Knowledge Dynamics

Anca MANDRULEANU
Academy of Economic Studies, Bucharest, România
anca.mandruleanu@fabiz.ase.ro

Data is a set of discrete symbols or signs used to express facts about events. Still, data tells nothing about why or how these events happen and they do not contain explanations or interpretations of the eventual changes of events. In an organizational context, data is most well described as structured records of transactions.
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Modern organizations usually store date in some sort of technology system. It enters into the system by departments, such as: accounting, finance, marketing. Until recently, central information system departments that respond to requests for data from management and other parts of the company have managed it. Nowadays, data is less centralized and available on demand, but the basic structure of what it is and how it is stored and used is the same. "Data describes only a part of what happened; it proves no judgment or interpretation and no sustainable basis of action. While the row material of decision-making may include data, it cannot tell you what to do. Data says nothing about its own importance or irrelevance. But data is important to organization – largely, of course, because it is essential row material for creation of information" (Davenport and Prusak, 2003, pag 3).

All organizations need data and some industries are heavily dependent on it. Banks, insurance companies, government's agencies are several examples. Efficiently keeping track of millions of transactions is their business. However, for many companies, more data is not always better than less. Sometimes, companies pile up data because it is factual and therefore creates an illusion of scientific accuracy. If sufficient data is gathered, correct decision will automatically suggest themselves. This is a false in two accounts. First, because there is no inherent meaning in a data and second, because too much data can make it harder to identify and makes sense of the data that matters.

Information is a result of processing data. Information means to put "in-form" the data, by giving it relevance and purpose.(Druker, 1993).information is like a message, usually in the form of a document or a visible or audible communication. Just like a message, it has a sender and a receiver. Information is meant to change the way the receiver perceives something, to have an impact on his judgment and behavior. It must inform; it is a data that makes the difference. Strictly speaking, the receiver and not the sender, decides whether the message he gets is really information – that is, if it truly informs him. According to Denver and Prusak, we transform data into information by adding value in various ways (200, p.4):

We will consider the working definition of knowledge formulated by Davenport and Prusak (2000, p 5). "Knowledge is a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms."

It is obvious that knowledge is not simple. It is a mixture of various elements; it is fluid and well structured, it is intuitive and therefore hard to capture in words. Knowledge exists within people and it is part of human complexity and unpredictably.

In any organization, there are two types of knowledge:

- Individual knowledge
- Organizational knowledge

Individual knowledge belongs to each member of the organization and can be accessed only with individual acceptance. Also, individual knowledge is composed of:

- Tacit knowledge
- Explicit knowledge

Knowledge can be obtained individually through a direct experience, or it can be obtained through a transfer process. Polanyi (1983) defined the knowledge obtained through a direct experience of life as tacit knowledge. The other type is defined as being explicit knowledge.

Knowledge integrates both theoretical and practical aspects of life and sciences. It is both rational and nonrational, abstract and concrete, based on inner feelings and the impact of the environment upon us. Polanyi remarked: „We had seen our tacit powers interpreting the world around us by converting the impacts between our body and the things that come our way into a comprehension of their meaning. This comprehension was both intellectual and practical" (Polanyi, 1983, p.49).

Tacit knowledge can be obtained form direct individual experience and it is stored within the unconscious zone of the brain. We are using it without being conscious of it, thus it is non-rational. We just say that tacit knowledge is experience or intuition. Tacit knowledge is similar to practical knowledge and it is the "knowing what" part of a knowledge body.

Explicit knowledge approached the theoretical knowledge and it is the "knowing how" face of the same knowledge body. Explicit knowledge is transferred through communication and it can be explained.

Knowledge comes in two formats. One is located in employees' heads and it is known as a tacit knowledge and the other one is presented in written form or embedded in products and it is called explicit knowledge. Some organizations have knowledge embedded in their processes and the knowledge that is in a format between passive and explicit. The challenge for every organization is to transform passive knowledge into active knowledge and to transform individual, tacit knowledge into group, organizational knowledge. Organizations have to put processes in place and think of knowledge initiatives to bring about this transformation. Managing knowledge is about creating an environment to encourage knowledge creation and transfer.

Tacit knowledge is transferred from one individual to another and from individuals to groups and teams through conversations, dialogues and meetings. Many times, this transfer takes place informally. A transfer from tacit to explicit knowledge takes place through the creation of documents, e-mails, reports, memos. Knowledge creation and transfer are achieved by interaction among individuals and in these kinds of interactions, four modes of knowledge conversion take place:

- Socialization: informal meetings, discussions, brainstorming, customer interaction, mentoring, learning groups
- Externalization: cartoons to communicate, meetings, workshops, master classes, assignment databases
- Combination: publications, conferences
- Internalization: knowledge zone, customer feedback, development counseling, facilitation skills.

The knowledge – creating activities take place between people. We may find data in transactions or record and information in messages, but we can only obtain knowledge from individuals or group of knowers.

One main reason for which we find knowledge valuable is that it is close to action. Knowledge can and should be evaluated by decisions or actions that it leads. For example, better knowledge can lead to measurable efficiency in products and processes.

Organizational knowledge refer to all the knowledge that can be integrated at the organizational level from individual knowledge of its members and form incoming knowledge fluxes from the external environment (Bratianu, 2006, p.170). Even if the human resources of an organization is composed of the total number of its employees, the orga-

nizational knowledge is not the sum of all individual workers knowledge. In fact, only the explicit knowledge can be integrated into a new body of knowledge at the organizational level. The tacit knowledge remains at the individual level due to its implicit nature.

When workers leave the company, they take with them all the tacit knowledge accumulated in time. Professional workers rapidly evolve in scientific and technical fields, obtaining a lot of theoretical and practical knowledge, which is not contained and explained in the organization's documents. Thus, when theses professionals leave the company there is a significant loss of knowledge, which is discovered only when successors become aware of missing insights due to some mistakes or difficulties in solving their problems.

Knowledge develops over time, through experience that includes what we absorb from courses, books and mentors as informal learning. Experience refers to what we have done and what had happened with us in the past. "Expert" and "experience" are similar words and they mean "to put to the test". Experts – people with many knowledge on a subject – have been tested and trained by experience.

Knowledge born of experience recognizes familiar patterns and can make connections between what is happening now and what happened then. The experience – based insights are what firms pay premiums for and they show why experience counts.

Knowledge strategies become crucial for any accurate understanding of how an organization works and a mastering of the dynamics of knowledge can determine the competitiveness of an economic agent.

Organizations exchange information and knowledge with the external environment, which means to yield and to receive information and knowledge. Just like a human body, an organization can identify, capture, filter and interpret knowledge and information coming from processing all the knowledge. Integrating it into its own knowledge basis, an organization can accommodate its level of knowing with that required by a competitive capability. That means to accept the idea that we may consider a kind of cognitive system at the organizational level. Individuals may come and go, but the organization preserves its knowledge, its values and its behavior. In this perspective, organizational culture is a form of the organization knowledge basis.

The importance of experience is one indication of knowledge's ability to deal with complexity. Knowledge is not a rigid structure that excludes what does not fit; it can deal with complexity in a complex way. This is one essential source of its value. Even if it is tempting to look for simple answers to complex problems and deal with uncertainties by pretending they do not exist, knowing more usually leads to better decisions than knowing less. Certainty and clarity often come at the price of ignoring essential factors. Being both, certain and wrong is a common occurrence.

The knowledge is represented by all the information and knowledge existing in documents and in the structural elements of the organization itself. In management, we may say that any exchange of information between an organization and its environment modifies the knowledge state of organization and contributes to the decision making process. Actually, any decision making process is generated because of knowledge variation and any implementation of theses decision-making processes and to action generation.

Many people assume that organizations are neutral and objective and that their purpose is to create a product or provide a service and that the goal is unrelated to values. In fact, people's values and beliefs have a powerful impact on organizational knowledge. After all, organizations are made up of people whose values and beliefs influence their actions and thoughts. The organizations themselves have histories derived from people's actions and words that also express organizational values and beliefs.

Beliefs and values are integral to knowledge, determining in large part what the knower sees, absorbs and concludes from his observations. People with different values see dif-

ferent things in the same situation and organized their knowledge by their values.

People in organizations have sought, used and valued knowledge, at least implicitly. Company hire for experience or education because they understand the value of knowledge that has been developed and proven over time. Managers making difficult decisions are much more likely to go to people they respect and avail themselves for their knowledge than they are to look for information in databases. Most people in organizations consult a few knowledgeable people when they need expert advise in a particular subject.

Explicitly recognizing knowledge as a corporate asset is new, however, as it understands the need to manage and invest it with the same care paid to getting value from other, more tangible assets. The need to make the most of organizational knowledge, to get as much value as possible from it is greater now than in the past.

In any organization there is a given knowing state based on the knowledge quantity and quality existing in a certain moment of time. This knowing state can be changed as a result of knowledge variation at the organizational level caused by different knowledge process: generation, acquisition, integration, codification, sharing, storage, retrial and transformation.

Any organization can be considered as an open system with respect to information. Between the internal and external environment there is a continuous exchange of information. By processing the incoming information flux the organization acquires new knowledge with respect to its knowing state. Also, within the organization there is a process of knowledge creation, especially by transforming tacit knowledge into explicit knowledge at the individual level and then by sharing and integrating the new knowledge at the organizational level. Knowledge acquisition is important in improving the knowing state, by reducing the complexity and uncertainty of the decision making process.

It is well known that people interaction is how individuals share emotions, feelings and experience. Individual face – to – face interaction is the only one way to capture the full range of psychical sensations and emotional reactions that are necessary for transferring tacit knowledge.

It is interesting to consider a knowledge cycle, starting with the tacit - explicit transformation, continuing with explicit – explicit sharing and ending up with explicit – tacit transformation. While for organizations it is important the sequence of the first two:

- Tacit - explicit
- Explicit – explicit

for the individuals it is important the last one: explicit – tacit.

This cycle is similar to a learning cycle, consisting of the following processes:

- Concrete experience
- Observation
- Reflection
- Forming abstract concepts
- Testing them in operational contexts

The concrete experience is the source of the tacit knowledge and the next two stages contribute to the generation of the explicit knowledge.

Bibiliography

1. Andriessen, D., Tissen, R. (2000). *Weightless wealth. Find your real value in a future of intangible assets*. Prentice Hall: London.

2. Baumard, PH. (2001). *Tacit knowledge in organizations*. London: Sage Publications.

3. Bratianu, C. 2006. Knowledge dynamics in organizations. *In*: *The Proceedings of the 6th Bienal Internationa Economic Symposium SIMPEC2006*, Vol.1, pp.51-57. Brasov: Infomarket.

4. Collins, J., Porras, J. (2002). *Built to last. Successful habits of visionary companies*. Harper Business Essentials: New York.

5. Garratt B. (2001). *The learning organization. Developing democracy at work.*HarperCollinsPublishers: London

6. Debowski, S., *Knowledge management*. John Wiley & Sons Australia: Sydney, 2006

7. Ion Roşca, *Societatea cunoaşterii*, 2006

8. Joe Tidd, John Bessant, Keith Pavitt, *Managing innovation*, 2001

9. Hayes-Roth, R. (2006). *Hyper-beings. How intelligent organizations attain supremacy through information superiority*. Booklocker.com, Inc.
10. Hitt, M.A., Ireland, R.D., Hoskisson, R.E. (1999). *Strategic management. Competitiveness and globalisation.* 3rd edition. South-western College Publishing: Boston.
11. Kermally S. (2002). *Effective Knowledge Management.* West Sussex: John Wiley&Sons, Ltd
12. Nicolescu O., Nicolescu L. (2005). *Economia, firma şi managementul bazate pe cunoştinţe.* Bucuresti, ed. Economică
13. Richard Florida, *Competing in the age of talent: quality of place and the new economy,* 2004
14. Roos, J., Roos, G., Edvinson, L., Dragonetti, N. (1997). *Intellectual capital. Managing in the new business landscape*. Macmillan:London.
15. Schulz, M. (2001). The uncertain relevance of newness: organizational learning and knowledge flows. *The Academy of Management Journal*, 44 (4), pp.661-681.
16. Sveiby, K.E. (1997). *The new organizational wealth*. Berret-Koehler Publisher, Inc.: San Francisco.
17. Schulz, M., "The uncertain relevance of newness: organizational learning and knowledge flows". *The Academy of Management Journal*, 2001
18. Welch, J., Welch, S. *Winning*. Harper Business: New York, 2005