Satisfaction and Motivation: 
IT Practitioners’ Perspective

Adrián Hernández-López, Computer Science Department, Universidad Carlos III de Madrid, Madrid, Spain

ABSTRACT
Job satisfaction and motivation are traditional areas of organizational psychology research. Nevertheless, within Software Engineering (SE), these concepts continue to be in the research agenda. These concepts are interrelated between them and with other important management aspects within SE: productivity measurement. In this paper, the job satisfaction and the motivation of software development team members are analyzed using a qualitative exploratory approach. Results are presented under the point of view of Maslow’s hierarchy of needs and Herzberg’s dual factor theory. Moreover, the factors that participants considered as improvers of their productivity are also analyzed. And also, links between productivity factors and motivation are analyzed. Finally, results points to a high presence of hygienic factors that should be covered if organizations what to improve the job satisfaction of software project team workers.

Keywords: Job Satisfaction, Motivation, Practitioner, Productivity, Software Engineering (SE)

INTRODUCTION
Job satisfaction and motivation are old areas of research in organizational psychology (Locke, 1969; Maslow, 1943; Vroom, 1964) and are closely related to the study of management in companies, since one of the management functions is to influence the behavior of the people to achieve the objectives of the job (Pritchard & Ashwood, 2008; Sommerville, 2010). One of the pioneers in these areas of research was Taylor (1911); according to scientific management humans are motivated to work purely by money. In those years, the car assembly industry and other related industries started to demand more workforce, and workers were paid ‘piece rate,’ that is, paid for every item produced. So, under Taylor’s point of view management need not consider psychological or social aspects of work, it should just consider payment level and other extrinsic motivators. Later, McClelland pointed that there are also extrinsic motivators, and them could extinguish intrinsic motivators (McClelland, Atkinson, Clark, & Lowell, 1976).

After Taylor’s work, some important researches were done, mainly: Maslow’s hierarchy of needs (Maslow, 1943) and Herzberg’s dual factor theory (Herzberg, Mausner, & Snyderman, 1959) are the most important ones.

Job satisfaction have been studied in relation with many other important concepts of human resources management such as turnover (Mobley, 1977), personality (Judge, Heller, &

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Mount, 2002), and work commitment (Morrow & McElroy, 1987) among others. Motivation also have been widely studied, e.g., in relation with career (London, 1983), burnout (Houkesa, Janssena, de Jongeb, & Nijhuisa), and payment level (Eisenberger, Rhoades, & Cameron, 1999). Moreover, the existence of a link between job satisfaction and performance is widely known (Judge, Thoresen, Bono, & Patton, 2001).

So, from a general point of view, the motivation of human to work has been widely studied. Nevertheless, the focus on these concepts within Software Engineering (SE) is not as old as in organizational psychology and requires more attention (Beecham, Baddoo, Hall, Robinson, & Sharp, 2008). In this knowledge area, Boehm stated that motivation have the single largest impact on practitioner productivity (1981) and DeMarco and Lister found that motivation is one of the most frequently cited causes of project failure (1999). But, despite of these important findings, it continues to be ‘undermined’ and problematic to manage (Procaccino, Verner, Shelfer, & Gefen, 2005). Moreover, the focus on these concepts seems to have moved out (Judge et al., 2001), maybe because many organizational researches seem to assume that we know all there is to know about job satisfaction and motivation, and then we lose of its usefulness because of its familiarity and past popularity, as Roznowski and Hulin (1992) commented.

And, as McConnell (1996) noted, “Every organization knows that motivation is important, but only a few organizations do anything about it. Many common management practices are pennywise and pound-foolish, trading huge losses in motivation and morale for minor methodology improvements or dubious budget savings.” So, research in job satisfaction and motivation need to continue, and also from SE standpoint (Beecham et al., 2008; Sach, Sharp, & Petre, 2011).

The remainder of the paper is organized as follows. First, we introduce a brief state of the art about job satisfaction and motivation, secondly, we present the research method we have used; thirdly, we analyze the results of the study; fourthly, we discuss the results and, finally, we point to some conclusions from the findings of this research.

BACKGROUND

Job Satisfaction and Motivation

Motivation has been under research since the beginning of the 20th century. But, according to Golembiewski (2000), it is possible to find more than 140 formal definitions to the term “motivation.” Nevertheless, these definitions converge to a common set of characteristics: motivation is internal to the individual, it has intensity, force and duration, it varies due to the objective, and it determines the human behavior. Firstly, Taylor (1911) proposed in his scientific management theory, or Taylorism, that humans were only motivated to work by payment level. In those years, workers were paid more if they produce more per hour and this produced a fast growth in organization’s productivity but workers became exhausted and dissatisfied. These psychological outputs were later considered for two of the main job satisfaction and motivation researches: Maslow’s hierarchy of needs (1954) and Herzberg’s dual factor theory (1959).

On one hand, Maslow’s hierarchy of needs theory (Maslow, 1943) in which five levels of needs are pointed to, from basic needs in lower level to complex needs in higher level: (1) physiological (food, water, sleep...), (2) safety (security of, employment, resources, health...), (3) love/belonging (friendship, family...), (4) esteem (confidence, respect others, respect by others...), (5) self-actualization (morality, creativity...). From level one to five, needs can be grouped under a group called deficit needs or D-needs which are primordial needs, and level five as being needs or B-needs. The difference is that while the D-needs can be met, the B-needs are a continuous driving force. Maslow also stated that once a human cover needs of a specific level, he or she will develop higher needs (Figure 1).
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