

Impact of Technology on Employee Relations

An Article to analyze the effect of technology on relationship amongst employees

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Abstract- This article discusses how technology is affecting the employer – employee relations in the present day fast developing technology. Employee relations involve multiple layers of communication, from employer-employee relations to interactions among the workforce itself. Perrow has given how technology can affect relations which can be divided into 2 main divisions one being Routine Technology made up of Routine and Engineering classification that is standard/same technology and the other being Non-Routine technology which is Constantly updating/New technology -Routine technology leading to mechanization and Non Routine/New Technology promoting Creativity.

Index Terms- Knowledge- technology, knowledge worker

I. INTRODUCTION

Employee relations involve multiple layers of communication, from employer-employee relations to interactions among the workforce itself. To understand the effect of technology on employee relations we have to understand how the structure of an organization changes with the type of technology being used in the organization. We have various theories to study this phenomena, these are:

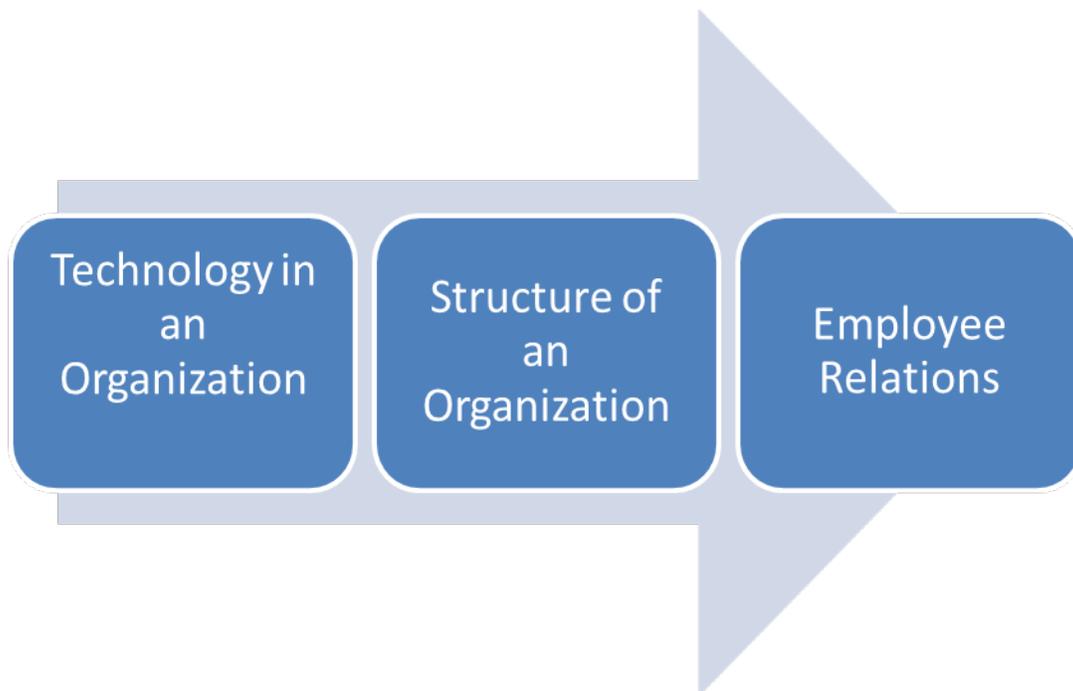


Fig 1. Technology affects Structure affects Employee Relations

- Joan Woodward's(1965) technology contribution which characterized the major technologies used in manufacturing organizations into unit, process and mass technologies. What we could derive from this theory was that routine technology (i.e. technology leading to more routiness in work) like mass meant a more formalized structure and vice versa.
- Another one was Perrow's(1967) knowledge technology contribution which divided technology into 4 types routine, non routine, craft and engineering types based on task variability and problem analyzability factors used in the technology.
- The third major contribution was Thompson's Technology structure that divided technology into Long linked, mediating and Intensive technologies, with long

linked corresponding to standardization of operations, tools, parts and machines.

Focusing on the Knowledge Technology contribution of Perrow, since the world has moved on to become a knowledge based economy. Its two main dimensions are:

- a. Task variability that describes the number of exceptions individuals encounter in their work.
- b. Problem analyzability which describes the type of search procedure employees follow in responding to exceptions.

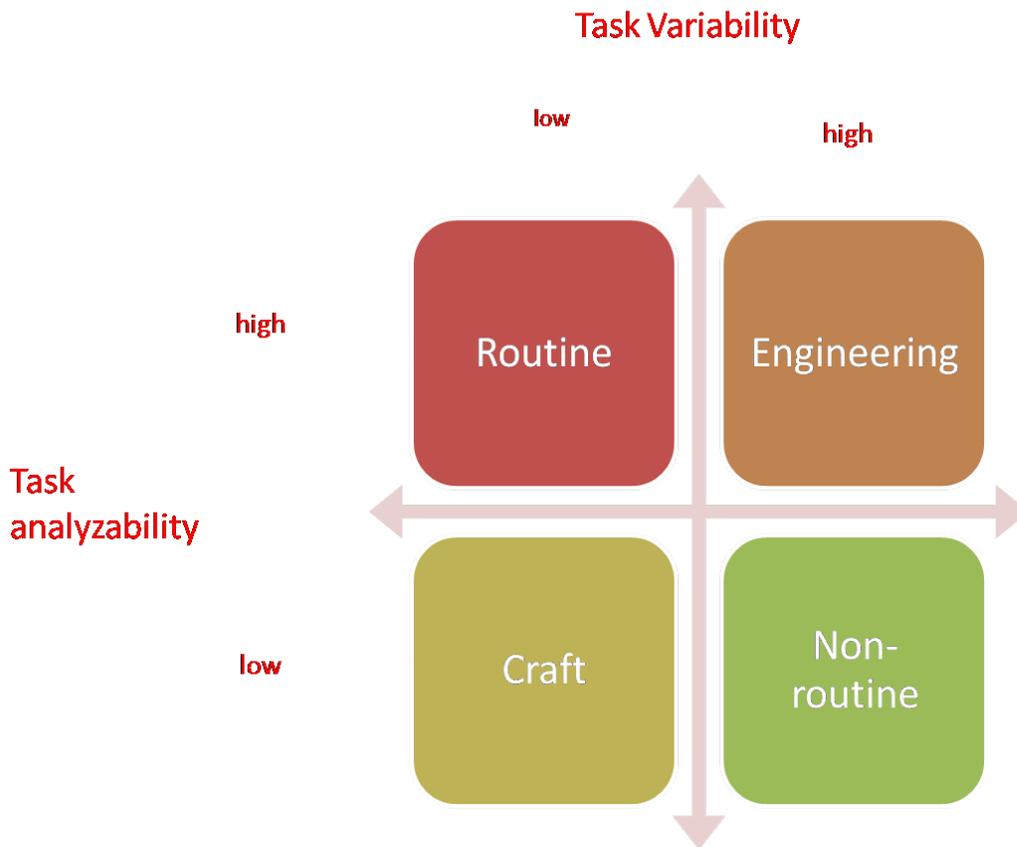
The four technology categories in his theory are:

1. ROUTINE: characterised by the lack of exceptions and its depth of comprehension. Traditional manufacturing technologies such as assembly lines belong to this category.

2. CRAFT: characterised by its lack of exceptions and unpredictable outcomes that are difficult to analyse. Construction work that demands the drafting of new designs to resolve building problems is an example of applied craft technology.

3. ENGINEERING: characterised by many exceptions and its depth of comprehension. Standard and accepted methods are available to provide solutions to problems. Accountants, most engineers and laboratory technicians use engineering technologies.

4. NON-ROUTINE: characterised by many exceptions and poor comprehension. Problems appear frequently with no existing solutions. Commercial space engineering is an example of a non-routine technology.



Based on Perrow(1967)

Fig 2. Perrow's(1967) Knowledge technology theory

II. HOW ORGANIZATION STRUCTURE AFFECTS EMPLOYEE RELATIONS?

Perrow's classification can be divided into 2 main divisions one being Routine Technology made up of Routine and Engineering classification that is standard/same technology and the other being Non-Routine technology which is Constantly updating/New technology.

1. Routine technology leading to mechanization:

Due to standardized work and repetitive tasks employees:

- Are less able to talk with each other during work – thus employees are not able to make any new friends at work. The standardized technology means that each employee has a fixed set of duties and doesn't need to talk to anyone regarding issues faced with the handling of their technology; he/she has a manual etc. to solve their difficulties.

- Tend to confine their communications to work-related matters – Since socialisation is very less, topics other than work related matters are not discussed much.
- Generally tend to make fewer friends at work and feel socially isolated – all the above factors increase stress level of the employees as they feel socially isolated and they do not have any outlet for the tensions accumulated at work time.

2. Non Routine/New Technology promoting Creativity:

Due to autonomy, the employees involved with using non-standardized technology:

- Likely to become involved in conflict with other departments - there is stress on efficiency since not using a routine technology leads to a loss in efficiency.
- The employee-employer relationship is not that congenial as there are bound to be creative differences amongst the two.

Employee Relations	Routine Technology	Non Routine/New technology
Social Isolation	High as infrequent interaction amongst employees	Low as constantly need guidance to understand latest technology
No. of Friends amongst Peers	Very few due to social isolation	More in number than in Routine technology cases
Equation with their Boss	On very good terms as efficiency is high and Work related issues are few and far between	Is not that congenial as efficiency suffers due to constant new technology related issues
Conflict within departments	Only when one department's work interferes with the other	Frequent conflict due to new technology increasing dependency amongst departments

III. HOW TECHNOLOGY STRATEGY COMBINATION CAN AFFECT EMPLOYEE RELATIONS?

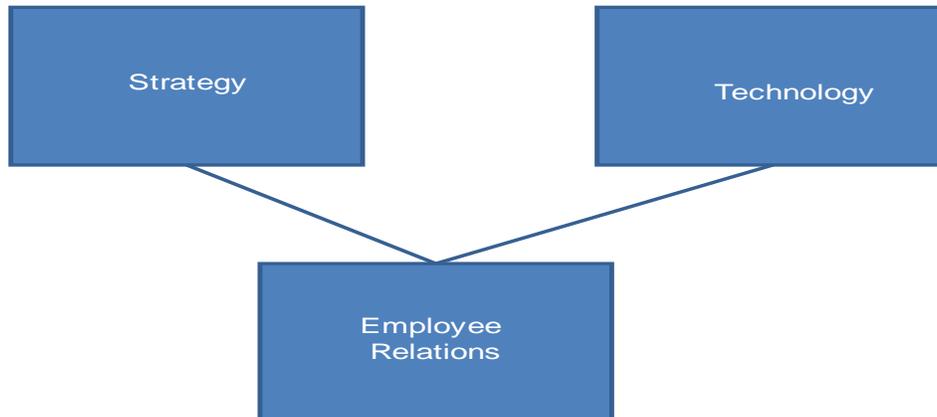


Fig. 3 Strategy and technology affecting employee relations

A combination of strategy and technology can impact Employee relations in an organization.

1. Strategy of Transparency in communication using Technology:

Exchanging information through emails, social networking software for the office employees can be a way of disseminating information amongst them. These are also an important way to improve the relation among the employees as everyone knows what is being communicated.

2. Leadership strategy using technology:

Division of work should be according to what technology the person is comfortable using. Technology can also be used to

encourage healthy competition at work as employees can be encouraged to learn latest technology or achieve mastery in the technology already in use.

3. Promoting 'Knowledge Worker' strategy in the organization:

As Peter Drucker believed that dissemination of information would be most important for the organizations working today to survive, it is imperative that technology plays an important part in making all the employees knowledge oriented workers. This would boost employee morale and help them perform better in the organization. It would also help them to improve relations

amongst themselves due to increased motivation and knowing what is going around them.

[3] <http://www.provenmodels.com/41> - Perrow's technology typology

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