

The Adverse and Positive Effects of Change on Employee Motivation Driven by New Information Systems Development in the Workplace

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Organisations arise from the complexity of society and depend on satisfying needs of other organisations and people. Technological developments, aggressive market competition, financial constraints, expanding markets, restructuring and mergers, new philosophies and government legislation are all putting pressure on organisations to change to stay ahead. The 21st Century workplace is a dynamic environment and organisations have an insatiable need to develop their information systems to understand markets, identify profitable customer segments or to monitor performance. Cost constraint, profit maximisation, service or efficiency requirements or strategic market differentiation drive systems development.

Implementing the process and systems changes required to support organisations causes considerable change for the organisation and workforce. Downsizing, business process re-engineering, labour deskilling and coupled with underclass areas generated out of the old heavy engineering industries, make people feel suspicious of change and threatened with exclusion in the new world of technology and information systems. The conflict between the interests of the individual, the organisation and the system or process create a culture where there is fear of the unknown, job insecurity with people feeling less valued and resistant to change.

They say that “you can take a horse to water but you cannot force it to drink; it will drink only if it's thirsty”. Sigmund Freud through to McGregor, Maslow, Locke and many others have theorised about motivation. As organisational psychologists have further developed their views, such as David McClelland's ‘Socially Acquired Needs Theory’, it has become clear that change, affiliation and motivation are inextricably linked in changing environments; systems change invariably generates organisational change and

with it the motivation or de-motivation of the workforce.

Freud was pessimistic about people, taking a Theory ‘X’ view that people are essentially lazy, dislike work, have little ambition, initiative or need for responsibility; their primary need being security and they will only work if they are rewarded or coerced into action i.e. a ‘carrot and stick’ philosophy. Fortunately this is not reality and in contrast to this, Douglas McGregor held a Theory ‘Y’ view, believing that employees are self-motivated to achieve, learn and be creative; that work is a natural activity to the extent that they develop self-discipline and self-development, preferring to take on challenging work by themselves.

Abraham Maslow (1954) totally rejects the Freudian tenet, preferring to believe a third theory ‘Z’, which holds that good qualities are initially inherent in people and it is only by people being subjected to external influences that they change. Indeed, Maslow's ‘Hierarchy of Human Needs Theory’ or human motivation is the basis of McGregor's views. A core element of Maslow's philosophy is the meaning and significance of work against the threat of life's evils: boredom, crime, vice and poverty. According to Maslow, basic human needs are firstly, physiological needs followed by safety and security, care, self-esteem and eventually self-actualisation needs. This view is further reinforced by the belief that behaviour is dominated by unsatisfied needs such that when the basic need of food and clothing is satisfied, people aim for the next higher level and so on. This ongoing journey is termed hierarchical, and demonstrates that a person is inclined to seek higher goals through self-development and inner drive.

Frederick Herzberg's empirical study ‘Motivation and Hygiene Theory’ (Herzberg *et al*, 1959) was based on analysis of the interviews of 200 engineers and accountants in the Pittsburgh area in the USA, his view was that people work essentially in their own self-enlightened interest and that they are happy and stimulated by work accomplishment.

Herzberg considered that people's needs revolve around firstly maintenance needs, termed hygiene factors, and these are job related elements that can create job dissatisfaction, for example

company policy, supervision, interpersonal relations, working conditions or salary - their motivational effect is limited. Secondly, Human needs, which are the motivational factors that can significantly increase job satisfaction, such as achievement, recognition, responsibility and progression. Similarly, McClelland's (1961) 'Socially Acquired Needs' view proposes that people are stimulated by the need for achievement, power or affiliation, although the strength of that inner drive will vary between each individual.

Inevitably, these theories have been further developed. The 80's and 90's have seen marked growth in the use of goal setting and management by objectives approaches such as Locke's (1968) 'Goal-setting' theory that argues setting targets produces higher performance and further that stretching goals result in even higher performance. Locke considers that Herzberg's views rely on the principle that psychological and biological processes are distinct whereas Locke takes the view that mind and body are intertwined and that it is through the mind that people establish both physical and psychological needs and means of satisfaction. Locke accepts that an individual's needs may be similar but it is each individual's values that will impact on their attitude towards work.

To examine the relevance of motivational theory to change in the workplace, this paper will consider two scenarios; a local authority's (it will be referred to by the pseudonym "North") Library information system initiative and Financial Services systems developed in branches and Call Centres.

North library department had been involved in the implementation of two information system projects, the 'TALIS' book lending system and the government's "Peoples Network" initiative. TALIS was a branch-wide windows based solution to an earlier DOS based environment that was used in selected, larger branches. The DOS users had the issue of adjusting to a new system environment whilst the work practice change for staff that had previously used the traditional "Browne" manual system was a significant step; they entered a completely new operating environment. The Peoples Network installation coincided with the latter stages of the TALIS implementation. The changes were not aggressively communicated or sold to the staff

but simply information was passed down to the teams.

So what were the impacts of the combined internal systems changes and customer Internet facilities on the staff? There is evidence, Burchell B.J., (1999), to suggest that insecurity can affect in many ways, such as in their productivity. Many employees had considerable service based on a manual system little changed over the years. Where, previously, staff had both an understanding and control over their actions, they now found that they were being led by systems, over which they had minimal influence. Work experience suddenly seemed to count for little because they were now channelled towards meeting the needs of the system. Comfort and competency were suddenly replaced by self-doubt and reduced confidence about their ability to grasp the new technology; for some it became a barrier that was either insurmountable or unacceptable. Others felt that "the computer" got in the way of their traditional role of dealing with people and books. For some the computer had arrived and was 'taking over'.

Staff were also expected to undergo the ECDL computer-training program and this has received a very mixed reaction. Many staff felt that they were being forced into involuntary learning and the prospect of sitting assessments has caused anxiety. Some started to think that this was an environment they were not suited to and, in any event, retraining and study, was unwelcome at their stage in their working life. For some, change has been compounded by more change with early retirement suddenly becoming opportune or job change contemplated.

Maslow's, second level of hierarchical needs are demonstrated in this case, clearly the degree of safety and security was threatened by the systems changes. Herzberg's maintenance theories are also relevant in the library example. Working environments changed and became significant dissatisfiers. Staff were not seeking the motivators of achievement, recognition, responsibility and progression because they were in a stable environment that suited their purposes.

Locke takes the view that events cause dissatisfaction and that events are caused by agents; in the above case by the organisation imposing a new system on the users. And yet these events could be viewed as stretching

individuals by providing them with new goals. Why then has there been a reaction from a number of staff regarding the need to undergo ECDL training? Clearly, the values of some staff are such that they will accept the new information system challenge, for others the pressure to change will be too great. Maybe a different result could have been achieved had there been a more proactive communication program been initiated highlighting the positive benefits for staff.

The second case involves new mortgage processes and systems implemented in differing business process reorganisations. In 1986, the “West Yorkshire” Building Society, again a pseudonym, devolved centralised processing to branches. The goal was to increase market share by dramatically reducing mortgage completion delivery time through local decision making, training and higher business lending targets. Typically, the assistant branch manager was selected for re-training, often with little regard to suitability or motivation; for some it was like ‘placing square pegs in round holes’. However, many welcomed the new challenge because the new, skilled roles were recognised and rewarded and staff were empowered to make decisions that would reflect on the team’s branch profitability and status within the organisation. Staff had greater control, felt valued by the business, were motivated and gained higher job satisfaction. This demonstrates Maslow’s third and fourth levels of hierarchical needs, with staff being attracted to the new technical roles that were part of key business strategies.

Whilst overwhelming benefits were gained, it became evident that insufficient thought had been given to usability of the systems and staff initially struggled to interpret the underwriting interface. This demonstrated a need to consider both system and user requirements and reflected the need to adopt a socio-technical design methodology. Users should have had a greater role in influencing the non-technical aspects of system design. If this had resulted in minimised levels of stress there would have been an even greater impact in terms of job satisfaction and enhanced productivity. The work by Mumford (1995) and Ackoff and Emery (1972) regarding Socio-technical methodology is relevant here but will be discussed later.

Herzberg’s motivational theory was clearly proven in the “West Yorkshire” example. Teams became highly motivated because they were provided with the tools to enable them to create success. The issues of achievement, recognition, responsibility and advancement and all had a significant part to play in increasing job satisfaction. Equally, McClelland’s views apply, his three needs theory of achievement, power and affiliation were demonstrated in peoples focused approach on getting mortgage business by having the mandate to make decisions, which, as successful teams, made them feel a real part of the business.

Locke’s ‘Goal-setting’ theory was also effectively demonstrated in this case. However, it was more than simply raising targets that delivered success – it had to be combined with providing the technical means and equipping individuals by training them and raising the profile of the role across the branch network.

The “West Yorkshire” approach was dichotomous to the business re-engineering by “Southern National” in 1996. Mortgage processing was reverse re-engineered into several mortgage-processing centres. Whilst the principles of economies of scale, flexible resourcing and centralised control were understandable, the process redesign required improved systems and considerable staff re-organisation. The empowerment and service delivery improvements were a significant success story for the “West Yorkshire”. Customer feedback was positive and the new mortgage lending roles became prized objectives for staff that had previously restricted career paths.

Conversely, the centralised lending strategy adopted by “Southern National”, in the short term, proved highly destructive. Removal of the decision making process at branch level was not well received by staff.

The new teams struggled to adapt to the concentration of mortgage processing. Mortgage tracking gradually became impossible in a factory-like environment. Call-management systems, initially designed to inform teams of the success rate of call handling, became effectively millstones, with up to 3000 calls on-line at any one time and on one occasion 26,000 calls registered in a single day. Staff sickness rates rose dramatically, staff morale was at an all-time

low and teams struggled to recruit and maintain full complement for almost 2 years. Staff felt that they were working in an effective 'black-hole'. However, many of the staff remained with the organisation despite extreme stress and pressure. They were recruited because they were identified as being target driven with an ability to accept change in a high-pressure environment and service eventually improved.

George Elton Mayo's 'Hawthorne Studies' (1924-1927) on human behaviour have contributed to organization development in terms of human relations and motivation theory. He identified that the need for recognition, security and sense of belonging is more important in determining workers' morale and productivity than the physical conditions under which they work. Attitudes and effectiveness are conditioned by social demands from both inside and outside the workplace. He established that change resulting from new techniques tended to continually disrupt the social organisation of an organisation.

Locke's views that goal-setting will achieve higher results are reflected in the approach by "Southern National". The state of the art call centres had excellent working conditions and staff were organised into competing teams for performance measurement. The use of call monitoring systems and both team and individual targets certainly resulted in performance improvements and this supports Locke's views.

We have seen that processes were inevitably driven by business requirements, with limited focus on a socio-technical approach. Certainly in the "West Yorkshire" and the Library cases there was little user involvement in the analysis, design and development of systems. So how can employee motivation be managed for the benefit of both the individual and the organisation?

Socio-technical Systems(STS) are defined as those where the human component has the ability to alter their own objectives, to be purposeful and to change requirements from within the system – in effect where the hardware and software is in balance with people and procedures - Ackoff & Emery (1972). Typically this would be achieved by involving two types of team: a Steering Committee that Sets key objectives and constraints and a Design Group, led by a Facilitator. The facilitator is the key role in the

ETHICS methodology - Mumford (1995). He says there are 3 objectives related to the management of change; allow people to influence the design of their own work situations, set specific job satisfaction objectives as well as technical/operational objectives and ensure that the new technical system is surrounded by a compatible, well-functioning organisational system.

Hackman and Oldham's Job Characteristics Model (1974), is complimentary to the STS approach in that it offers the opportunity of achieving a match between the person and the job. The key model components are the Motivating Potential Score (MPS) based on the motivating features of the job such as skill or task variety, autonomy or job significance compared to the Growth Need Strength (GNS), the person's motivational preferences such as need for more content or desire for progression. The relationship between the MPS and the GNS is effectively the job-person match where, ideally, the motivating potential of a job should be well matched to the growth needs of the individual.

We have seen that implementation of systems and organisational change can have significant impact on an organisations ability to deliver the benefits envisaged as a result of change. New systems have to be designed with human issues equally as important as technical requirements.

There are ever-increasing trends towards customer-focused services and the relationship between the Information System service provider and the customer is increasingly dependent on human relationships. The real threat is that in transitional states staff often can have jobs that do not satisfy or meet their motivational needs. Organisations need to ensure organisational harmony. Furthermore, it has been recognised that people do not resist change as such, but resist the uncertainties that change can cause (Waddell D. & Sohal A.S., 1998).

Applying business strategies to effectively manage the motivational issues can provide an effective weapon to drive through change without alienating the workforce. After all a business will stand or fall on the quality of its people, product and effective operation.

References

- ACKOFF, R. L. & EMERY, F. F. (1972), "On purposeful systems", Aldine-Atherton, New York.
- BURCHELL, B. J. (1999), The Unequal Distribution of Job Insecurity, 1966-86, International Review of Applied Economics, Vol. 13, No. 3, p. 6.
- FREUD, S., "The Standard Edition of the Complete Psychological Works of Sigmund Freud (24 volumes) ed. Strachey J., Strachey A. & Tyson A., Hogarth Press, 1953-1974.
- HACKMAN, J. R., OLDHAM, G. R. (1974) The job diagnostic survey: an instrument for the diagnosis of jobs and the evaluation of job redesign projects, Technical Report No 4, New Haven, Conn., Yale University, Dept of Administrative Sciences.
- HERZBERG, F., MAUSNER, B., SNYDERMAN, B. (1959) The Motivation to Work, John Wiley and Sons Inc., New York, NY.
- HERZBERG, F. (1959) "The Motivation-Hygiene Concept and Problems of Manpower".
- LOCKE, E. A. (1968), "Toward a theory of task motivation and incentives", Organisational Behaviour and Human Performance, Vol. 3, pp 157-89.
- MASLOW, A. H. (1954) Motivation and Personality, Harper & Row Publishers, New York, NY.
- MAYO, G. E. (1924-27), "Hawthorne Experiments", Western Electric Hawthorne Studies Collection <http://www.library.hbs.edu/hc/wes/indexes/alpha/content/1001955886>, (21.03.2002).
- MCCLELLAND, D. C. (1961), The Achieving Society. Van Nostrand Reinhold, New York.
- MCGREGOR, D. (1960) "The Human Side of Enterprise", *McGraw-Hill*, ISBN 0070450986.
- MUMFORD, E. (1995), Effective Requirements Analysis and Systems Design: the ETHICS Method. Macmillan.
- TAYLOR, F. W. (1911), "The Principles of Scientific Management, <http://melbecon.unimelb.edu.au/het/taylor/sciman.htm#Ch2>, (21.03.2002).
- WADDELL, D., SOHAL, A. S. (1998) Resistance: a constructive tool for change management, Dept. of Management, Monash University, Melbourne, Australia, Management Decision 36/8 [1998] 543-548, MCB University Press [ISSN 0025-1747].