

136 - ANALYSIS OF THE MOTIVATING POTENTIAL SCORE OF HACKMAN AND OLDHAM: A LITERARY REVIEW

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1. INTRODUCTION

The concern with quality of life at the labor environment has its origin back in the Industrial Revolution. The claims coming from increasingly organized working groups along history at the “Satan's Plants” have turned work more humanized or, mainly in the initial phases, less dehumanized. The transformation occurred at a slow pace, forged by small conquests that were the result of difficult clogs, mostly accompanied by legal apparatus.

Work occupies a significant part of people's lives. This fact justifies the intervention in the worker's personal life. Although they are still permeated by variables that are very much alike and have huge interrelation, the concepts of quality of life and quality of work life present a distinction that has become more intense with the associate life, which has grown complex.

The confirmation that the experiences in the labor environment have a direct and significant influence in the worker's quality of life leads to questioning the existence of a measurable index about the influence of work in the quality of life.

In an attempt to measure the level of motivation generated by work, Hackman and Oldham (1974) propose a score named “Motivating Potential Score”. The present study attains to analyze the quantitative instrument of evaluation of quality of work life by Hackman and Oldham.

2. THE MODEL OF QUALITY OF WORK LIFE BY HACKMAN E OLDHAM

The model of quality of work life by Hackman e Oldham has its origin associated to the theoretical model by Hackman and Lawler, which was published in 1971. The redefinition of the former model, summed up with the operational conduction proposed in this model, resulted in the instrument of evaluation of quality of work life by Hackman and Oldham, which was published as a technical report in 1974 and also as a scientific essay in 1975.

Significant advances in the context of work marked the sixtieth decade. Some facts such as the civil manifestations claiming for social equality and the insertion of women in the job market have outlined a scenario of labor redefinition. After an affluent period of economic expansion, the context reverts in the United States. The scenario that was being outlined instigated the development of researches for the solution of the crisis that emerged.

Based on the studies of Hackman and Oldham (1974, 1975), Chang Junior and Albuquerque (2002) and Davis and Newstrom (2004) it may be assured that there are three factors that have an influence in the motivation of the working environment, which are denominated as Critical Psychological States: awareness and results of one's work; responsibility perceived by the results of one's work and significance perceived by one's work.

The Critical Psychological States are individual processes that cannot be influenced during work management; therefore, it is necessary to determine working properties that are passive to evaluation and change and that have a direct influence in the Critical Psychological States. Those receive the denomination of Essential Dimensions of Work (CHANG JUNIOR; ALBUQUERQUE, 2002).

There are also secondary facts the have an influence in the dimensions of work and the results denominated Personal Results of Work: internal motivation to work; general satisfaction with work; satisfaction with one's productivity; absence and turnover. At last, there is the Necessity of Individual Progress, which is directly related to the Essential Dimensions of Work and Personal Results of Work.

The instrument that determines the Motivating Potential Score evaluates the motivational processes of work through 15 closed issues. The topics focus on the five Essential Dimensions of Work proposed by Hackman and Oldham: Skill Variety, Task Identity, Task Significance, Autonomy and Feedback.

This way, the Motivating Potential Score “indicates the degree to which one's work is considered Significant, foments Responsibility and promotes Awareness of Results” (DAVIS; NEWSTROM, 2004, p. 154). It is an instrument with objective questions, with answers disposed in a seven-element scale of the Likert type. In most cases, not more than 10 minutes are necessary in order to fill it out.

The calculation of this score is based on the idea that “before a job enrichment program [Quality of work life] is launched, an employer needs to study tasks in order to evaluate how much they include variety, identity, significance, autonomy and feedback” (DAVIS; NEWSTROM, 2004, p. 154). Considering this focus, it is necessary to emphasize the importance of the existence of a tool that determines, through a quantitative approach, the level of motivation provided by work.

3. FORMER MODEL BY HACKMAN AND LAWLER

The model proposed by Hackman and Oldham (1974) results from a prior study conducted by Hackman and Lawler (1971). In this prior study, the characteristics that are present at work were identified in a way to establish conditions that motivate workers. The individuals tend to show a significant personal satisfaction when they experience high levels of Variety, Autonomy, Task Identity and Feedback. The four aforementioned features were denominated Essential Dimensions of Work.

According to Hackman and Lawler (1971), the Essential Dimensions of Work are measurable variables that present the definitions below:

- ▶ Variety: the amount of operational variety demanded from workers or how much they make use of diverse equipments and procedures during the execution of their work;
- ▶ Autonomy: how much workers own authority of programming their activities, having the choice of equipments that will be used and deciding the procedures that will be applied;
- ▶ Task Identity: how much workers conduct complete activities in their work and are able to clearly identify the results of their efforts;
- ▶ Feedback: the amount of information received by workers concerning their performance at work and/or how correctly it has been conducted;

It was concluded that the highest level of motivation is only obtained when a given work features, simultaneously, the maximum score in all of the Essential Dimensions of Work. In this context, one's work is motivating once the perception of the worker concerning the Essential Dimensions of Work is positive.

However, the necessity of determining if all dimensions should show high scores, so that the worker would present great motivation, was confirmed. Thus, the level of motivation was correlated with the four Essential Dimensions of Work in three different ways: summing up the scores of the four dimensions, treating each dimension independently and through the result of the four dimensions' scores.

The results of the empirical research conducted by Hackman and Lawler (1971) showed that the level of satisfaction significantly decreases when the score of one of the dimensions is relatively low in relation to the other ones. This fact does not occur when the score of the four dimensions are reduced in the same proportion. This way, the four Essential Dimensions of Work are equally distributed when determining the motivation provided by one's work and the motivation could be calculated using the formula below:

$$\text{Variety} \times \text{Autonomy} \times \text{Task Identity} \times \text{Feedback}$$

Through the application of the instrument, Hackman and Lawler concluded that a given work could only provide an elevated level of motivation, once the four Essential Dimensions of work show moderately elevated scores.

In order to determine the motivational level provided by work, a questionnaire made up of 12 questions and divided into two sections was used. The first section contains a direct evaluation of the work through closed questions, with answers based on a Likert scale of seven alternatives. Each question has its own scale, in a way that the indicator 1 represents the worst result, the indicator 4 represents the intermediate result and the indicator 7 represents the best result. Each dimension is contemplated with an only question in section 1.

The second section mentions a series of aspects related to the four Essential Dimensions of Work and the interviewee must indicate, in a Likert scale of seven alternatives, how much each attribute is present in his/her work. The indicator 1 represents "nothing or at a minimum rate", the indicator 4 represents "moderately" and the indicator 7 represents "frequently". The indicators 1 to 7 always respectively represent the worst and best result. Each dimension brings two questions in section 2.

Although Hackman and Lawler (1971) affirm that the high level of motivation occasioned by work results from a balance among the four Essential Dimensions of Work, these do not offer a standardized score to calculate the level of motivation provided by work.

4. FINAL MODEL OF HACKMAN AND OLDDHAM

In a study after Hackman and Lawler (1971), Hackman and Oldham (1974) proposed a reformulation of the prior model. The new model considers that the work presents five essential dimensions, instead of four, as proposed in the former instrument. The additional dimension is the Task Significance. The Essential Dimensions of Work proposed by Hackman and Oldham (1975) are:

- Skill Variety: the amount a job requires of activities concerning the conduction of work, and use of the worker's different abilities and talents;
- Task Identity: how much is required from the workers to conduct complete activities, that is, activities that have a logical beginning and end;
- Task Significance: how much the result of a given work has an impact in life or job of other people, inside or outside the organization;
- Autonomy: how much a job provides freedom, independence and privacy, in a way that the worker is able to program his/her work and determine the procedures that will be applied to conduct it;
- Feedback: degree with which the conduction of working activities provide the worker with the retroaction of clear and precise information over his/her performance at work.

Similarly to the model by Hackman and Lawler (1971), the model proposed by Hackman and Oldham (1974) does not approach the Essential Dimensions of Work in an isolated basis and does not found the motivation provided by work through their arithmetic average, but through the product of the dimensions. However, the calculation of the motivation level of work in both studies differ due to the fact that Hackman and Oldham (1974) have attributed different importances to the dimensions.

Through the arithmetic average between the scores of the dimensions Skill Variety, Task Identity and Task Significance, followed by the multiplication to the scores Autonomy and Feedback, what is obtained is a score that determines the level of motivation provided by work. This score is denominated Motivating Potential Score.

$$\frac{(\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}) \times \text{Autonomy} \times \text{Feedback}}{3}$$

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In this new model, the calculation is done through a geometric average, where, differently from the model by Hackman and Lawler (1971), the dimensions Skill Variety, Task Identity and Task Significance, have lower account than the Autonomy and Feedback ones.

Following the model by Hackman and Lawler (1971), the questionnaire that determines the Motivating Potential Score is composed by two sections and is summed to the three items that cover the new dimension, which is the Task Significance. Thus, the instrument proposed by Hackman and Oldham has 15 questions.

In the same way as Section 1 from the model by Hackman and Lawler (1971), this first section covers a direct evaluation of work through closed questions, with answers based on a Likert scale of seven alternatives. The scale of answers is different in all questions, and the answers directly mention the dimension of work approached in each question. In all questions, indicator 1 represents the worst result, indicator 4 represents an intermediate result and indicator 7 represents the best result. Each work dimension is covered with one question.

The second section of the instrument is composed by asserts related to the five Essential Dimensions of Work and the interviewee must indicate, in a Likert scale of seven alternatives, the accuracy level of each affirmative, namely, how correct they are. Indicator 1 represents "total disagreement", indicator 4 represents "indecisive" and indicator 7 is "total agreement".

Opposite to Sections 1 and 2 by Hackman and Lawler (1971) and Section 1 by Hackman and Oldham (1974), indicators 1 and 7 not always respectively represent the worst and best result. In this section there are questions where the scale of answer is inverted. That is, indicator 1 represents the best answer, whereas indicator 7 represents the worst answer. Two items represent each dimension; in a way that one item of each dimension is disposed in scales of normal answers and the other one is

disposed in inverted answers scale. It is evident that the model by Hackman and Oldham (1974) was based on the prior model proposed by Hackman and Oldham (1971). The questions pertaining to the referred models may be visualized in table 1:

DIMENSIONS	HACKMAN AND LAWLER (1971)	HACKMAN AND OLDHAM (1974)
Variety	How much variety is there in your job?	How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?
	The amount of variety in my job.	The job requires me to use a number of complex or high-level skills.
	The opportunity to do a number of different things.	<i>The job is quite ample and repetitive.</i>
Autonomy	How much autonomy do you have on your job; how much are you left on your own to do your own work?	How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?
	The freedom to do pretty much what I want on my job.	The job gives me considerable opportunity for independence and freedom in how I do the work.
	The opportunity for independent thought and action.	<i>The job denies me any chance to use my personal initiative or judgment in carrying out the work.</i>
Identity	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 does your job involve doing a "whole" and identifiable piece of work? That is, in the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?
	The opportunity to complete work I start.	The job provides me the chance to completely finish the pieces of work I begin.
	The opportunity to do a job from the beginning to end (i.e., the chance to do a whole job).	<i>The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.</i>
Feedback	To what extent do you find out how well you are doing on the job as you are working?	To what extent does the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing—aside from any "feedback" co-workers or supervisors may provide?
	The opportunity to find out how well I am doing in my job.	Just doing the work required by the job provides many chances for me to figure out how well I am doing.
	The feeling that I know whether I am performing my job well or poorly.	<i>The job itself provides very few clues about whether or not I am performing well.</i>
Significance		In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?
		This job is one where a lot of people can be affected by how well the works gets done.
		<i>The job itself is not very significant or important in the broader scheme of things.</i>

Table 1: Dimensions of work by Hackman and Lawler and Hackman and Oldham

Source: Hackman and Lawler (1971); Hackman and Oldham (1974), adapted by the author

The questions in Section 1 of the model by Hackman and Lawler (1971) become more direct and specific in the model by Hackman and Oldham (1974). In Section 2, it is noticeable that the two items related to the same dimensions are very similar. In an attempt to make them different, without inferring distinct meanings to them, Hackman and Oldham (1974) proposed an inversion of the scale of answers in one of the items of each dimension. Still in section 2, whereas Hackman and Lawler (1971) questioned how much each of the aspects mentioned is present at work, Hackman and Oldham (1974) prefer to transform such aspects in assertions and question how true they are in the interviewee's point of view.

Concerning the adaptation of a prior study, the main contribution of Hackman and Oldham (1974) was determining parameters in order to calculate the motivational level proceeding from work. The score named Motivating Potential Score represented this level.

The calculation of the work dimension's scores is conducted through the simple arithmetic average among the three questions that compose each dimensions. It is necessary to invert the questions whose scale of answers is inverted. The Motivating Potential Score (MPS) is calculated through the average among the scores of the Skill Variety, Task Identity and Task Significance dimensions, which is multiplied by the average score of the Autonomy dimension and multiplied by the Feedback dimension score.

The score of the Motivating Potential Score ranges between 1 and 343, and according to Hackman and Oldham (1974), the score 125 is used as a point of reference. The values that are equal to or higher than 125 are considered satisfactory, whereas the values below 125 are considered unsatisfactory.

5. CONSIDERATIONS OVER THE MODEL BY HACKMAN AND OLDHAM

The scenario after the sixtieth decade launched a decline in the North American economy, a fact that stimulated researchers to infer suggestions that focused on repeating the economic outcome of the previous decade. In an attempt to corroborate with the economic situation, that was gradually becoming more declining, Hackman and Oldham concentrated their studies in the constructions of an instrument that measured the index of motivation derived from labor activities.

An exclusivity of the model of quality of work life of Hackman and Oldham is the outlining of the theory in an instrument of quantitative evaluation. Whereas the other classic models of quality of work life evaluation are theoretical and qualitative, Hackman and Oldham established the proposed indicators in their model in a polarized scale of the Likert type. The proposed establishment resulted in an instrument of evaluation that enables a quantitative analysis that composes it.

It is emphasized that the elaboration of the quantitative instrument followed a highly elaborated methodology. The use of questions with scale of inverted answers, the transparency of the dimensions to the interviewees; the creation of a global score resulting from all the proposed dimensions; the attribution of different importance's for the dimensions; and the creation of a borderline point to indicate the thresholds of satisfaction and dissatisfaction, constitute aspects that significantly contribute for the accuracy of the instrument.

Although the model in an exam is pioneering in what concerns to the quantification of a variable quality of work life, it shows frailties. There was no intention by Hackman and Oldham to study the work environment itself, but simply the behavioral approach of work itself.

The five essential dimensions of work are ramifications of an exclusive progenitor aspect that uniquely exalts one characteristic proceeding from the labor environment: satisfaction. Even being an important aspect for the evaluation of quality of work life, it is pertinent to emphasize that the multidimensionality of this variable transcends the individual's satisfaction.

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ABSTRACT:

The evaluation of quality of work life through quantitative methods has become more intense recently. Opposite to what it may seem, such practice was launched in the seventieth decade with Hackman and Oldham. The current study aims to build a criticism to Hackman and Oldham's model of quality of work life. In order to measure quality of work life, the aforementioned authors have created a score named Motivating Potential Score. The indicators that compose the Motivating Potential Score are ramifications of satisfaction at the work environment. It is assumed that Hackman and Oldham have been the pioneers in the quantification of the evaluation instruments of quality of work life, but have not been concerned with studying the labor environment itself, taking only the behavioral approach of the workers into account. Although it is an important aspect at the working environment, quality of work life transcends the individual's satisfaction.

KEYWORDS: quality of work life, instrument of evaluation, model of Hackman and Oldham.

ANALYSE DU POTENTIEL MOTIVATEUR DU TRAVAIL DE HACKMAN ET OLDHAM: REVISION

BIBLIOGRAPHIQUE

RÉSUMÉ:

Aujourd'hui, l'évaluation de la qualité de vie au travail au travers de méthodes qualitatives s'intensifie. Au contraire de ce qui pourrait paraître, cette pratique a débuté dans les années soixante-dix avec Hackman et Oldham. Ce travail a pour objectif construire une critique du modèle de la qualité de vie au travail de Hackman et Oldham. Pour mesurer la qualité de vie au travail, ces auteurs ont créé un score dénommé Potentiel Motivateur du Travail. Les indicateurs qui composent le Potentiel Motivateur du Travail sont en relation avec la satisfaction originaire de l'ambiance de travail. Nous concluons que Hackman et Oldham ont été les pionniers dans la quantification des instruments d'évaluation de la qualité de vie au travail. Cependant ils n'ont pris en compte que l'abordage comportemental des travailleurs sans tenir compte de l'ambiance en soi du travail. Bien qu'il s'agisse d'un aspect important de l'ambiance au travail, la qualité de vie au travail transcende la satisfaction de l'individu.

MOTS-CLÉS: qualité de vie au travail, instruments d'évaluation, modèle de Hackman et Oldham.

ANÁLISIS DEL POTENCIAL MOTIVADOR DEL TRABAJO DE HACKMAN Y OLDHAM: UNA REVISIÓN

LITERARIA

RESUMEN:

La evaluación de la calidad de vida en el trabajo por medio de métodos cuantitativos se ha intensificado en la contemporaneidad. Al contrario de lo que puede parecer, tal práctica se inició en la década de 70, con Hackman y Oldham. El presente artículo objetiva construir una crítica al modelo de calidad de vida en el trabajo de Hackman y Oldham. Para medir la calidad de vida en el trabajo, los referidos autores crearon un score denominado Potencial Motivador del Trabajo. Los indicadores que componen el Potencial Motivador del Trabajo son ramificaciones de la satisfacción oriunda del ambiente de trabajo. Se expone que Hackman y Oldham fueron pioneros en la cuantificación de instrumentos de evaluación de la calidad de vida en el trabajo, pero, no se preocupan en estudiar el ambiente de trabajo en sí, llevando en cuenta solamente el abordaje comportamental de los trabajadores. Todavía que se trate de un aspecto importante en el ambiente de trabajo, la calidad de vida en el trabajo trasciende la satisfacción del individuo.

PALABRAS-CLAVE: calidad de vida en el trabajo, instrumento de evaluación, modelo de Hackman y Oldham.

ANÁLISE DO POTENCIAL MOTIVADOR DO TRABALHO DE HACKMAN E OLDHAM: UMA REVISÃO LITERÁRIA**RESUMO:**

A avaliação da qualidade de vida no trabalho por meio de métodos quantitativos tem se intensificado na contemporaneidade. Ao contrário do que pode parecer, tal prática teve início na década de 70, com Hackman e Oldham. O presente trabalho objetiva construir uma crítica ao modelo de qualidade de vida no trabalho de Hackman e Oldham. Para mensurar a qualidade de vida no trabalho, os referidos autores criaram um escore denominado Potencial Motivador do Trabalho. Os indicadores que compõem o Potencial Motivador do Trabalho são ramificações da satisfação oriunda do ambiente laboral. Aduz-se que Hackman e Oldham foram pioneiros na quantificação de instrumentos de avaliação da qualidade de vida no trabalho, mas, não se preocupam em estudar o ambiente laboral em si, levando em conta somente a abordagem comportamental dos trabalhadores. Ainda que se trate de um aspecto importante no ambiente laboral, a qualidade de vida no trabalho transcende a satisfação do indivíduo.

PALAVRAS-CHAVE: qualidade de vida no trabalho, instrumento de avaliação, modelo de Hackman e Oldham.

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