

MOTIVATION AND GROWTH THEORY AS NEXUS

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Abstract: The theory of motivation need appreciation from the *epistemological* perspective, whereby it is important to study the source, nature and limitations of knowledge in this particular area. The approach in this particular field has been *clinical*, in that, the emphasis has been on the study of human mind with a view to investigate into its deepest recesses so that the invidious phenomenon of the 'organization man' could be successfully tackled.

The mechanism of the organization is unfair for the individual. It has injected habit patterns and values, which have corroded the natural base/basis of human life. The idea behind the clinical studies was to proffer information to the management, adequate enough to doctor the organization environment in conformity with the requirements of human psychology so a healthy work environment could be established within an organization. In this paper a mathematical model is established to calculate the total motivation level of any individual with the help of motivational parameters. It is a clinical mathematical study of motivational estimation.

Keywords: Growth theory, Motivation, Motivation estimation, Impact order in Motivation, quantitative evaluation of the motivation

1. Introduction:

Motivation is a situation where a human can be developed in which they can think their work or job a respectful and honorable. Their needs should be appreciated and should be met if possible. The organization should review & should reinforce wherever it is necessary. Motivation has been categorized as given below.

- 1) Need based motivation
- 2) Process based motivation
- 3) Reinforcement based motivation

There are few other situations in working scenario that generates automatically the enthusiasm to work-hard. This can be called as self generated motivation. There is one other process of motivation and that is of recognition of the expertise of the product. The demand for the products is another motivating factor. The mutual competition of organization becomes at time a great deal of motivative force.

Three factors are prominent in motivation and each one is complex in providing enhanced activities of production (Physiological, safety or security, social, esteem, self actualization,), the other motivation is based on process and depends up on the transfer function of the system, Reinforcement motivation provided additional need for a specific variables. It is being reinforced. Here if we can add one more function of motivation and that is working ability.

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The study carried out envisages the evaluation of motivation on persons carrying out the job. There can be many situations in the working scenario. The people engage on the job may be fully motivated but due to constraints and limitations on him a output may be partial. We can introduce a factor ABILITY for evaluation in totality of the motivation with ability, the term ability ‘A’ can assume values between 0 to 1.

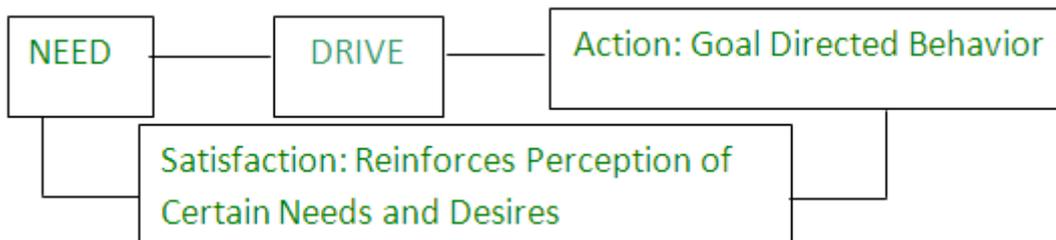
1. Working Ability

Motivation theories need to be prized from the epistemological view in that it is valuable to discuss the source, nature and limitations of knowledge in this particular area. Clinical approach is needed in this particular field, in that; the stress has been on the study of human mind with a view to exploring into its genuine recesses so that the unpleasant experience of the ‘organization man’ could be successfully tackled. The organization has wrongly mechanized the individual. (5) It has injected habit patterns and values, which have rotten the natural base/basis of human life. The idea behind the clinical studies was to volunteer information to the management, adequate enough to doctor the organization environment in conformity with the requirements of human psychology so a healthy work environment could be recognized within an organization. The flip side of the coin was as interesting. By means of the understanding thus brought about, human behavior could be moulded in the desired direction or doctored in the desired mode. Another objective could be listed as studying pathological behavior on the part of the workers, diagnosing the underlying ill and suggesting remedies with a view to their integration in future management strategy. Management thus would be served with a preemptive tool in that the emergence of pathological traits could/would be prevented in the future. The approach however put upon itself, a few limitations. It has remained a half way house between psychology and administrative science; a bit of both; not completely either.

Therefore, the basic characteristics of the phenomenon of motivation are:

- (a) An *internal need* which energizes and activates human behavior.
- (b) *Drive*, which is explained as the inner force that propels behavior in a specific direction.
- (c) *Goals* are the incentives or pay-offs that reinforce private satisfaction, which in turn reinforce the perpetuation of needs.

2. A simplified motivation process is represented as follows:



3. Motivation process: (3) (4)

In this model of, *need* gives rise to a *drive* to achieve the set *goal*. Therefore, motivation can be defined as “*the need or desire within an individual that drives him/her towards goal- directed action.*”

Need satisfaction is imminent if human beings are to be happy and healthy entities. An organization’s ‘health’ in turn will be contingent on the overall well being of the people constituting it. Motivation theories have to look at the ‘existential condition’ i.e. ‘life’ of the individual inside and outside of an organization in an integrated perspective, if all ramifications of personal needs and desires on the environment of an organization and it’s functioning have to be taken cognizance of /into perspective.

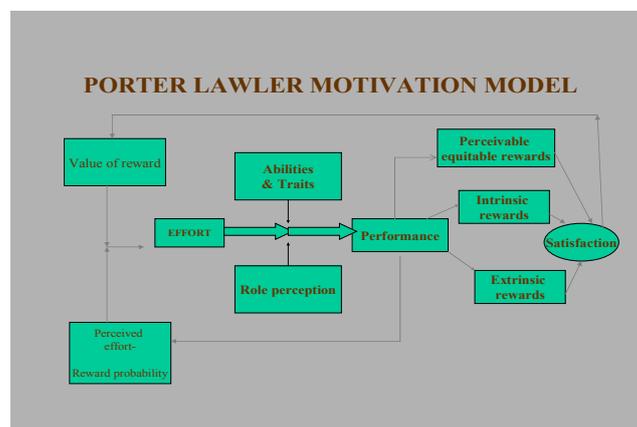
In case needs are not satisfied, behavioral aberrations such as frustration, aggression and indifference may crop up which may be difficult to settle/negotiate post-occurrence. According to **Heresy and Blanchard**, other forms of frustrated behavior are rationalization, regression, fixation and resignation. *Rationalization* is making excuses; *regression*, taking resort to childish behavior which is unbecoming of a mature personality; *fixation*, constant repetition of useless behavior which may be an incorrigible tendency and *resignation*, apathy or indifference. In case of fixation, punishment may be a dangerous management

tool in that it might make the subject even more obstinate and difficult to correct. Hence a sound motivation policy on the part of the management is the only recourse, both as a *preventive* and a *corrective* tool.

Heresy and Blanchard have brought out the difference between what they term *goal-directed activity* and *goal activity*. The former in essence is motivated behavior directed at reaching a goal. The latter implies engaging in the goal itself for e. g. in case of hunger, food is the goal, search for food, goal directed activity, and eating, the goal activity itself. Another important distinction relates to their effect on the strength of the need. In goal- directed activity, the potency or strength of the need increases as one furthers efforts towards it, unless a person feels dejected and gives up on it following repeated failures. Once goal activity begins, the strength of the need diminishes in proportion to the satisfaction derived there from.

On the other hand, Porter-Lawler Expectancy Model⁽⁹⁾ incorporates the relationship between *perception*, *effort*, *expected reward* and *satisfaction* (motivation). Actual performance on the job is contingent on the effort expended towards accomplishing it. Effort is understood as comprising of a few variables, which are, strength of motivation and energy exerted. The quantum of effort exerted in pursuit of a given task will depend on the “value of a reward” plus the perceived energy a person believes needs to be exerted and the probability in his eyes of reaching the set goal. The record of actual performance in turn, also influences “perceived effort” and “probability of reward.” Acquaintance with work content and some previous experience in the matter of handling it also aids the development of an optimistic perspective with regard to it. The worker consequently feels better motivated towards accomplishing it. The individual worker’s ability to comply with job requirements and understanding of the job content will go a long way in determining the effort expended in the direction of accomplishment of a set purpose.

According to Lawler, Performance leads to a set of *intrinsic* (sense of achievement) and *extrinsic* (money, status) rewards. If rewards match those expected by the worker, the result would be satisfaction. Performance can also influence perceived reward in that satisfaction will be affected by what the worker perceives as the rightful compensation for his efforts. According to Koontz and Weiherich, the Porter and Lawler model approximates to the real life situation as motivation depends on a complex mix of factors and the management needs to integrate all of those in order to devise a sound motivation policy. The expectancy theories imply that the manager must establish the causal relationship between performance and expectation of reward.



Source: <http://www.scribd.com/doc/388359/motivation> Access Date: 07/07/2008

Working organizations are involved in production or administration work. Human work in organization can be categorized into two groups: 1. Managing group & 2. Working group. The managing group’s work are very specified like – Decides policy for the organization, arranging finance for the production process or other associated activity, handles manpower involved in organization’s work or associated with other work while working group are there to execute all performance which decides by managing group. The aim of the organization is to produce Maximum output with the minimum efforts and with the minimum expenditure without losing quality. This makes the task very interactive and complex. There are many factors involved in the process such as use of appropriate machines, employing trained technical hands, and uninterrupted power

supply, proper supply of raw materials and good disposal of the waste. One's machine are installed and trained technical hand are employed, then with the ability of raw materials, the production will begin. If these requirements are fulfilled even there are chances for low production, medium production or high production rates. There are many reasons in variation of production quality because quality depends upon the working scenario and the morale of people. In this paper attention is being paid to have maximum production with quality for the given set of man and machine. It has been reported recently in a research paper "Estimation of Motivation Using Entropy" in the journal "Journal of Business Economics and Management" that the impact of man, his mental status and ability to work with machine has direct impact the output of the system. It has been realized that the dedication to do work with high moral values and sincerity can be generated by infusing motivation in the working class of group.

4. Motivation estimation: ⁽⁴⁾ ⁽⁵⁾

Motivation in workers is important factors, which can make the organization in profitable state, or it can divest it. Motivation is such competent phenomenon that its evaluation in numbers is very difficult. However the recent efforts in international level have suggested few methodologies along with their measuring terminology. In short the motivation is estimated on the basis of need of worker, process functioning, reinforcement, ability to work. It has been Realized that along with the above sets of methodology a third set is very important to be considered i.e., the in sighting of Nish-Kam-Karm effect in worker or self realization for doing the job even without getting the result.

5. Estimation of motivation when need, process, reinforcement and working ability are main parameters: ⁽¹⁾

The parameters those are considered in evaluation of the motivation are given below.

- 1) Need Based Motivation (N_b)
- 2) Process Based Motivation (P_b)
- 3) Reinforcement Based Motivation (R_b)
- 4) Working Ability (W_a)

These parameters (Need, Process, and Reinforcement) are use to evaluate motivation quantitatively. The equation derived out is given below-

$$\text{Impact in Motivation} = \text{Mot} * \text{Working ability} \quad \text{-- (1)}$$

$$I M = H_i (P_i) * \log (1/g) \quad \text{-- (2)}$$

$$\text{Where, Mot} = H_1 (P_1) + H_2 (P_2) + H_3 (P_3)$$

$$\text{Mot} = H_i (P_i)$$

$$\text{Where, } H_1 (P_1) = \text{Need Based Motivation } (N_b)$$

$$H_2 (P_2) = \text{Process Based Motivation } (P_b)$$

$$H_3 (P_3) = \text{Reinforcement Based Motivation } (R_b)$$

And, the fourth parameter working ability is also considered. $W_a = \log (1/g) = \text{Ability of People}$

$$\text{Where, } g < 1$$

The Motivation finally calculated is as given below –

$$\text{Impact in Motivation} = \text{Mot} * \text{Working ability}$$

6. Effect of nish - kam - karma philosophy in estimation of motivation ⁽⁷⁾ ⁽⁸⁾

Nish-Kam-Karma realization is a typical Indian motivational theory. If one has to do some work then it comes in mind to think the gain by the act of work. The thinking of gain or profit is human weakness. In ancient Indian philosophy, nish-kam-karma philosophy has been emphasized that the product of doing work is excellent. If the men involved are not sighting only the gain but they work with the feeling of duty to God. Such type of feeling instill a very high value of motivation. These feelings are generated in one he even scarify him. - The very burning example – is of Sardar Bhagat Singh Sheed –e –azam of Indian freedom fight, who was hanged to death and gained public respect post punishment.

There are large number of example of Nish-Kam-Karma generation have direct impact on the motivation. If Nish-Kam-Karma philosophies are infused in workers their Motivation can be highest degree. So we can add one more type of motivation function and that is Nis-Kaam-Karm motivation theory. For such type of

philosophy, it is difficult to assign Nish-Kam-Karma level. The infusion of Nish-Kam-karma obviously can be categorized in big O representation or GROWTH THEORY is applied. The application of growth theory is shown in the following table 1. ⁽⁶⁾

TABLE: 1

O Notation	<i>Nish-Kam-Karma Impact order in Motivation</i>
O (n)	In this impact the effect of the feeling is linear and the effect is measure in one by number (n). This is the lowest order of the impact of Nish-Kam-Karma in human being. Analytically it accommodate in equation as – $= C (n) + d$, Where ‘c’ and ‘d’ are individual constant.
O (n log n)	This category of the impact of nish-kam-karma is next higher one, where, (n) is a numeral value. The constrain will be $n > 10$
O (n ²)	This is next order of nish-kam-karm impact which accommodates second order of the variable ‘n’ polynomials - $= C (n^2) + d n + k$ The highest order is expressed while lower order are ignored.
O (n ^k)	The impact of the Nish-Kam-Karm is very-very large when ‘k’ is large. Fiyadeen in recent time are the examples of large k categorize.

When Nish-Kam-Karma philosophy is considered in the evaluation of motivation then the final motivation will be the convolution of Motivation and growth evaluation in terms of Nish-Kam-Karma. Then the total parameters for the motivation will be increased and that will be given below-

1. Need Based Motivation (N_b)
2. Process Based Motivation (P_b)
3. Reinforcement Based Motivation (R_b)
4. Working Ability (W_a)
5. Nish –Kam Karma/ Growth Theory (Big O)O(.)

The results so calculated are given as-

$$\text{Total Motivation} = \text{Mot} * W_a * O (. \text{ --- (3)}$$

$$T M = H_i (P_i) * \log^{1/g} * O (. \text{ --- (4)}$$

Where,

$$\text{Mot} = H_i (P_i), W_a = \text{Log } 1/g, O (.) = \text{Big O}$$

7. Example: calculate the total motivation value by given values:

Motivation is a complex phenomenon and if represented by numerical values, then it is random. However to make a start, one can represent need base motivation in percentage is given below—

Case 1

- | | | |
|----|--------------------------------------|--------------|
| 1) | Physiological need fulfillment | =90%=0.90 |
| 2) | Safety and security need fulfillment | = 80% = 0.80 |
| 3) | Social recognition need fulfillment | = 70% = .70 |
| 4) | Esteem need fulfillment | = 50% = .50 |
| 5) | Self actualization | = 50% = .50 |

Then the need base motivation factor is given as,

$$N_b = [physiological]security]social]esteem] self actualization]$$

$$N_b = [0.9].8].7].5].5]$$

$$N_b = 0.126$$

Case 2

- | | | |
|----|--------------------------------------|-------------|
| 1) | Physiological need fulfillment | = 80% = .80 |
| 2) | Safety and security need fulfillment | = 75% = .75 |
| 3) | Social recognition need fulfillment | = 70% = .70 |
| 4) | Esteem need fulfillment | = 50% = .50 |
| 5) | Self actualization | = 50% = .50 |

$$N_b = [0.8].75].7].5].5]$$

$$N_b = 0.105$$

Process base Motivation process: The other motivation factor is process base motivation.

P_b = depending on input and output,

Output in any organization will be function of input and the man – machine relations; this is expressed as given below,

$$P_b = [\text{raw input}] * [\text{man- machine}]$$

$$P_b = \{r_i(t)\} * \{\text{man-machine function in percentage}\}$$

Where, Man machine relation = 0.75

& $r_i(t) = [\text{good, fair, bad}] = [80\%, 50\%, 20\%] = [0.8, 0.5, 0.2]$

Then, $P_b = [0.8, 0.5, 0.2] * 0.75$

$$P_b = [0.6, 0.37, 0.15]$$

The man-machine relation is assumed to be 75%. Provided he remains with machine for long time.

Reinforcement motivation process:

It is a system where some process / input are reinforced in its follow-up working of the organization. One can make a policy for reinforcing percentage for the total output. In present case it is assumed to be 20% of total. Three cases are studied for the sake of explanation.

Case 1: $R_b = 20\% = 0.20$

Case 2: $R_b = 30\% = 0.30$

& Case 3: $R_b = 35\% = 0.35$

8. Tabular representation of the motivation estimation

Need Base Motivation	Process Base Motivation	Reinforcement Base Motivation	Total ($N_b * P_b * R_b$)	Total Motivation
0.126	0.6	0.2	0.015	1.823
0.126	0.37	0.2	0.0093	2.031
0.126	0.15	0.2	0.0037	2.43
Need Base Motivation	Process Base Motivation	Reinforcement Base Motivation	Total ($N_b * P_b * R_b$)	Total Motivation
0.105	0.6	0.2	0.0126	1.899
0.105	0.37	0.2	0.0077	2.11
0.105	0.15	0.2	0.0031	2.5
Need Base Motivation	Process Base Motivation	Reinforcement Base Motivation	Total ($N_b * P_b * R_b$)	Total Motivation
0.105	0.6	0.03	0.18	1.744
0.105	0.37	0.03	0.011	1.9558
0.105	0.15	0.03	0.0047	2.327
Need Base Motivation	Process Base Motivation	Reinforcement Base Motivation	Total ($N_b * P_b * R_b$)	Total Motivation
0.105	0.6	0.35	0.022	1.65
0.105	0.37	0.35	0.13	1.88
0.105	0.15	0.35	0.0055	2.25

From above we can compute the **Total Motivation**,

$$TM = \sum H_i (P_i) * \log (1/P_i) * O_i$$

$$= 1.823 * 0.30 * 26.0205$$

$$TM = 14.23 \text{ Entropy}$$

The computation gives the quantitative evaluation of the motivation, considering, all possible impact including Nish-Kam-Karm.

9. Conclusion:

The Nishkam motivation model is a shade better explanation of how and why people get and remain motivated without obtaining the desired ultimate result than that produced by Porter and Lawler. The answer lies in process enjoyment. Nishkam is not working without any desire for result; it is enjoying the process not the ultimate result.

Nishkam give the explanation of inner motivation by this the individual can explain the inner satisfaction and dedication towards given job or assignment. Different authors explain about the goal directed activity but no body explains the inner involvement towards the given job. When the nishkam of bhagvat geeta incorporated in the motivation factor, the percentage of motivation will be increases number of time in comparison of past motivation.

This mathematical model explain the motivation factors (Need based motivation Nb, Process Based motivation Pb, Reinforcement Based motivation Rb; Working Ability Wa; Nishkam karm O (.).

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