



Technology - by the people or for the people?

This paper analyzes the work of Rob Kling of social informatics and how implementing it in information technology organizations might cause difficulties. Social informatics is identified as, "the interdisciplinary study of the design uses and consequences of information technologies that takes into account their interaction with institutional and cultural contexts". This complex interdisciplinary approach consolidates the knowledge from mathematics, physics, computer science, management and human society. In today's society it is not easy to implement technology without human and socio interaction. Not only that, but as this paper will show, implementing the same technology will not always have the same effect and result of how and when it is being used. The human factor and society determines technology development and not vice versa, where society is influenced and organized around technology.

Through this paper we will focus closely on the difficulties information companies are facing when dealing with social informatics versus "technological determinism". Technological determinism for this study is defined as the belief that technology develops its own potential, which can only be limited by material resources. In this case it is regarded as autonomous and therefore controlling and eventually permeating the society.

When implementing information systems, might it be an existing technology or a new design, the design and configuration of the information system needs to work well for people and help them with their daily work, rather than complicate it or force them to undergo a lengthy training. A great technological idea or design will not provide the same success, if it is based on technology alone. In order to implement technology with success, it is required to understand how people work, who the users will be as well as what kind of organization it is that will be using the technology.

Many competent managers and professionals have significant trouble in implementing exciting ideas about new informational regimes and organizational strategies. A big part is that they do not use the human factor when considering technology implementation. Many times their decision making process is influenced by the latest technology on the market, whether it is faster or easier to use. Another main factor that leads to more technological rather than socio-technical solutions is the "need" to use "better" technologies. These might be technologies that will organize systems for better efficiency, are compatible with existing technology already in place, easy to maintain or technologies that are less expensive.

This technological driven decision-making and determinism will not lead to the expected results managers have when implementing new technologies in their organizations. Most interpretations of technological determinism have the general idea that technology follows a predictable and tracable path of development which is beyond cultural and political influence. Therefore, many professionals assume, that technology



does have some "effects" on society. These effects are thought to be inherent instead of socially conditioned and that the society itself will adjust to support and further the technology and its development once it has been introduced. These assumptions might lead many managers and professionals into making the wrong decisions, by assuming that people will adjust around the technology that is to be implemented. But people are social actors and have their own individual motivations, interests and values that influence them how and why they use technology. Because of this social and individual influence, institutions and companies are forced to adapt their information systems and technologies to the needs and wishes of the society rather than on what the latest technology is.

Just by implementing information technology and new designs, does not mean that it will improve productivity, efficiency of the work process or allow for complete new markets to open up. Good examples are Internet and online colleges, as the educational sector is one of the major areas where Information and Communication Technology (ICT) are playing a remarkable role. These colleges allow students to make the choice to study at home via Internet or to attend a classical college. Many people argue that in the next decades the classic college education on campus will diminish, as more and more people will take advantage of the new and modern type of studying. Although the assumption might seem logical, one has to try to understand the socio-technical aspect in the decision making process - if to use the technology or rather stay with the classical educational system.

Many adults might opt for the less complicated Internet based education, if they are not located near a campus or of their work hours do not permit attending day or night classes. But many teenagers most likely will still enjoy the classical college campus flair - mainly for the social interaction and new environment away from their home. Another main social factor that will impact the decision making process is, if the person is motivated enough to study on their own and will abide to set deadlines for paper submissions as well as if the online course system is "user-friendly", making navigation, course material, communication and learning easy, without spending many hours learning and adjusting to this new technical and educational system.

Another main factor that does play a role is the fact that not all courses will be provide complete online study, or at least will not provide the same educational experience as in a classroom. These courses are mainly technical and biology related, that require a lot of hands-on experience and laboratory time. This is something that cannot be substituted by multimedia presentations.

Kling brings another good example that shows how the social factor might influence technology implementation where he analyzes the use of Lotus Notes technology in Price Waterhouse and Ernst & Young. Both companies were using the same technology, mainly for the reason that their employees and offices were located all over the United States and the world. But what first was supposed to be an information-sharing tool, ended up being used by both companies in two different ways.



In Price Waterhouse it was used more as a utility tool, which was not used very much by the associates or partners, as they were billing their working hours to their customers. Lotus Notes learning and usability time was not a valid charge against their customers' accounts. But the IT used the technology very strongly as well as the tax departments, which used it to share technical information as well as distribute relevant tax information to all associates and partners throughout the company.

Ernst and Young on the other hand, developed organization whose charter was to organize E&Y's consultants' know-how in specific high profile areas. By 1997, 22 distinct social cross-office networks of consultants with expertise in certain industries were developed and organizational reforms and technologies were a focus of E&Y's. In this case, the system was used as a human organizational "intelligence system" for sharing insights, ideas, and materials in specific topical areas. Lotus Notes was used as an information support system -- a medium for storing, organizing and communicating these materials.

These examples show that even if the latest and best technology is implemented, offering the best of the best, the social factor, that will make the decision, if the project or technology is useful, cannot not to be neglected. The social factor does play a major role during the implementation of technology in today's system as well as how and when it will be used. Technology alone will not succeed without the human factor. Design, development and the use of technologies and information systems are closely tied to the social environment. The social context influences every single part of the information technology, starting from conception to design, implementation, use and upgrades. Each stage in that technology system is shaped by the social context. Therefore, implementing a new technology or design into an organization might not bring the effect and results it was intended to bring because the human or socio-technical aspect cannot be foreseen. And people will not adjust to technology - they will shape the technology of tomorrow.

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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.