Chapter 23
Motivational Gratification:
An Integrated Work Motivation Model with Information System Design Perspective

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ABSTRACT

Researchers in the field of information system (IS) endorse the view that there is always a discrepancy between the expressions of client's automation requirements and IS designers understanding of such requirement because of difference in the field of expertise. In this article an attempt is taken to develop a motivational gratification model (MGM) from the cognitive informatics perspective for the automation of employee motivation measurement, instead of developing a motivation theory from a management perspective and expecting the IS designers to develop a system based on the understanding of the theory that is alien to his/her field of expertise. Motivational Gratification is an integrated work motivation model which theoretically explains how employees self-regulate their effort intensity for 'production' or 'reduction' of motivational force towards future high performance, and it is developed using taxonomies of system approach from psychology and management. The practical implications of MGM in management and IS analysis and design are discussed.

INTRODUCTION

Computer applications in the field of applied psychology and management have automated many psychological applications like online psychometric testing, performance management systems, and human resource information systems. Researchers in the field of information systems have developed various techniques such as the Cognitive informatics (Wang, 2003), Object-oriented Cognitive Task Analysis and Design (OOCTAD) model (Wei & Salvendy, 2006); Cognitive Task Analysis (CTA) and Design (CTD) (Kirwan & Ainsworth 1992; Cooke 1994, Seamster *et al* 1997, Schraagen *et al* 2000); to understand cognitive activities based on human information-

processing theories. However, there has been very little done by researchers in the field of psychology and management to develop complex and abstract human information processing theories so that software designers and programmers are able to convert cognitive activities, such as motivation, into computer program based assessment. Hence, in this article an attempt is made to develop a new motivational gratification (MG) theory to extend the cognitive informatics theory (Wang, 2007) to understand the mechanisms of cognitive processes in employee motivation, and to develop next generation software for automating measurement of employee motivation.

The Cognitive Informatics Perspective

Wang (2003) has defined cognitive informatics "is a transdiciplinary expansion of cognitive and information sciences that into internal information processing mechanisms and processes of the natural intelligence – human brains and minds" (p.159). The cognitive informatics focuses on the nature of information processing in the brain such as information storage, categorization, retrieval, generation, representation and expression, and it effectively lends itself to cognitive foundations of software engineering. Hence, the cognitive informatics perspective provides a strong theoretical basis to develop the proposed motivational gratification model (MGM) to explain how employees self-regulate their efforts for high performance in work context, and how effectively the complex MG measure can be automated.

The Semiotic Approach

In the automation of employee motivation, it is important to be able to instruct the computer in precise, mechanical detail what exactly to do. Stamper, Liu, Hafkamp and Ades (2000) have explained how 'organizational semiotic' approach can be used in organisational analysis and infor-

mation systems design. The two basic concepts of organisational semiotic analysis in information systems design are the sign and the norm. Stamper *et al* (2000) define "a sign is anything that stands for something else for some community and a norm is a generalized disposition to the world shared by members of a community" (p. 15). Stamper et al have suggested that norms and signs are inter-related and they help to understand organisational behaviour in terms of signs and how, through norms, they are used in the automation of behaviour that is regular or capable of being anticipated (p. 16). The concept of norm lends itself to empirical study as well as develop schematic model of the fuzzy categories for the automation of behavioural processes. Hence, in this article an attempt is made to develop an integrated model of employee motivation with schema of norms, so that the computer can be used as an instrument for executing certain kinds of norms where it is more efficient to measure employee motivation. The existing motivation theories, which have been developed in the past, have very little focus to facilitate automation of organisational behaviour.

Employee Motivation and Consequentialist Assumption

Despite our commonsense understanding that what motivates employees at one point in time ceases to motivate in another point in time, the vast literature on employee motivation has no clear specifications of how to measure and understand when a subset of a hierarchy of motivators (Bagozzi, Bergami & Leone 2003; Lewis 1990) is active in imbuing effort (production) or ceases (reduction) to motivate. Many researchers in the field of psychology and management are critical of discussing employee motivation from the 'consequentialist' perspective (See Seo & Barrett 2004) of 'reduction or production' or 'wax and wane'.

The consequentialist assumption is that (1) people know all the possible outcomes and all the related probabilities and subjective values at any

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