THE METAPHOR OF THE NETWORK AND ITS CONTEMPORARY CHALLENGES

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Abstract. *The network has become a dominant form of contemporary thinking, the constitutive metaphor being reinvented during the explosion of reticular techniques - the Internet and planetary telecommunications networks. It seems to draw the invisible infrastructure of contemporary society. The figure of the network tends to define the ways of thinking, being ubiquitous in all disciplines, from biology to sociology, from law to computer science, etc., because the hidden structure of the complexity of today's society is the network that dominates and shapes it.*

The current Romanian language is a faithful mirror of society, constantly searching for itself in terms of lexical identity. The word network comes from Lat. *rětělla, diminutive of rětis[1], having the meaning of "entanglement of thread, string, wire, etc., worked with large meshes; net, fillet"[2]. This definition of the network refers to the technique that highlights it, fabric manufacturing. Since mythology, webbing is observed as a weaving technique. There was a time when the notion predated the term web, the mythological use of the web metaphor representing the links the gods weave between the invisible Cosmos and the visible world, the web being "the invisible link between the visible places of the physical body". The net, having as its etymology the Latin retis, is composed of regularly interwoven threads, being a fabric with wide meshes used to capture certain animals. We must insist on the dimensions of the fabric, which implies the connection, and of the catch, which aims at control.

From the 17th century to the beginning of the 19th century, the notion acquired a figurative, metaphorical meaning, being applied to the analysis of the human body, especially the circulatory system, becoming "the visible place of an

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[1] Cf. it. *rezza,* abruz. *ritedda,* fr. *réseau* (A. Ciorănescu, *Dicţionarul etimologic român*, Universidad de la Laguna, Tenerife, 1958-1966).
[2] Dicţionarul explicativ al limbii române (ediţia a II-a revăzută şi adăugită), Academia Română, Institutul de Lingvistică, Editura Univers Enciclopedic Gold, București, 2009.

invisible organization"[3], being enriched with new dimensions: circulation and fluidity, its genealogy showing the close connection between body and organism[4].

In the 19th century, the bodily metaphor passes into the field of engineering, where, from the given network it becomes an artificial network, hydrological, telecommunications, transport engineers, as well as geographers, administrators, planners, politicians and sociologists realize the enormous perspectives that the application of the network notion opened them up in their respective fields, being increasingly used in everyday life. If the doctor observes it, the network being for him a living fabric, the engineer conceives and builds it, thinking of it as an organism, but becoming an artificial, constructed network, an artifact, an autonomous technique independent of the body. And now the network designates the place and intermediate link between continuous circulation and gridlock, between "a paradise of circulation and exchange and an inferno of control and surveillance"[5]. The history of sciences and techniques notes the deep reticular character of natural and social organizations, the general form of the network being born from the concrete problems that faced natural realities and social constructions, it serves to designate a great variety of objects and phenomena (roads , railways, etc.), the term enriching itself through the extension and sliding of overlapping metaphorical registers, thus progressively detaching itself from the concrete objects it originally named, denoting certain intimately related general properties: interweaving, but also control and cohesion, circulation, knowledge and topological representation.

Along with these uses, new ones have appeared, being popularized by the development of informatics and modern means of telecommunications, the term being used to designate the complex ensembles of virtual circulation paths, the Internet being designated by this very term of "Network" or "the network networks". To designate the relationships between people via the Internet, the phrase "social networks" is used, stripped of its pejorative meaning (originally, "the network" was a secret society, a clandestine organization, an occult power), the emphasis not being placed on individuals and attributes their individual, but on the relationships they maintain between them, which modify their individual

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[3] *Idem*, p. 33

[4] P. Musso, *La pratique des réseaux chez Saint-Simon et l'émergence d'un concept*, in *Télécommunications et philosophie des réseaux. La postérité paradoxale de Saint-Simon*, dir. P. Musso, Paris cedex 14, Presses Universitaires de France, « La Politique éclatée », 1998, pp. 31-67. URL : https://www.cairn.info/--9782130483977-page-31.htm

[5] P. Musso, *La symbolique du réseau*, in *Quaderni*, n°38, Printemps, 1999, Politique symbolique et communication, pp. 69-98. doi: 10.3406/quad.1999.1396 http://www.persee.fr/doc/quad_0987-1381_1999_num_38_1_1396, p. 71.

behaviors and thus contribute to the shaping of social structures.[6] The network concept allows the description of the social structure of a community. Thanks to nodes and arcs, networks can be illustrated graphically and abstractly.[7] Nodes can represent individuals, groups, families, collectivities, businesses, states, etc., while ties can represent flows of any nature, from information and resources to relationships involving respect, friendship, influence, power, dominance.[8] The best expression of the network is an image, and not a definition of it, which has led to its widespread use.

Descartes and the Body Metaphor of the Web

Still used by weavers, the term is taken over by doctors to designate and draw the blood system and the fibers that make up the human body. It is Harvey who explains the laws of blood circulation in the human body[9], developing the idea that blood circulates in the body in a closed circuit, a theory that contradicts previous medicine that considered that blood was produced by food, then was "consumed" and then evaporated in the form of sweat.[10] and not only, the discovery being all the more important as it forces the reconfiguration of the entire blood system. It is Descartes who tirelessly defends Harvey's thesis[11] which he integrates into his general conception of the human being, rejecting the old theory of pneuma or "breath of life"[12]. United with the body, the soul figures in a network. He acts on her and through her, but being conditioned by the passions[13].

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[6] The work of P. Mercklé, *Sociologie des réseaux*, Repères, La Douverte, Paris, 2011, revisits the founding works of network sociology and the social science scientific uses of social network notions.

[7] J. Pacotte, *Le réseau arborescent, schème primordial de la pensée*, Paris, Herman, 1936.

[8] H. Bakis, *Les réseaux et leurs enjeux sociaux*, PUF, Que sais-je ?, Paris, 1993.

[9] A. Cesalpino (1519-1603), in *Quaestionum peripateticarum libri quinque* (1571), is the first to speak of "circulation" to describe how blood moves (*Cesalpino and the Circulation*, Nova et Vetera, *British Medical Journal*, 23 March 1946, p. 436). It is Harvey who generalized the closed circuit scheme to the entire human body.

[10]Observation of blood flow is allowed by clamping the arm with a tourniquet, which shows us that it circulates repetitively. See http://animation.hepvs.ch/sciences-de-la-nature/images/stories/doc_cycle_3/demarchescientifique/dsharvey.pdf.

[11] Harvey is explicitly mentioned by Descartes, with the name Harvejus or Herveus. In *Discours sur la méthode* he says that "if we ask how the blood in the veins is not exhausted by flowing continuously through the heart and how the arteries are not filled (...) I need not answer anything other than what has already been written by a doctor from England, to whom we must give praise for breaking the ice in this regard and for being the first to reveal to us that (...) the flow of blood is nothing but a perpetual circulation". (*Discours,* V).

[12] Ch. Smith, *Descartes' Visit to the Town Library, or how Augustinian is Descartes' Neurophysiology?*, in *Journal of the History of the Neurosciences: Basic and Clinical Perspective,* Vol. 7, no. 2, 1998.

[13] It is, says Descartes, the "principal effect of the passions" which incite and dispose the soul to desire things for which they prepare the body.

This paradigm of the body-machine has the heart as its principle of movement, the body being conceived as a complex network of fibers that allow the continuous circulation of blood (even if the use of the term "network" is reserved by Descartes only for the analysis of the function of a certain area of the brain – the central U-shaped part of the brain – this network being described by him as made of wires and spaces between the center of the brain and the periphery of the body). But Descartes remains attached to the linear conception of knowledge, which develops regularly, gradually and directively, therefore mechanically and reversible.

Diderot and the ambivalence of the network

The one who goes beyond network theory in terms of points and lines is Diderot, drawing on the fibrillar theories of Haller and Bordeu and thinking the political in terms of links and flows, connection, control and circulation. The special status given to analogy by Diderot justifies the transition from the human body to the body politic and the treatment of the geopolitical starting from the reticular form. Even if he does not explicitly make a theory of the network, he inaugurates "the use of the potential and analogical richness of the network, its transferability in disciplines with historically divergent epistemologies that nevertheless tend towards a category of common understanding that translates a new vision about the natural and social order"[14].

In its political works, the network promotes the idea of an organization that regulates, making private and public interests correspond, by rebalancing the functions of some mediating courts within a configuration that is no longer hierarchical, but decentralized and fluid.[15] As in the body, which owes its integrity to the collaboration, consensus and equal distribution of competences and power of all its parts, in the case of his political theory the relations of dominance and obedience are erased in favor of multilateral exchanges between the rulers and the ruled.

Saint-Simonism and the Modern Network Myth

It is the Saint-Simonist school that will place the reticular metaphor at the heart of its thinking, which will ensure its fecundity, along with the success it has achieved. Saint-Simon's organicist vision of the network generates, through the multiplicity of relationships and the circulation of people, goods, capital, ideas, and knowledge, the grandest projects. Organization implies a certain solidity, and fluidity is necessary for life and exchanges. The social body is organized as a human body, political science being founded, thanks to the logic of the body-

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[14] E. Letonturier, *Le réseau mis en oeuvre : le Rêve de Diderot*, in *Flux*, no. 24, 1996. pp. 5-19, https://www.persee.fr/doc/flux_1154-2721_1996_num_12_24_1183
[15] *Ibidem*.

network, on a new religion, "New Christianity", which is achieved "in the work of associates applied to the whole planet, for the fecundation of nature with communication networks"[16]. The circulation of money in the networked society ensures the functioning of the social body, just as the circulation of blood in the body through the blood network is the condition of life. Good governance is the condition of social change, ensuring the transition to the hoped-for industrial system through a peaceful transition from the present to the future. The network is no longer just an operational concept (banking and financial networks, street networks, canals, sea lines, railways), but the vector of a philosophy, from the original topological dimension (fabric image) and the circulatory dimension (accepted by medicine), the network now signifies more than any free movement and any free communication, becoming the instrument of the collective good, through "generalized communication based on organized connectivity", becoming "the new mobilizing utopia of the social planner"[17]. With Saint-Simonism, the web reaches its culmination, with Michel Chevalier turning the web into an object-symbol[18]. The egalitarian circulation of money allows communication-communion and democratization, the network itself producing social change, being conceived as a technique that ensures connection and as a political-moral operator that ensures meaning, being identified with a social and democratic revolution.

The network becomes a symbol of universal association, but the transition from the domination of people to the association of brothers (Marxism) will only be possible with the development of communication networks.

The development of networks – the equivalent of a political revolution

The telecommunications network is, for the social body, the equivalent of the nervous network for the human body, its functioning ensuring its survival.[19] Industrial development and the steam engine enabled the invention of self-regulating mechanical networks (the telegraph, railways), communication techniques and the computer making self-organizing networks possible. These, as smart networks, moved from the pyramidal model of the hierarchical network of actors (broadcasting network) to the model of anarchic dispersion of actors (computer network), to end up in the switched telephone network, egalitarian and interactive image.[20]

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[16] P. Musso, *La symbolique du réseau*, *op. cit.*, p. 81,

[17] *La penseé saint-simonienne et les réseaux*, https://www.universalis.fr/encyclopedie/reseaux-philosophie-de-l-organisation/4-la-pensee-saint-simonienne-et-les-reseaux/

[18] M. Chevalier, *Lettres sur l'Amérique du Nord*, tom. II, Gosselin, Paris, 1836, p. 3.

[19] A. Toffler, *Les nouveaux pouvoirs ? Savoir, richesse et violence à la veille du XXIème siècle*, Fayard, Paris, 1991, p. 144.

[20] J.-L. le Moigne, *op. cit.*, pp. 180-182.

In contemporary society everything is networked, from transportation to energy, from telecommunications to IT, even human relationships (via Facebook and LinkedIn) have ended up becoming "networks". The network, as the explanatory structure of the contemporary capitalist system, constitutes "the new morphology of our societies"[21], converging towards a "meta-network of capitals"[22], as a new figure of power, the entire planet being caught in its web, which leads to the suppression of control state control of society and economy and the destruction of the sovereign nation-state through the destruction of hierarchies.

Conclusion

Metaphor appears as a strategic tool for the analysis of culture, an essential ingredient of its interpretation[23], giving transparency to the social, through the permanent game between manifest and secret by means of rational modes of visibility, initiating us into the presence of the perceptible as a constitutive excess of the visible on itself and trying to name the world in the unattributable moment of its appearance, for the phenomenal world is the site of an original metaphoricity.[24] If metaphors structure our ways of perceiving and feeling, they also have the power to produce a new understanding of things and thus to transform reality.

BIBLIOGRAPHY

Bakis H., *Les réseaux et leurs enjeux sociaux*, PUF, Que sais-je?, Paris, 1993.

Barbaras R., *Le tournant de l'expérience. Recherches sur la philosophie de Merleau-Ponty*, Paris, Vrin, 1998.

Castells M., *La société en réseaux. L 'ère de l 'information*, Fayard, Paris, 1997.

Chevalier M., *Lettres sur l'Amérique du Nord*, tom. II, Gosselin, Paris, 1836, p. 3.

Ciorănescu A., *Dicționarul etimologic român*, Universidad de la Laguna, Tenerife, 1958-1966.

Dicționarul explicativ al limbii române (ediția a II-a revăzută și adăugită), Academia Română, Institutul de Lingvistică, Editura Univers Enciclopedic Gold, București, 2009.

Dupuy G., „Réseaux, philosophie de l'organisation", in *Encyclopædia UNIVERSALIS*, t. 19, 1990. Le Moigne J.-L., „La mémoire du réseau: Tout s'écoule...et pourtant...", in *Information, culture et société: la montée des réseaux*, Actes du colloque international, Grenoble 9-12 mai 1989, pp. 173-185.

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[21] M. Castells, *La société en réseaux. L 'ère de l 'information*, Fayard, Paris, 1997, p. 525.

[22] *Idem*, p. 531.

[23] J. Molino, *Anthropologie et métaphore*, in Revue *Langages*, n° 54, Larousse, Paris, 1979, pp. 103-126.

[24] R. Barbaras, *Le tournant de l'expérience. Recherches sur la philosophie de Merleau-Ponty*, Paris, Vrin, 1998.

Letonturier E., *Le réseau mis en oeuvre: le Rêve de Diderot*, in *Flux*, nr. 24, 1996, https://www.persee.fr/doc/flux_1154-2721_1996_num_12_24_1183

Mercklé P., *Sociologie des réseaux*, Repères, La Douverte, Paris, 2011.

Molino J., *Anthropologie et métaphore*, in Revue *Langages*, n° 54, Larousse, Paris, 1979.

Musso P., *La pratique des réseaux chez Saint-Simon et l'émergence d'un concept*, in *Télécommunications et philosophie des réseaux. La postérité paradoxale de Saint-Simon*, sous la direction de P. Musso, Paris cedex 14, Presses Universitaires de France, « La Politique éclatée », 1998, https://www.cairn.info/--9782130483977-page-31.htm

Musso P., *La symbolique du réseau*, in *Quaderni*, n°38, Printemps, 1999, Politique symbolique et communication, http://www.persee.fr/doc/quad_0987-1381_1999_num_38_1_1396.

Pacotte J., *Le réseau arborescent, schème primordial de la pensée*, Paris, Herman, 1936.

Smith Ch., *Descartes' Visit to the Town Library, or how Augustinian is Descartes' Neurophysiology?*, in *Journal of the History of the Neurosciences: Basic and Clinical Perspective,* Vol. 7, nr. 2, 1998.

Toffler A., *Les nouveaux pouvoirs? Savoir, richesse et violence à la veille du XXIème siècle*, Fayard, Paris, 1991.