



## **Technological determinism – our choice or our destiny?**

Technology in the past years has become a more and more vital part of our society than we might have imagined. No matter what we do and where we are, we are surrounded by it and we depend on it. Might it be the cell phone we can no longer live without, the embedded microchips that make our cars safer to drive, the toys and games that are more enjoyable, more reliable appliances or the computer and Internet we need to “survive”. But implementing technology alone is not as simple as one might think. IT managers and companies have many obstacles to face when implementing IT systems in organizations.

The human factor - the society – has developed high expectations, adapted rules, norms and perceptions that need to be met by the new technologies. We have become very information and technology enthusiastic, expecting the best of the best, and an easy to use technology that will make our work and business processes a lot easier and more efficient. We want to be the factor that drives the development of technology in the direction it suits and benefits us. But there is the other side to it, the technological determinism, that states that technology shapes how we as individuals in a society think, feel, act, and how our society operates as we move from one technological age to another.

There has been a great depth of controversy as to how far technology does, or does not, condition social change. Most of us would no doubt find it obvious that technology does affect our daily life in a positive way and that our society certainly not only benefits from the developed technologies but also takes tremendous advantages of the opportunities it offers. But how did we get here? Does technology dictate our life style, the work processes, our values, ethics and expectations or are we shaping our society and lifestyle by influencing the technological outcome? This paper aims to introduce the discussion on the social aspects of implementation of information technology in our society, what has to be taken into account when planning as well how much technology influences our life style.

One important way in which information technology is affecting our life is by reducing the importance of distance. In many industries, the geographic distribution of work is changing significantly as many companies have decided to outsource a lot of their work to companies overseas such as India, where wages are much lower. These arrangements can take advantage of the time differences so that critical projects can be worked on nearly around the clock. In conjunction with the latest technology such as groupware solutions or knowledge management, even large projects can be managed easily and allowing the different teams to hand off their work electronically to colleagues thousands of miles away.



Knowledge management is also a great example, which shows that technology alone is not the key to success. This technology needs to be shaped and designed by the human factor and our expectations otherwise it will not be used. Knowledge management – also known as organizational learning and expertise management or as a problem of capturing, organizing, and retrieving information – is on its way to becoming a more and more important tool in the commercial and government sector. This tool involves a lot of human interaction and social factors when in the creation and communication of knowledge. There is quite a lot of research that suggests that it is not just a matter of getting the right knowledge to people at the right time, but people need to engage with it and learn it. Theorists as disparate as Dewey, Vygotsky and Piaget and have consistently shown that the mere presentation of information does not necessarily result in learning. People have to become actively involved for behavior to change, for insight to occur, for problems to be solved. The matter of managing information is deeply social in nature, and must be approached by taking human and social factors into account.

The probably most important aspect of a knowledge management system is that it becomes a knowledge community: a place where people discover, use, and manipulate knowledge, and can encounter and interact with others who are doing likewise. Implementing these types of technologies into organizations, will build social capital, including trust and cooperation among colleagues. The creation of such an environment can be an interesting but at the same time a challenging one for system designers and for organizations, because they are so much dependent and shaped by the human factor and not the other way.

This example also shows that success or failure of a computer system or technology depends on whether society accepts or resists its implementation. Society plays a critical role in the success of technology implementation, but there are always many people who are reluctant to use new technology. This resistance should not be viewed as a barrier that needs to be removed or that it will be dysfunctional or even destructive, but it can be useful in preventing implementation of systems that are flawed or will have negative organizational impact. Many times, the decision of which technology will be implemented is based on organizational and commercial goals.

"Marry a technology in haste; repent at leisure", is all too often the lesson that is learnt by those who are driven by organizational decision making processes, such as effectiveness and finances. At the corporate or organizational level, it requires professionals that have the maturity and responsibility to put the interest of the business before their own references. This means that implementing new technologies and strategies cannot be based solely on the benefit of the business and ROI. For the decision maker, this means to adopt a skeptical attitude towards the hype generated by vendors and marketing companies and turning the focus on the principles, usability and techniques of technology.



The result should be the implementation of technology that will benefit the business, but also support our already strongly developed values and expectations. Although technology has been and will be influenced by our values, ethics and lifestyles, its implementation also has changed them. Efficiency, a value that was originally applied to machines, now has become a term applied to all aspects of society. And each element of it is expected to attain a higher and higher percentage of its maximal possible performance, output, or ability. The ethical implication of technological development and deployment can be seen in the changes in the distribution of justice, as those with technology tend to have higher access to the justice systems. In addition to that, technology provides power. This technological power provides strategic advantages to the human(s) who hold the greatest amount of technology in fields such as military, pharmaceuticals and computers. The third and very much influenced area is our lifestyle. Technology has allowed people to complete more tasks with less efforts in short periods of time, making life easier in many ways. But on the other hand, it also has its disadvantages such as pollution due to technological advancements, congestions due to increased transportation as well as the first generation of nuclear reactors.

Although it shows that our society has a great influence on technology and its development, it also shows that we do adjust and incorporate technologies in our daily lives, as long as they are within our needs, expectations, values and norms. Technology acts as an enabler and catalyst to ensure organizations operate profitably and efficiently in the global environment. But at the same time technology is and should be the medium for our society and for people from all walks of life to take advantage of the new opportunities offered by it. Technology should be a fundamental element for creating new skills, shaping our knowledge and profit driven economy as well as using the given opportunities to improve our life style.

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### **About the Author**

Dasha Deckwerth is the CEO at Stealth - ISS, with extensive experience in international business and computer security. Prior to her position as CEO, Dasha had gained extensive international business experience in various European, Asian and Central American countries and later became the VP of Marketing and Business Development at Stealth - ISS® in Berlin, Germany. She also worked on several projects as security and regulatory compliance consultant in the commercial sector as well as for various NATO countries and government agencies. Dasha's current focus includes managed data center services, knowledge management, regulatory compliance applications and services and security implementations and consulting. Mrs. Deckwerth holds a B.A. in International Relations and Foreign Affairs from Eckerd College, is currently pursuing an MBA in IT Management from Touro University and speaks six languages.