ORGANIZATIONAL AND COMPUTER CULTURE

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Abstract

When getting a new workplace, the employee has to start all over again or from zero. From learning what his/her place is to how to work on computers, it is a continuous task as everything keeps changing in a dynamic organization. Employee's luggage of knowledge is going to get harder and harder with each step taken inside the organization. He or she has to adapt to the new place, has to know his/her duties, to work only with certain information, to behave properly, to respect some rules of conduct. All this is just a small part of what means adapting to an organizational culture. We are going to see in this paper that not only this culture is important but, we have to take into consideration computer culture too. People are influenced by the organization's environment and culture when doing their tasks and that is why a healthy culture is needed in order to prevent computer crimes.

Keywords: culture, information technology, behavior, employee, organization

Introduction

Employees face new technological changes in the workplace every day. Some employees embrace the changes that technology brings, while others resist and become defensive. If they finally embrace it, as they have to adapt to the new requirements of the job and society, they try to use it for their own benefits bringing in some cases disasters to the organization they work for. The new technologies allowed criminals to change the environment in which they are doing the illegal activities. Now, they can surf the Internet for victims, connect to private networks, and cover their tracks. Only the skilled network administrators can figure out what is happening and supported by the managers can use and take the appropriate measures.

In order for an organization to survive and face all the challenges including those with employees, it has to have its own culture and rules to be respected. We can say that the first suspects when something wrong has happened are the employees as they have access to all the organization's information and technology. The explosion of the Internet and its use in whether for private or public use, has affected productivity positively and negatively. On one hand, organizations have harnessed the Internet to perform tasks such as analysis and research and have shortened cycle times, marketed products and reduced costs associated with doing business[1]. Consequently, companies have started to rethink how much Internet access to allow employees in the workplace. Broadband access to the Internet in the workplace increased the number of web pages viewed by individuals and the amount of time spent online. Using Internet for business allows the employees to access outside information and software and that is why they are tempted to do something wrong like stealing and selling organization's information by impersonating somebody else, steal money by altering data, bring damages to both hardware and software and so on. Organizations have to prevent these types of illegal activities by training their employees and facing them with the consequences of their actions.

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[1] Grodzinsky, F., Gumbus, A., *Internet and Productivity: Ethical Perspectives on Workplace Behavior*, The Ethicomp Journal, Sweden, 2005, http://www.ccsr.cse.dmu.ac.uk/journal/articles/vol3iss1_13.pdf

Therefore we will see in this paper why it is important to have an organizational culture and how should managers deal with unethical employees. We have used management's and computer science's literature in order to present the problems that organizations are dealing with.

From organizational culture to computer culture

In order to have positive results, each organization should have a culture as we could say it is a little society with its own people, rules, principles, and actions. Laudon and Laudon[2] say that the key elements of an organization are its people, structure, business processes, politics, and culture. We are going to focus on organizational and computer culture and people's reactions towards them.

If we search the Internet and look into literature we will see that a formal definition is very used, that of *culture,* which is a set of learned core values, beliefs, standards, knowledge, morals, laws and behaviors shared by individuals and societies that determines how an individual or a group acts, feels and views himself and others. A society's culture is passed from generation to generation and aspects such as language, religion, customs and laws are interrelated. With computers, it should go the same; people should learn from each other how to use technology in the best way possible.

Culture is made up of the values, beliefs, underlying assumptions, attitudes, and behaviors shared by a group of people[3]. It is the behavior that results when a group arrives at a set of - generally unspoken and unwritten - rules for working together. Culture is difficult to define, but you generally know when you have found an employee who appears to fit your culture. He just "feels" right to do the job. A big mistake considering that appearances can be deceiving and that the trustworthy employee becomes the greatest enemy.

From what we can see, culture has two forms:

- Unspoken and unwritten. It is transmitted from person to person, based on employees' actions, behavior, results, and values.

- Spoken and written. It is the official one, used by managers to control their staff. It is written in contracts, in different papers and is transmitted to everybody.

The first type of culture is known by everybody, as news travel very fast. Perhaps the most used example is that employee X did something that was right or wrong, won or lost something, what is to be done for clients, suppliers, and partners. These actions cannot be found in organization's official papers but in employees' behavior. The official culture is that written and should be respected by everybody for positives outcomes.

There might be some problems in building a culture inside an organization. First of all, it is somehow difficult to have an organizational culture especially if it is a multinational one, where employees come from different countries and have their own values, standards, principles, and ethics. Secondly, will that culture be adopted by everybody, when employees come and go, especially if they are young or just in a probation period? It is difficult but not impossible. Managers should bring to mind to the new employees what they want from them, what their attributions are and how they should behave in order to have a good collaboration.

According to Kathryn Baker[4] organizational culture literature makes it clear that:

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[2] Laudon, K.,Laudon, J., *Management Information Systems: Managing the Digital Firm*, 9th Edition, Pearson Prentice Hall, 2002.
[3] Heathfield, S., *Culture: Your Environment for People at Work. What Is Organizational Culture?*,
http://humanresources.about.com/od/organizationalculture/a/culture.htm.
[4] Baker, K., *Organizational Culture*, 2002, http://www.maxwell.af.mil/au/awc/awcgate/doe/benchmark/ch11.pdf.

-   culture is essential for both successful organizational change and maximizing the value of human capital;

-   culture management should become a critical management competency;

-   while the right culture may be a necessary condition for organizational success, it is by no means a sufficient condition. An important challenge for managers is to determine what the most effective culture is for their organization and, when necessary, how to change the organizational culture effectively.

Culture is the environment that surrounds everyone at work all of the time. It is a powerful element that shapes work enjoyment, relationships, and processes. But, culture is something that we cannot actually see, except through its physical manifestations in our workplace as organizational or corporate culture is the system of shared actions, values, and beliefs that develops within an organization and guides the behavior of its members.

Edgar Schein[5] suggests that organizational culture is even more important today than it was in the past. Increased competition, globalization, mergers, acquisitions, alliances, and various workforce developments have created a greater need for:

-   coordination and integration across organizational units in order to improve efficiency, quality, and speed of designing, manufacturing, and delivering products and services;

-   product innovation;

-   strategy innovation;

-   process innovation and the ability to successfully introduce new technologies, such as information technology;

-   effective management of dispersed work units and increasing workforce diversity;

-   cross-cultural management of global enterprises and/or multi-national partnerships;

-   construction of meta- or hybrid- cultures that merge aspects of cultures from what were distinct organizations prior to an acquisition or merger;

-   management of workforce diversity;

-   facilitation and support of teamwork.

These desiderates apply to all organizations no matter their activity, whether they offer products or services, but using knowledge, as we know it became the most valuable asset an organization has. Employees tend to go according to their culture and that is why sometimes they may offend their colleagues without bad intention. One has to be careful and think if what he or she is about to be doing and saying is going to be offensive or not. Culture is determined by the inputs and outputs employees receive and give. If the outputs are satisfactory for the employees, everything will be fine; they will work hard and will be happy. If not, problems will rise to demand proper reward for the job and the environment they work in. Each organization has a unique culture, or fundamental set of assumptions, values, and ways of doing things, built by employees for the employees, that has been accepted by most of its members.

Parts of an organization's culture can always be found embedded in its information systems. Culture can support[6] linkages between technology adoption and organizational growth; it can be a critical success factor in manufacturing strategy and play a crucial role in determining the success or failure of mergers and acquisitions. As we would expect, organizational culture has also been found to play a significant role in a number of IT management processes. These can include technology driven change, e-business initiatives, groupware development and deployment, new technology and adoption, computer-based monitoring, and management of new systems

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[5] Schein, E., *Organizational Culture and Leadership*. San Francisco: Jossey-Bass Publishers, 1992 (copyright 1985).

[6] Balthazard, P., Cooke, R., *Organizational Culture and Knowledge Management Success: Assessing The Behavior–Performance Continuum*, Proceedings of the 37th Hawaii International Conference on System Sciences – 2004.

development. Implementation of all these technologies was possible because organizational culture managed to face change in order to succeed.

Laudon and Laudon say that the interaction between information technology and organizations is complex and is influenced by many mediating factors, including the organization's structure, standard operating procedures, politics, culture, surrounding environment, and management decisions. The next figure is a suggestive representation of what they stated.

Fig. 1. ***The two-way relationship between organizations and information technology***
(Source: Laudon, K.,Laudon, J., 2002, Management Information Systems: Managing the Digital Firm, 9th Edition, Pearson Prentice Hall)

This complex two-way relationship is mediated by many factors, not the least of which are the decisions made–or not made–by managers. Other factors mediating the relationship include the organizational culture, structure, politics, business processes, and environment. If those two authors put an interdependent relation between organizations and information technology, Bob Travica (2008)[7] investigated the concept of information culture as a component of organizational culture and explored its influence on the implementation of self-service software.

Computer culture could be defined as a set of values, beliefs, standards, knowledge, morals, laws and behaviors applied to the use of computers and information management inside an organization. Every organization should have its own culture, its own values, standards and rules for the employees to respect. It is not a new concept, as we see over the Internet, but mostly it is confused with computer use or even the Internet but as we can see it is a mix. Computer culture is also known as information technology culture and that is why it is not wrong to use both terms.

The reality is that people from different cultures do business differently–and have varying sets of values, moral guidelines and ethical principles to guide them through the maze of life. What might be the "right" way to act in one culture may be considered "wrong" in another. Understanding the cultural context and ethical mindset of a potential foreign business partner or competitor can help in developing sound strategies for negotiations and deal making. According to pragmatism, values are being tested all the time with reality. Attitudes toward computers differ between the genders. Males tend to display more positives attitudes toward computers, regardless of the level of familiarity, while female attitudes become more positive as the level of familiarity increases.

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[7] Travica, B., 2008, *Influence of information culture on adoption of a self-service system*, Journal of Information, Information Technology, and Organizations, Vol. 3, http://jiito.org/articles/JIITOv3p001-015Travica470.pdf.

When using computers, people from a culture will act different from others. Each uses their own set of principles in using information technology and is doing as their consciousness says he or she should do and it is right. Ethical principles themselves can conflict, and it requires higher level principles to settle those conflicts. In order to prevent them, organizations must have a computer culture of their own, to use it both inside and outside, in relationships with their customers, supplies and partners.

To understand a culture is to understand its people, which lead to how computers are used. Of course, many mistakes are generalized making every person in some country guilty or capable of doing the same bad things. We know that it is not true. If somebody does something it doesn't mean everybody is doing the same. Schein says that "Culture is learned; hence learning models should help us to understand culture creation. Unfortunately, there are not many good models of how groups learn–how norms, beliefs, and assumptions are created initially. Once these exist, we can see clearly how leaders and powerful members embed them in group activity, but the process of learning something that becomes shared is still only partially understood." For new employees to integrate it goes the same, to understand an organization is to understand its culture and people.

First step in having a computer culture is for managers and IT administrator to understand its necessity in order to allow knowledge sharing, work in harmony and understanding and this way preventing computer crimes or traditional ones. If employees aren't happy with the environment they work in or remuneration they will act in one of the ways:

- leaving and taking with them confidential information;
- staying and asking for remuneration according to job's difficulty and environment;
- leaving after a lot of training has been done, losing money and time;
- taking themselves what they think it would be fair for them to have by stealing and damaging both data and devices.

Computers influence the organizational culture. We know that they are a tool for the knowledge workers, for doing business online, for communication and collaboration, and so on. To achieve any measure of "success," investment in IT must be accompanied by significant changes in business operations and processes and changes in management culture, attitudes, and behavior. An information system can be deemed a failure if its design is not compatible with the structure, culture, and goals of the organization as a whole. This means that computer culture depends on the organizational culture. Computers must be used in an appropriate way, not to harm others. Employees should use only the data they are allowed to, they should act in an ethic way. We can say that computer culture is part of organizational culture as shown in the figure below.
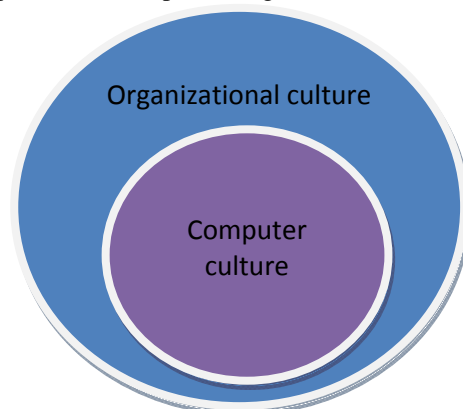
Fig. 2. ***Relation between computer and organizational culture***

Ethics is different for each individual, it is something that it is filtered through each mind and is influenced by the individual differences that may be a function of people's background. Computer ethics [8] is a form of applied or practical ethics. It studies the moral questions that are associated with the development, application, and use of computers and computer science. First of all, the employee should contribute to the well-being of the organization he or she works for. He/she must not harm others, must respect the privacy of others, must be fair and honest, and respect confidentiality. Culture is the key driver of behavior, and that while information technology can facilitate collaborative behaviors it can't force them to happen. But, managers should not force employees to embrace certain technologies if they are resistant as they will never use them at their full potential. Everything must be done gradually, to avoid resistance for change. New employees should be taken easy to adapt and get at the same time knowledge needed for their job. They should be given proper training to manage data they are supposed to in the ways the organization needs. Doing this means bringing them to knowledge the ethics code, security policies and other rules for an advantageous collaboration.

Computer culture is different from an organization to another, for a person to another, as there are several factors that influence one way or other employees' thinking and acting. We will present them later in this paper. We can state that, according to figure number 2 that organizational culture comprises computer culture. According to Rosca, Varzaru, Rosca, (Rosca, Varzaru, Rosca, 2005) organizational culture includes two types of elements[8]:
-    visible and conscious elements;
-    invisible and unconscious elements, culture's nature itself.

When acting, employees are influenced by certain factors, that is why we can talk about three organizational culture levels:
-    beliefs and persuasions level, found in employees' consciousness unaware of its presence;
-    values and attitudes level, that employees opt for it and show it;
-    individual and group behavior level within the organization, that can be perceived through spontaneous and systemic observations.

Accepting to be members of the organization, employees' competences and abilities are "designed" according to jobs' requirements. People make efforts to adapt to organizational system's requirements, but this interaction generates many times some tensions as employees find very hard to respect the codes and are tempted to get some money or goods using information and communication technology.

Table 1. **Some organizational and computer cultures' influence factors**

		Internal factors	External factors
Organizational culture		The person	Legislation
		Work environment	External economic environment
		Managers' style of leading	Politic system
		Groupware	Competition
		Organization's characteristics	Customers
		Founders and owners	Suppliers

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[8] Rosca, C., Varzaru, M., Rosca, I.G., "Resurse umane – Management şi gestiune", Editura Economică, 2005.

	Computer culture		Used technologies
			Information found over the Internet

The person influences the two cultures as he or she has his/her persuasions, beliefs, values, experiences, preparation, attitudes, behavior interacting with others from the same workgroup. The work environment is important as employees desire this to be according to their tasks, harmonious and peaceful. Managers have a positive or negative impact, according to their leading methods and human resources management. Organization's characteristics depend on organizational culture's complexity and organization's dimension found in number of employees, income, social capital and so on. Founders and owners are those that create organization's philosophy and determine its fundamental values. External factors influence positive or negative according to the difficulties faced by the organization and customers' and suppliers' demands.

Both organizational and computer culture determine the employees to commit computer crimes and that is why we have talked about these subjects. A healthy organizational culture determines a good communication and collaboration between employees among themselves. Ethics drives their behavior along with financial and material needs. That is why it is important to keep supervising the employees, assure they are happy and that they will not commit any act of stealing, blackmailing, confidential information publishing using computers and so on.

Over the Internet people find all sorts of information, from news to hacking, and that is why network administrators along with the managers should deny surfing dangerous sites and should monitor employees' every move to prevent crimes. Internet access for employees has also added to the problem. Online games, chat rooms and other diversions, including pornography sites, are diverting the attention of organization's work force.

The history surrounding the birth of IT in organizations suggests that IT brought with it a culture of its own that clashed with the dominant organizational culture. Many organizations had their own system of values and beliefs; and the emergence of the discipline of IT imposed on the existing culture, resulting in tension in the IT-business relationship[9]. Business management inexperience is another reason given for the cultural gap. The arrival of the computer and the IT industry challenged traditional forms of management, administration, and authority. But, in the end, after many debates, technology has become an imperative presence in any organization and business.

Workplace cultures are interactive. They are shaped by the workers who make up the culture; and, in turn, those workers are shaped by the culture in which they work. Cultures are organic. They are constantly growing, morphing, reforming, adjusting and adapting. Information technology is also developing at an impressive pace and that is why its culture is in permanent change.

Therefore, no matter the organization, small or large, national or multinational, and no matter of people's cultures, each one should make its own culture for employees' sake and organization's profit. In order to ensure a good activity, organizations need to develop programs aimed at prevention, education and rising awareness. Organizations may also wish to consider a 24/7 helpdesk to provide support and advice, and to capture details of any incidents that occur[10].

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[9] Horn Nord, J., Norg, G., Cormack, S., Cater-Steel, A., *An Investigation of the Effect of Information Technology (IT) Culture on the Relationship between IT and Business Professionals*, International Journal of Management and Enterprise Development, 4(3). , 2007, pp. 265-292, http://eprints.usq.edu.au/992/1/Cater-Steel-Nord_Nord_Cormack_Cater-Steel_IJMED.pdf.
[10] Computer Crime Research Center, *Computer crime: cyber fraud*, 2006, http://net-security.org.

Paper content

In this paper we have tried to underline the importance of computer culture within an organization. We have stated that it is a part of the organizational culture. Every employee should be aware of them and of everything else that has a relationship with computers and organizational behavior. Managers and especially the human resource managers should know their employees and watch every move they make. In order to prevent computer crimes, every employee, IT or non-IT, should be surveyed. There are many programs that allow an organization to monitor everything that it is done on computers.

This study has been done by studying both the management and computer science literature together with observations made during different activities done by the public employees and their behavior towards clients and their information.

Conclusions

Some might think that computer culture is just computer use; others may think it is different from the organizational culture or that they depend on each other. Perhaps everyone is right in their way. Nowadays, computers are present in every organization; no business is done without them, as they became a tool for communication, collaboration, trading, and so on. If at the beginning they were seen as something that is not necessary, nowadays, computers are seen as being extremely useful and present everywhere.

Values and beliefs of employees come from their life. They started to gather when they were children and are developing during their lifetime. Individuals continue to learn as they get older, go from place to place, from organization to organization. As we can see, people tend to work either alone or in groups if their activity is asking. When using information technology for communication and collaboration they have to be aware that they are actually interacting not only with the computers but with the users behind them. If one wants respect from others first he or she must respect. Because computer use requires knowledge and skills, organizations make sure their employees are equipped with the competencies needed to use computers, which means they search future employees with a computer culture.

Future reasearches can be done on various subjects mentioned in this paper like, computer crimes prevention, forensic science, organizational behavior, individual's personalities, information security, losses from employees bad behavior and so on.