

TITLE: Knowledge Federation

TEXT ABOVE THE TITLE: What will the creation of knowledge look like in the future?

TEXT IN THE LOWER-LEFT CORNER: The writing and publishing of text, as the way we have practiced since the beginning of civilization, has an interesting paradox - when the amount of knowledge becomes too voluminous, we are no longer able to put together the knowledge about a theme that interests us in order to make an opinion about it.

TEXT IN THE TWO COLUMNS ON THE LEFT:

Imagine that you are interested in the climate change or, more concretely, the question "Is the climate change a sign that the human civilization is able to influence the planetary system to such degree that it has become necessary for us to change the way in which we think and behave?". You have opened the book "The Dominant Animal" by [Ann and] Paul Ehrlich, in which the answer to your question is vehemently affirmative, but while you are reading it you are not even sure whether Paul Ehrlich still has the same opinion. Perhaps he has changed it in the meantime? At the same time, you are rightly convinced that there are authors who deny his opinion. Or, let us pose a similar problem in this way: Wikipedia has shown that the contemporary communication technology allows for a completely different way of creating knowledge. An article about the climate change in Wikipedia reflects the current and global state of knowledge. If you are disagreeing with the published statements, you may change them or write your opinion on the associated "discussion" page. But Wikipedia too has problems: If you are, for example, James Lovelock or Paul Ehrlich, you will want to publish your own opinion, you do not want to allow that enthusiastic high school students and representatives of business or political interests change it as they wish. However, the immense popularity of Wikipedia indicates that a change is already under way. We are talking not only about the change of technology and the way of creating knowledge, but also about democratization, availability and simultaneity (the offered information reflects the current state of knowledge and changes when the knowledge changes).

THROUGH UNIFICATION TO SYNTHESIS

This is, of course, true not only about Wikipedia, but also about the blogs and numerous other projects and technologies [belonging to a trend called] Web 2.0. But, obviously, Wikipedia is only a first step in a certain new direction which we still need to think through and develop. This opinion is held by Dr. Dino Karabeg, [associate professor of informatics] at the University of Oslo. Namely, owing to the voluminous knowledge we have, we are no longer able to make a qualified opinion about core issues. How should we approach this problem? What models are explored in the world? There belongs Karabeg's "Federation". What is Knowledge Federation?

It's about a new way of creating and using knowledge. Text writing and publishing, as the way we have practiced since the beginning of civilization, has

an interesting paradox – when the amount of knowledge becomes too voluminous, we are no longer able to put together the knowledge about the theme that interests us in order to make an opinion about it. Information technology has enabled us to create enormous quantities of information. But more information does not necessarily mean better informing! Richard Wurman published two books titled “Information Anxiety”, in which he talks about the anxiety we feel when facing the enormous quantities of information, aware that there are things there we must know about, perhaps even those that would substantially improve our effectiveness in work and our quality of life, if only we could find them. [And Neil Postman claimed:] We are glutted with information, drowning in information, have no control over it, don't know what to do with it. We may understand Knowledge Federation with the help of the analogy with political federation. The versions of individuals and groups preserve their autonomy and identity, and versions that represent the opinion of a larger whole (global, of a scientific discipline, expert group or similar) are also created. The unification of knowledge from different and presently divided scientific and other fields, in order to create a synthesis and more general insights, is of especial interest.

PROBLEM SOLVING

For example new scientific results or new ways of solving the acute or chronic problems. Written or printed text, which has been the main medium of communication during the past five thousand years, has the disadvantage that it reflects the opinion the author had at the moment of writing, which is embodied or ‘frozen’ in the medium, and then placed to a specific point in space, such as a bookshelf in a library. Based on this medium, during history, a practice has been developed, i.e. the very way of creating and communicating knowledge: writers write and publish books, the scientists publish scientific articles. This way of working has also its ethical system that supports it – we believe that by publishing the book or the scientific article we have contributed to the extent of knowledge and thereby finished our job. In the meantime, and especially recently owing to information technology, the amount of such published knowledge has become so large that often nobody is still able to find, unify and read the written texts on a theme about which we wish or must form an opinion. It is completely reasonable to ask: What will the creation and communication of knowledge look like in the future? Will the new way make it easier for us to understand the time we live in and to solve contemporary problems?

TEXT IN THE COLUMN ON THE RIGHT: Professor Karabeg names four ways in which ‘knowledge federation’ can be understood

A Knowledge federation as an activity (here ‘knowledge federation’ is a verb and not a noun).

This presupposes the creation of knowledge by combining partial insights which preserve their identity and autonomy. Imagine that instead of writing an entire book about, let's say, genetics, you use the media to unify the key insights of other authors into a common

whole. Imagine also that this whole is such that the participating authors can change it, by changing their own parts according to new findings.

B Knowledge federation as a principle of the social organization of creation and dissemination of knowledge.

In this sense we may compare knowledge federation with the related word “democracy”, which also denotes a principle of social organization. Democracy is not only a collection of technical solutions (voting ballots, voting, the will of the majority, representative bodies and others), but also and above all an ethical stance. The values that characterize the knowledge federation are, accordingly: B1) Autonomy of every individual author, document, insight or finding, the desire to give each of them space, to secure that it is valued, preserved, and given access to. We do not want to allow the dictatorship of the majority or the dominant way of looking to suppress the insights that may be vital in the future. We do not want to lose the necessary knowledge in the mass of information. B2) The synthesis of individual knowledge artifacts into a more whole one, which represents the view of a group about a theme or the view of an organization about a goal (for ex. of Sociology, or a business solution). Having created individual knowledge artifacts, we have completed only one part of our job. We cannot leave it up to the reader to unify such knowledge. Every organization that creates knowledge has the task to give its knowledge the form which makes it useful and effective for the social purpose it needs to fulfill.

C Knowledge federation as a movement has the goal to realize the mentioned social organization in practice.

In this regard the key part of the job is of a strategic nature - how to realize the changes for which we realize that they can bring us a substantial improvement not only in the creation of knowledge, but in the development of the civilization in general? Serving the ideal of federation is similar to serving the vision of democracy. Media and Internet tools that facilitate knowledge federation in practice are here of especial interest.

D Knowledge federation as an academic field.

We do not want to say that knowledge federation has a field of interest which is distinct and different from the existing scientific disciplines; insights that are congruent with and necessary for knowledge federation are nowadays created in a variety of disciplines. Instead of that we want to collaborate under the banner of knowledge federation: bring together experts from all disciplines that may help us understand knowledge federation and realize it in practice.