Supermedium

The "net" or "network" concept traditionally referred to a structure formed of thin, flexible fibers, intertwined and used to catch or capture, mainly in hunting and fishing. With time, however, it proved to be a very useful abstraction in many diverse areas. The idea of corporate structure began to be used in economics, that of network structure in the theory of management. In transport we speak of railway or roadway networks, and in infrastructure of power, water, and sewage networks.

More or less in parallel, another word has likewise gained wide currency, especially in science but also in media coverage of broader issues: the term "system." We have grown accustomed to speaking about social and political systems, health-care and education systems, computer systems and pension systems, systems of cooperation and security. We are prepared to envision all but the simplest of phenomena as a "system." Interestingly, scientists have for some time now been using the classical term "network" with respect to certain complex systems, to underscore a certain means of system-internal communication. The term has spread most widely in tandem with the rise of data transmission technologies, especially the Internet (which is essentially the model network solution). But it is also used to describe many other situations, especially those focused not on information itself, but on how it is conveyed. In this context it is natural that the "network" concept has also been adopted by the social sciences.

In sociological research, for years there have been successive attempts to find terms to describe ongoing societal changes. One example can be found in the term "information society," coined already more than 40 years ago by the Japanese futurologist Kenichi Koyama. Despite its extensive popularity, today we can clearly see the important limitations of that term. In spite of the extraordinary pace of development seen in information-dissemination techniques in recent decades, after all, it is hard to conclude that this is in fact the most distinctive feature of today's times. Information and the exchange of information have always gone hand-in-hand with societal development. No wonder, therefore, that the importance of network-oriented systems analysis and the constant search for the most appropriate distinguishing trait of modern society prompted the Spanish sociologist Manuel Castells to popularize the term "network society." On this approach, a network is a highly efficient system for conveying information of a political, economic, social, or personal nature, fundamentally broadening the informer's capacity to exert an impact on (generally very numerous) informees, thus introducing completely new social dependencies and ties. In essence, without duly considering the network supermedium of the Internet, there is no way to study and therefore comprehend most of the phenomena occurring around us. With the unlimited complexity of its network structure and resources of information, the Internet truly is a real, key attribute of globalized society, characterized by easy access to vast information, attractive educational opportunities, the ability to experience the world and maintain interpersonal contacts unrestrained by geographic proximity, the chance to do business in the global market, and an unlimited number of other potential possibilities.

Wisely taking advantage of those possibilities represents an extraordinary opportunity to harness deep-seated resources of human creativity, to provide more equal opportunities and counteract social exclusion, to significantly streamline business activity, and to participate in otherwise inaccessible domains of human civilization. Unfortunately, while appreciating such benefits, we cannot forget about the dangers – progress always entails both fascinating and menacing consequences. As recent history clearly teaches us, new network-oriented technologies can also utilized by despots oppressing their people, aggressors provoking military convicts, terrorists egging on criminal acts, economic and financial fraudsters, or dishonest plagiarizers of copyrighted digital content. In other words, the term "network society" should be understood as an appeal for the networks that surround us to be given a more human, more civil face – surely a difficult objective, but one that is certainly attainable.

It is with that goal in mind that we offer up this issue of Academia magazine, turning an eye to networks in many of their myriad and intriguing forms.

Prof. Michał Kleiber
President of the Polish Academy of Sciences