

RELATIONSHIPS AND COMMUNICATION NETWORKS

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Abstract: *The main feature of the present situation regarding communication is the impregnation of the social with technology. Computer-mediated communication systems has led to the crystallization of a strong specific interactions. This article describes how human relationships constitutes the ontological pillar of society and social relations form the axis irradiance of sociology. Overall, as social agents in social space, people come in a variety of social relationships. Thus, a distinct note of the article refers to the rapid development of information technology over the past decade, which has enhanced electronic communication between people.*

Key-words: *communication, social agents, technology, network, virtual space*

1. Introduction - Communication creates relationships

Social networks are also communications network. JR Taylor's thetic option, widely agreed by researchers, is „thesis that communication is the essential modality (...) of the constitution of organization and, more generally, of society” (Taylor J. R., 2000, p. 3). Relationship with the other is the base on which any communication develops. This can be subsumed to the input on different binary lines: submission-dominance, cooperation- competition, etc. Interaction in which communicative relationship develops produces primarily a communication that tends "to change the system of relationships" (Dăncu V.-S., 1999, p. 85). Staying right in terms of this perspective, communication, as shown by professor Laurențiu Șoitu is defined as "setting a relationship" (Șoitu L., 1997, p. 7).

Communicative situation creates primarily a communicational relationship. Specifically, communication generates a derived communicative relationship by which the reproduction of communication occurs. Secondly, infrastructures of

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communicational force are released: participants create and occupy at the same time places they deserve and which are capable of. "In general, as professor Ioan Drăgan argues, the human relations (and not only them) are communicational interactions" (Drăgan I., 2010, p. 728). Procedurally, communication gives thus a positioning of the actors one to each other, through the automatic construction of positions and roles. Once on a certain communicative relationship a communication is triggered and woven, it will reproduce inexorably the relationship and it will finalize and define roles, sites and communication positions for it.

The initial relationship implies a quality of the relationship between the interactants. From this perspective, it appears as partially preexistent to the communicational interaction. Communication is based on a relationship reproducing and modifying itself. The relationship is clearly evolutionary. When discussing an interpersonal relationship is taken into account that, as demonstrated by Professor Mihai Dinu (Dinu M., 2004, p. 106), it involves five phases: contact, involvement, intimacy, deterioration and collapse. The dynamic of the relationship is the engine of communication. Judging from this, we can say, slightly exaggerating, but no less true, that in communication the contents, messages are also excuses for the convictive or persuasive changing of the relationship by argumentation and expresses as influence. The relationship in self reproduction becomes a rule for the ones it connects. There are transient, perishable, poor relationships and fixed, clear, well defined relationships. If the first ones generate free, unlimited communication, unpredictable relationships, the last ones will lay the foundation of relatively predictable communications. The predictable, fixed relations, are the support of the situations named, as "sermon", "lesson", "meeting", etc. and they are questioning rather subsidiary the position, the place in communication. In contrast, the undefined relationships are structured in unnamed, unpredictable situations and where one of the main sides of the interaction is consumed in fixing the position, the place.

Therefore, communication creates and also recreates relationships. A communication started on a trusted relationship has the chance to develop in time a marital relationship, because as we know the components of the latter are trust, respect and admiration. A marital relationship can start from any of the three relationships. It is noticeable that the issue of the relationship is an axiological issue. Relationship is a value subsumed to some values, rules or principles. Although not invoked or mentioned, that is invisible discursively or actionally, relationships exist and create effects, because one cannot imagine a behavior, however trivial, that is not generated at least by a single value that it is trying to perpetuate in the same time with the creation of another.

2. Communication Expanding in Information Age

According to Albert Bressand, in *Information Age*, the concept of communication "has become too tight"; so to speak about this informational universe would be better to use the concept of "relationship" (Bressand A., 1996, p. 112). In fact, the idea of moving from communication to relationship was exposed earlier (1995) in a book written with Catherine Distler. All types of communication would have gained the consciousness of intervenient in the consciousness of making contributions in what relationship is concerned (Bressand A., Distler C., 1995, p. 7). Communication would only fuel, facilitate, strengthen, extend, make loyal, destabilize or legitimize a relationship. Communication is reduced to message and products (Smarandache F., Vlăduțescu St., 2012, p. 101). The network communication is conceived as "relational machine" ("machine relationelle") which is as "a set of resources (infrastructure) and rules (infrastructures) allowing the actants who have access to it to undertake and carry out common projects when they are in line with expectations and common uses (infoculture)" ("une ensemble de moyens (infrastructure) et de règles (infrastructures) permettant aux acteurs qui y ont accès d'entreprendre et de mener à bien des projets communs dès lors que ceux-ci sont conformes aux attentes et usages communs (infoculture)") (Bressand A., Distler C., 1995, p. 12). However, communication does not occupy the central place in our society, because it has not ensured the function of relational machine. Communication is just one element of a "relational engineering" which communication networks involves it. The idea of relational engineering is inferred in the model underlying the contemporary representation of networks. For example, S. Kaser, N. Narang and S. Nrang show that "a communication network can be viewed as an interconnection of communicating entities" (Kasera S., Narang N., Narang S., 2006, p. 2).

Understanding organizations as networks allows the detection and exploitation of some relevant features in theory and in social practice. Mutual argument is valid too: the network-organization perspective makes visible the features of networks in general. For example, the organization features are found in all networks. J. Gammack and S. Poon argue: „The four level of a virtual organization infrastructure (in descending order of hierarcy) are: collaboration, conversation, communication and connection" (Gammack J., Poon S., 2001, p. 216). In other words, social networks and organizations are organisms, communicational machines. Any communicational network is a relational machine. A relationship is a combination of a contact with a contract and connivance (Bressand, 1996, p. 113). The perspective created by Bressand and Distler is to make visible the movement from monolithic communication to network communication. The new communicational conformation occurs through the increasing of the relationship importance. Under the pressure of a relationship exceeding and making it only mere a component, the monolithic communication is devalued. The relationship connecting in network the monolithic communications rises above each and every one of the

communications. The new type of communicational relationship makes the network to function as a relational machine. In the network, relationship commands but not the monolithic communications. Communications are related here: they are in contact, in the contract and connivance (Vlăduțescu Șt., 2006, p. 39). Communication networks appear as "relational economies". The management of the network relationship is a management of communications which exactly through this management become monolithic. "The contact, Bressand A. (1996, p. 113) argues, is set in relation to information". It is the one that information technologies are realizing with efficiency greater than ever. "The contract may be implicit or explicit. It is most of the time a combination of the two forms", A. Bressand asserts (Bressand A., 1996, p. 113). The contract is "essential for communication". In the network, it becomes also complex. The penetration into the telephone network makes the conversational contract broader and more difficult to define entirely. To an interpersonal contract a contract between the subscriber and operator is added. In the television network, financed indirectly through advertising, "direct" contracts are automatically signed between the viewer and the advertiser. An additional contract is established through digital decoders which allow "pay per view". Contractual size of the network itself relies on a beam of contracts between broadcasters, software companies and media production industries. The third part of the relational triptych may appear as expendable, considering that relationship may be reduced to contacts and contracts. As a relational machine, a network has the function to trigger and rule, but not to manage the relationships crossing it. "There is no really network communication, A. Bressand accentuates (Bressand A., 1996, p. 114), unless the relational machine is based on common values and objectives and if it allows the interlocutors to deal with any contingency which the contract rules are not enough to master". In this respect, in any relationship there is a connivance, whether ephemeral or limited, a connivance without whom the relationship can not be a meeting of minds, a meeting of two or more wills, of two or more persons. On this third part relies the development of the Internet as a network of networks.

F. Capra emphasizes that social systems self-generate their communication networks: „Living social systems (...) are self-generating networks of communications” (Capra F., 2002, p. 93). In his book "Communication Power" (2009), Manuel Castells defines social networks as communication structures: „networks are complex structures of communication constructed around a set of goals that simultaneously ensure unity of purpose and flexibility of execution by their adaptability to the operating environment” (Castells M., 2009, p. 26). This definition of networks is natural in the context in which the fundamental thesis of the book, otherwise robustly argued, is: „Communication power is at the heart of the structure and dynamics of society” (Castells M., 2009, p. 41).

The nuclear idea is that communication is the foundation of the social networks. Social networks are, above all, communication systems with well defined and judiciously hierarchized structures. Within these, the agents (actors) have stated and

fulfill roles that the network itself generates. Whether like it or not, everyone in the world is part of many social networks. Current society itself is a network of networks. Manuel Castells believes that one can speak of a „network society” and that „network society is to the Information Age what the industrial society was to the Industrial Age” (Castells M., 2009, p. 12). The communication networks are circuits of transmitting significances. They consist of communicators and the communication relations between them. These cross over the personal relational universes of communicators. The communication networks are based on consistent, cohesive and unified communication relationships. A communication network is a functional system of generating, attenuating, articulating, mobilization and circulation of meanings. In relation to the geometric configuration of the communication circuit, the network may acquire different forms.

3. Types of “communication networks”

With Georg Simmel and F. Moreno as precursors, the scientific research of "communications networks" began in the 40s of the last century. Among the pioneers and founders in the same time are included Kurt Lewin and his student Alex Bavelas. Before 1950, Alex Bavelas had founded "Group Networks Laboratory". In here there have been initiated the well known investigation of networks on the experimental formula of groups of 5 subjects. A. Bavelas (1950) and his student Harold J. Leavitt accomplish the design of a taxonomy of networks valid until today. In order to study networks, H. J. Leavitt has formed 20 groups of 5 subjects and has given them certain tasks to achieve. By making radiography of how the 5 person group interacted, he has inventoried, as A. Bavelas had previously done, the "communication patterns" (Bavelas A., 1950, p. 725). The communicational interaction patterns have led H. J. Leavitt to the validation of 4 archetypes of networks. Although the groups of 5 were artificial, he has concluded that in the natural groups of 4 too appears the same prototypical set of four possibilities of configuring the network. The 4 found forms are: "chain", "Y", "star", "circle" (Leavitt H.J., 1951, p. 39). The two extremes are "chain" and "circle". The networks belonging to such types have opposite marked attributes: „the circle, one extreme, is active, leaderless, unorganized, erratic, and yet is enjoyed by its members. The star, at the other extreme, is less active, has a distinct leader, is well and stably organized, is less erratic, and yet is unsatisfying to most of its members” (Leavitt H. J., 1951, p. 46). The four archetypes are delimited as a tandem: "circle" and "chain" are horizontal networks, "Y" and "star" are vertical networks. In horizontal networks, internal relations are egalitarian. In contrast, in the vertical type, the functioning is hierarchical and organizational relationships are of subordination. The circle is the type of network in which democracy is at home. Here the leader is a facilitator of group activities and the members attend visibly free to achieving the tasks. The problem is that, as Leavitt argues, "circle" „showed no consistent operational organization” (Leavitt H. J., 1951, p.

42). The "chain" is an environment of the leadership style "laissez-faire". The vertical networks "Y" keep pronounced elements of democracy, but it works hierarchically. The most verticalized networks are of "star" type (they are also called "wheel"). They are the paradigm of authoritarianism and of a single person management. On the other hand, it is noted that horizontal networks, not robustly structured, are at risk of disintegration. Particularly, "chain" networks have major trends of operational disruption. Mielu Zlate calls the "star" networks "X" networks and he argues: "X network is typical for groups practicing an authoritarian leadership" (Zlate M., 2004, p. 509). In general, these prototypical, pure networks are rarely seen in the communicational environment. The configurations of the communication networks are in most cases mixed. Depending on the significant contents in the communicational network flows, some of the geometric networks have been renamed. Thus, a chain communication network is a sequence network. In such a network, a person belongs to two sequences: the acquisition sequence and the transmission sequence. If the node-person distorts the meanings (the message, the information), then he will become a barrier in the network. The "star" format is specific to highly hierarchized groups. Here is the pyramidal network. The pyramid networks are also called merged networks. A highly efficient network is the team type network. Within it the node-persons are interdependent and establish a mutual communication. In relation to the ethical foundation it may be spoken of "formal communications networks" and "emergent communications networks" (Monge P. R., Contractor N., 2003, p. 9).

4. Conclusions

The world today has become a network of networks and the actors whether state or non-state, are interconnected. Connectivity is a type of diffuse and extensive relation. It is a product of the development of information and technology. Connectivity is not only a network feature; it is also a purpose of it. An enhanced connectivity means more links and a higher potential for achieving connections. An actant or economic actor with such a profile is better placed in the market and has higher profits.

As Thomas Homer-Dixon argues, „our connected world has given us great benefits“, „greater connectivity allows companies larger profits, and gives society better ways to combine diverse ideas, skills and resources“ (Homer-Dixon T., 2005).

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THE DIGITAL DIVIDE: ICT DEVELOPMENT INDICES IN MEXICO

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Abstract: *The integration of Information and Communication Technologies (ICTs) to the manufacturing sector enables to reduce production, management and marketing costs, allowing achieve higher levels of competitiveness. In the social area, ICTs are tools of inclusion improving the provision of education, health and government services, as well as expanding its coverage area of these services. To achieve these benefits it is required a proper incorporation and adaptation of ICTs in the social area, as well as, the development of required ICT services, properly. In this work, we analyze the role of the digital divide in the information society, as ground for social exclusion in the use of ICT in Mexico. Afterwards, the behavior of the digital divide is analyzed, with its different dimensions through time, also describing the penetration and development levels of ICT. Moreover, the case of study of university students enrolled in Information Technology careers is discussed in order to determine the existence of a digital divide and its parameters. Finally, a diagnosis about the growth of the Internet and mobile telephony services in Mexico is carried out, considering the prevailing world economic situation.*

Key-words: *Digital Divide; ICT; Internet; Social Exclusion; Information Society*

1. Introduction

In recent years, Information and Communication Technologies (ICTs) have become the backbone for the efficient information management, encouraging the emergence

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