff well documented in Western cultures. The second factor loaded high (all positive) on need for independence only. In Japan, need for independence emerged as a single factor and did not correlate with nAch. The third factor had high loadings (all positive) for nAch again. But this time, the factor did not have high loadings on any other needs or values. Based upon these results, Doi (1982) concluded that there were two types of needs of achievement in Japan: (1) "affiliative need for achievement" (first factor) and (2) "non-affiliative need for achievement" (third factor). This study shows that in Japan, highly achievement-oriented individuals also have a high need for affiliation. Therefore, it is likely that for the Japanese task interdependence, which requires interpersonal relationship for the completion of work, facilitates internal motivation because it satisfies both nAch and nAff simultaneously.

Conclusion

On the basis of the modified model presented in Figure 1 and some empirical evidence, the following hypotheses are derived.

1. In individualistic culture, internal motivation is a function of *autonomy*. This relationship is moderated by need for achieve-

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ment (growth need strength). Therefore, internal motivation is a function of both autonomy and need for achievement. In equation form, this relationship can be written as:

Internal Motivation = f (autonomy, etc.)

Autonomy = f (nAch)

Internal Motivation = f (autonomy, nAch).

2. In collectivist culture, internal motivation is function of *task interdependence*. This relationship is moderated by need for affiliation. Therefore, internal motivation is a function of both interdependence and need for affiliation. In equation form:

Internal Motivation = f (task interdependence, etc.)

Task Interdependence = f (nAff)

Internal Motivation = f (task interdependence, nAff).

3. However in Japan, where there is evidence of positive relationship between nAch and nAff, both nAch and nAff will moderate the relationship between task interdependence and internal motivation. Therefore, the general equation is:

Internal Motivation = b^1 (nAch) + b^2 (nAff)

Where, in Japan $b^1 > 0$ and $b^2 > 0$; in individualistic cultures $b^1 > 0$ and $b^2 = 0$.

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