Influence Of Technological Revolution On Human Resource Management

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INTRODUCTION

A cutting-edge, progressive firm is constantly inventing new practices, but most managers find it easier to leave untouched, than challenge, the vast bureaucracies that defy the slightest hint of change across an organization. It's going to take something more fundamental to make working life productive. If one grasps the newly emerging logic of knowledge, it is possible to understand the significance of what is happening, and anticipate how institutions will work in a knowledge- based world. The tectonic shift of fundamentals in the emerging knowledge economy has redefined the concept of wealth. Today, as much as 90 % of the net worth of corporations in most modern nations is in the form of *"intangible"* assets such as skilled labour, partnerships, patents and software.

While in no way undermining the value of capital, knowledge-based economies have changed the dynamics of strategy by focusing the laser light on innovation and technology. Knowledge is a resource that virtually anyone can create and whose value is enhanced by sharing and ,therefore, knowledge is considered as the *" the infinite resource".*[1]

Organizations have not been totally immune to changes over the past three decades or so. However, change management has merely nibbled at the fringes of what is more of a constitutional problem for institutions.

Technological revolution is impacting the followings shifts in industry and society at large: [2]

- A shift towards developing an E-Organization;
- A shift from profit motive to community and social welfare;
- A shift from capitalism to a democratic enterprise.

A SHIFT TOWARDS DEVELOPING AN E-ORGANIZATION

Many examples show that IT is creating a new form of *"e-organization"* that integrates operations world-wide into a single information system operating in real time : *"Tele-working"* among *"virtual teams"* automation of the entire supply chain, and *" e-tailing"* directly with clients.

Dell Computers uses mass customization to help customers place orders online directly to factories, automatically updating financial accounts , reducing labour costs and inventory, eliminating retail outlets and sales people, and delivering PCs in days.

CISCO conducts 90% of all transactions with suppliers and commercial clients using B2B. **IBM** is integrating 155 data centers,128 CIOs,31 networks and hundreds of PC configurations around the globe into one seamless system. The speed of corporate decisions is so fast that *"digital dashboard"* provides real time strategic information to allow instantaneous organizational control, like a flight simulator. One CEO said it allows him to *"feel the pulse of the business."*

With organizations being operated instantaneously via IT systems at great distances, standing over your employee's shoulder is no longer adequate. Now the focus is on results, especially the overall performance of small units and teams, which then allow these *"internal enterprises"* the freedom for innovation, creativity, and other forms of knowledge work. At IBM, 40% of the employees work out of office, and one-third of all AT &T managers do not sign daily attendances logs.

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One of the most remarkable features of knowledge is that anyone can create it. A good example is **Napster**, The music-swapping software system that gained 50 million members in a matter of weeks. The invention of Napster was so clever that it established a dramatically different peer-to-peer architecture that is now eclipsing client-server models with bottom-up collaboration. The inventor was a just a high school student. Bit Torrent was formed by another lone genius, who designed a distributed system to circumvent the logjam of bits waiting to transmit movies on demand. Similar examples abound in which people without advantage, resources, or status somehow gained the insight to produce creative innovations, and organizations are increasingly driven from the bottom-up, buying into the principles of entrepreneurship to harness this talent. In a knowledge -centric world, we want to encourage ordinary people to introduce innovations and reward those who succeed. Yes, it will be a bit messy business. And with the automation and off shoring of routines jobs unabated, the remaining tasks are entrepreneurial in nature anyway. The growth of organizational networks, self-managed teams, performance pay, entrepreneurship and other trends - all point in this direction. A survey found that two-thirds of professionals work in team, and 90% think of it to be more productive & satisfying. Ninety percent of the corporations and many government agencies use incentive systems, bonuses and stock plans to reward performance, often for entire teams. One manager said, *"The focus is on whether we produce, not how, when, and where we do it."* Typical cases are summarized as follows:[3]

- **Best Buy** saw 35% gains after moving to a *"results only"* system that allows employees to choose when, where, and how they work as long as they produce.
- **Amazon** has 65,000 independent web entrepreneurs, who sell its services on their own sites. These *"mini-Amazons"* create innovative solutions at low costs, while increasing the company sales.
- **Johnson & Johnson** has grown at a robust 15% each year for 120 years after being decentralized into eighty small, self managed businesses, with an average of 350 employees. Each company has its own board.
- **Nucor** is America's most successful steel firm because it ties pay to performance. Nucor workers earn three times the industry average – about $ 100,000 per year. Here's how the CEO described bringing other steel mills into the company: *"Once our culture is in place, it far outperforms anything.....by 30%,40%,100%....."*
- **The city of Indianapolis** was a government bureaucracy when Steve Goldsmith became the Mayor. After requiring employees to complete with outside providers, costs and taxes fell, services improved, employee pay rose and they enjoyed their jobs more even as an influx of people and businesses rejuvenated the city.
- **Nokia** uses autonomous business units to launch dozens of new phones each year. Even research operations are profit centers, whose funding comes from line units, thus resolving the traditional conflict between R&D and marketing.

SHIFTS FROM PROFIT MOTIVE TO COMMUNITY AND SOCIAL WELFARE

Corporations are the most powerful institutions in the world, yet, they are also the most poorly understood. One of the most confusing features is the apparent conflict between profit versus employees, customers, the environment, the public, and other stakeholders. Business actually creates enormous social benefits, but the focus on money places corporate executives in a self-serving posture, opposed to the democratic ideals of collaboration, community and social welfare. American businesses, for instance, excel at creating wealth, but the social costs are huge. An overriding focus on money is primarily responsible for the largest gap between the rich and poor since the Great Depression, a long history of financial scandals like Enron and World Com, exorbitant CEO pay, while thousands are laid off, the decline of employee benefits, and a backlash against globalization. The problem was manifest when GM and Ford plunged into a crisis, as rising gas prices halted the sale of trucks and SUVs in 2000. Ford lost $12.7 billion, the worst loss in the entire history of the organization.

The American auto industry, with its obsession with gains from gas guzzlers, has been effectively overtaken by Toyota and other car makers who developed energy-efficient hybrids and other benefits. Wal -Mart 's reputation for poor employee pay and cut-throat treatments of suppliers is estimated to have reduced its stock value by $ 16 billion.[4]

In an extremely competitive world, managers are increasingly dependent on educated employees to produce innovative, high-quality work. Fierce competition has forced a constant drive to understand customers' needs.

Alliance with suppliers and business partners are now the competitive advantage. The environment has become a strategic concern as developing nations increase the level of global pollution. Surveys conducted show that 80% of the managers understand they must collaborate with their stakeholders [5]. But they are confused because this conflicts with the prevailing belief that the role of business is to make money. Again, this conflict is resolved by the logic of knowledge.

Unlike capital, knowledge can grow indefinitely. Capital consists of tangible assets (factories, land, money) that are limited, but knowledge is an intangible asset that increases with use. Ray Smith, the former CEO of Bell Atlantic, who is often called the father of Information Age, said: *"Knowledge can't be used up. The more you dispense, the more you generate."*

Collaboration is now economically productive because all parties benefit. That's why we have seen such a wave of alliances. Micheal Porter, the Harvard guru of corporate strategy, notes, *"social responsibility has become an inescapable priority (and it is not) a zero sum game .Both sides can benefit."* [6]

A Mckinesy study of 1,144 top global executives found that 79% of the respondents expected that responsibility for social issues will fall on corporations, although only 3% said they do a good job presently. Profit served as the rightful goal decades ago, when the main task was to build manufacturing plants - *"capital"* .Thus, corporations are moving beyond social responsibility to a broader collaboration with stakeholders to improve the entire socio - economic system- *'the corporate community'*.

SHIFT FROM CAPITALISM TO A DEMOCRATIC ENTERPRISE

The mission of big businesses would evolve under this perspective into a *"quasi-democratic institution"*, in which employees ,customers ,business partners, and the public join investors in advancing their collective success .But the purpose should not be an obligation to have *"social interests represented"* , which constricts the social responsibility view. The goal should be to enlist selected leaders of stakeholders groups as active partners in building a more successful business. CEOs are asked to accept responsibility for shaping this political reality into a more productive governing coalition -a 'corporate community'.

Surveys show that 70% of the public thinks that corporations have excessive power and 95% imagine that they should serve the interests of employees, their communities and other groups in addition to money.[7]

This has been a short analysis of a complex subject, so readers may want to explore the extensive literature on these difficult issues [8]. The main intent of the researchers has been to outline how these two overarching themes of democracy and enterprise make sense intellectually, and how this difficult process of institutional change may overcome traditional barriers. The attraction of hierarchy and self-interest runs deep , it is very hard to change behaviour, and most people do not understand these ideas . It is little wonder that there is such a struggle to alter institutions .But change is being driven by the relentless race to use knowledge effectively . Redefining institutions-especially the corporation-could be the single most powerful move to improve life in the difficult years ahead. It would go a long way towards creating a more harmonious world. The present institutional model was the best for its time. Now, we are moving beyond profit and hierarchy to invent a *"collaborate enterprise"* , based on *"stakeholder partnership"* , to form *"corporate communities"* , composed of myriad *"internal ventures"* , forming a *"self - organizing system"* that replaces capitalism with something we might call the *"Democratic Enterprise"* .[9]

IMPACT OF TECHNOLOGICAL REVOLUTION IN INDIA

While the technological and IT revolution occurred in the West as an evolutionary process over a long period of time, in India, it has happened primarily during the last two to three decades. A combination of IT application, easy availability of Web/the Internet/telephony at affordable prices, penetration of modern media into drawing rooms has created an unbelievable impact at the gross root level in India . [10]

To cite a few examples, timely weather reports through satellite technology and kiosks at villages is leading to agricultural revolution, the online railway reservation system that spans a large network crisscrossing the length and breadth of the country has made travel so easy, the Indian postal system to remote corners of the country has improved drastically, while e-governance with computerization of records by the central and state governments has revolutionized at the click of a button.[11]

Delivering another blow to the notorious red tape and hierarchy, the enactment of the Right To Information(2005) Act

is slowly forcing transparency in decision-making and overthrowing bureaucratic and political hierarchies [12]. On the public health front, tele-medicine, through networking hospital chains across the country, has been a demonstrable success in reaching affordable quality care to the rural areas [13]. Constant exposure to the TV would make the so called *"oppressed"* gain confidence and challenge social hierarchies at the rural villages.

It is difficult to think of any industry or for that matter, any walk of life in India, which is not impacted directly or indirectly by the IT revolution. A large number of women have been leaving homes and joining the workforce, thanks to the phenomenal growth of IT and ITES industries. Computer education has percolated even to the elementary school and primary school levels. India's foreign-currency assets grew from a meager ₹ 43,880 million to ₹ 5,931,210 million in 2004-05 [14].Many factors have contributed, but the impact of technological /IT revolution has had a major role in it.

IMPACT AT THE ORGANIZATIONAL LEVEL

At the organizational level, a technological and quality revolution is sweeping through the workplace, egged on by globalization. New industries like ITES are exponentially growing. In organizations, some positions have been downsized or altogether dispensed with; newer job profiles have taken their place. For instance, position like quality inspectors, key punch operators and time and motion study experts, costing assistants are no longer in existence. Virtual battalions of Accounts Assistants have been replaced by few ERP Implementers.

The HR assistant is almost an anachronism, their position in the new order is being filled by KIOSKS at the shop floor and ERP HR Packages. Skill demand has shifted from Un-skilled to semi-skilled, and from skilled and to multi skilled. Illiterate employees are replaced by employees who can operate numerically controlled (NC) and CNC Machines.

IMPLICATIONS FOR THE HR PROFESSIONALS

❁ The differentiator for any organization in an extremely competitive environment is its employees with a positive attitude to work in terms and constantly learn & upgrade competencies. As the saying goes, *'Hire employees for attitude and pay for performance.'*

❁ While recruiting, HR professionals need to look for employees willing and competent to quickly learn, unlearn and relearn as knowledge keeps growing exponentially.

❁ Organizations also need persons who keep themselves physically and mentally fit to cope with increasing stress loads associated with technological revolution.

❁ The HR Professionals need to encourage work life balance through innovative practices like *'Home Office'* and *"Tele working"* wherever is feasible.

❁ For HR persons to be effective, they need to understand and handle the new generation employees, their aspirations and lifestyles, and design work place and performance systems accordingly.

❁ Another imperative is to constantly make the work challenging, as the new generation technology savvy employees often lack the patience for repetitive and monotonous jobs.

❁ Provide formal and informal opportunities for employees to continuously learn to be in tune with rapid changes and thus create a *"culture for learning organization"*. Learning in fun seems to be the order of the day. Re-engineer the reward systems to recognize innovation and knowledge among employees.

❁ As the knowledge worker respects persons with high ethical standards, the HR person needs to lead by example in nurturing ethics and corporate governance by walking the talk. Corporate governance and ethics will either build or dismantle employer brands.[15]

❁ The HR person has also to become tech savvy himself/herself and prepare all leaders to be driven by '*Knowledge Power'* rather than *" Positional-hierarchical power"* with a paradigm shift in thinking and approach.

❁ Here are the *"4Cs"* essential for the HR person [16] to be effective in the knowledge industry :

1. Competent : Know the technology and its impact inside out.

2. Curious : Yearn to Learn.

3. Courageous : To innovate and experiment.

4. Care : For the entire team of transition.

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