

A Forefather of Environmentalism – Lewis Mumford, the Critic of Technology and Civilization

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Abstract: Lewis Mumford was one of the most important forerunners of human ecology and environmental studies in the 20th century. He was not a specialist; he defined himself as a generalist who was interested in the whole spectrum of the problems for human existence. He investigated the relations of human communities and their environment from a historical perspective. According to Mumford's starting point human communities are in an organic adaptive relationship with their environment. This is an active adaptation through which they form their environment while they are being shaped by it as well. The values of a civilization are determined by the mode of this adaptation. Mumford strongly suggested that modern civilization based on nature-devastating technology has run into a deadlock but he was convinced about the chance of developing a new way of thought which is able to synthesize the results of the science based technology and organic worldview.

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Lewis Mumford's (1895–1990) life spanned almost the whole 20th century. In his autobiographies he defined himself as a generalist who was interested in the whole spectrum of the problems for human existence and investigated the relation of human communities and its environment from a historic perspective.¹ He belonged to the first generation of American cultural critics among such thinkers as Randolph Bourne, Van Wyck Brooks and Waldo Frank, but undeniable

¹ He wrote two autobiographies: Lewis Mumford, *Sketches from Life* (New York: The Dial Press, 1982); Lewis Mumford, *My Works and Days. A Personal Chronicle* (New York & London, 1979).

he was the most renowned of them.¹ The traditions of American republicanism and democratic populism and that of American transcendentalism supplemented with the works of Patrick Geddes, the Scottish town planner with his organic theory of history was the basis of the intellectual heritage which he drew on, but he was inspired by the thought of the Victorian romantic anti-capitalist thinkers, John Ruskin and William Morris.²

His life work contains somewhere about 30 books in which he dealt with the problems of technology, urban planning, history of literature and history of art, but he was one of the grounding fathers of ecological thought as well. In this contribution I would like to give a brief sketch about his ecology inspired cultural critique and critique of technology which strongly influenced the worldview of the green movement arising in the early seventies. To describe nature as a whole, as a complicated living order of different ecosystems and to see human race as a link in this great chain of being – these are the main motifs of green thought which were prefigured in the thought of Lewis Mumford.³

For describing the history of mankind Mumford applies notion-pairs opposing to each other: *mechanistic worldview* – *organic worldview*, *democratic and dispersed technology* – *totalitarian and centralized technology*, but perhaps the most known idea of his thought is *megamachine*. His philosophy of history is based on a special anthropology in which man is a being provided with two basic attitudes: the *will to power* and the *will to order*. In this conception Mumford tries to accommodate the theory of Nietzsche and that of the conservative sociological thought emerging from the second half of the 19th century that presented the man as a social being embedded in his/her social relations. This picture on man's inherent sociability was a reaction to the liberal anthropological view in which the human being is a self-contained entity that comes to contact with his/her human fellows on his/her own terms. So, the individual is the prime mover and society is a derivative phenomenon. Mumford vehemently discards this picture of man. In spite of his deep and persistent interest in the field of

¹ Casey Nelson Blake, *Beloved Community. The Cultural Criticism of Randolph Bourne, Van Wyck Brooks, Waldo Frank and Lewis Mumford* (Chapel Hill and London: The University of North Carolina Press, 1990)

² Herbert L. Sussmann, *Victorians and the Machine. The Literary Response to Technology* (Cambridge, Massachusetts: Harvard University Press, 1968)

³ To the problem of the structure of green thought see: Tim Hayward: *Ecological Thought. An Introduction* (Cambridge: Polity Press, 1994)

technology, he does not think the man to be exclusively a tool maker, a *homo faber*. Besides the ability for making tools and building a sophisticated technology, man is endowed with the ability for creating symbols and meanings. These abilities are in a complementary relation with each others: the process of humanization requires a balance between them. The dominance of technological abilities without symbol-creating ones paves the road to a mechanized barbarism, while the prevalence of symbol-creating ability isolates man from his/her outer environment. However, the value-structure preferred by a society is determined by its relations to nature:

“ Since value is integral to all human experience, a theory that eliminates value as a primary ingredient inevitable smuggles it back again by making sensations or impulses, as such, the seat of value; whereas value comes into existence through man’s primordial need to distinguish between life-maintaining and life-destroying processes, and to distribute his interests and his energies accordingly. Here lies the main function of reason: that of relating and apportioning the facts of experience into an intelligible and liveable whole.”¹

The Middle Ages economic, social and intellectual life was organized by an organic world picture – argues Mumford. The order of the universe was guaranteed by a transcendent God. Every entity of the universe – as it was in detail elaborated in Arthur Lovejoy’s seminal book² – was a link in the great chain of being extending from God through archangels and angels to animals. This cosmological model maintained a well elaborated hierarchy of values but this, as a consequence of complex economic-social-intellectual causes, became discredited at the end of the Middle Ages. This historical process according to the thought of Mumford was a historic loss because of the value-crisis involved by it.

Social mutuality was an essential element of medieval social practice – points out Mumford. He admittedly borrows this idea from Kropotkin’s theory on mutual aid. Mumford emphasizes that the Middle Ages gave way to a decentralized democratic technology of artisanship – this motif is borrowed from the romantic anti-capitalism of William Morris, thinker of the Victorian era. Mumford – preceding the later opinion of such historians of technique like Lynn White junior –

¹ Lewis Mumford, *Interpretations and Forecasts. 1922–1972* (New York: Harcourt Brace Jovanovich, 1972), 184–185.

² Arthur Lovejoy, *The Great Chain of Being: A Study of the History of an Idea* (Cambridge, Mass.: Harvard University Press, 1964).

describes the Middle Ages as a dynamically developing age in the sphere of technique as well.¹ The medieval civilization was in an organic relation with nature: it did not want to dominate or exploit it but tried to cooperate with it and to adapt itself to nature, to the conditions of its own habitat. This civilization thought itself to be the steward of nature and not the lord of it. Mumford in his undeniable idealized picture of the Middle Ages casts doubts to see this period *tout court* as the age of scarcity. Everything depends on how we define scarcity and abundance:

“Had this craft economy prior to mechanization, actually been ground down by poverty, its workers might have spent the time given over to communal celebrations and church-building on multiplying the yards of textiles woven or the pairs of shoes cobbled. Certainly an economy that enjoyed a long series of holidays, free from work, only fifty-two of which were Sundays, cannot be called impoverished. The worst one can say about it is that in its concentration on its spiritual interests and social satisfactions, it might fail to guard its members sufficiently against a poor winter diet and occasional bouts of starvation. But such an economy had something that we now have almost forgotten the meaning of, leisure: not freedom from work, which is how our present culture interprets leisure, but freedom *within* work; and along with that, time to converse, to ruminate the meaning of life.”²

The highest merit of the Middle Ages, according to the theory of Mumford, was that there was no chance for the construction of the *megamachine*, i.e. a centralized technological complex exploiting man and nature. But this situation, as a consequence of cumulative technological, social and intellectual changes, was replaced by another set of constellations. In his book entitled *Technics and Civilization* (1934) he gives a technology-centred division into periods of modern civilization. The first phase was the *eotechnic period* between the 10–17th centuries, with the water mill and wind mill as its main sources of energy; the second was the *paleotechnic period* between the 17–19th centuries, with the steam engine as its peculiar power machine, the third one is the *neotechnic age* emerging at the end of the 19th century onward, with electricity as its main source of energy. However, this triad

¹ Lynn White Jr., *Medieval Technology and Social Change* (Oxford: Oxford University Press, 1963)

² Lewis Mumford, *The Myth of the Machine. The Pentagon of Power* (New York: Harcourt Brace Jovanovich, Inc., 1970), 138.

resembles the Hegelian one of thesis–antithesis–synthesis¹. The thesis is the eotechnic period in which the dominant factor is the decentralized, nature-friendly technology of artisanship; the antithesis is the paleotechnic period in which emerges a centralized nature-devastating and man-exploiting technological complex, the modern megamachine based on the association of steam-power and nation-state. The synthesis is the neotechnic period in which emerges a historical chance for synthesizing the democratically structured premodern artisanship with the modern electricity based decentralized technology and for the transformation of mechanistic world-view into an organic one.

One of the main questions for Mumford concerns what a machine is. The identification of the machine with the technological devices, which were invented in the industrial revolution of the 18th century and which constituted its typical technological complex, is misleading because it neglects the technical achievements of premodern civilizations – declares Mumford. Hence, he proposes an ecological definition of machines:

“Machines have developed out of complex of non organic agents for converting energy, for performing work, for enlarging the mechanical or sensory capacities of the human body, or for reducing to a measurable order and regularity the processes of life. The automaton is the last step in a process that began with the use of one part or another of the human body as a tool. Behind the development of tools and machines lies the attempt to modify the environment in such a way as to fortify and sustain the human organism: the effort is either to extend the powers of the otherwise unarmed organism, or to manufacture outside of the body a set of conditions more favourable toward maintaining its equilibrium and ensuring its survival.”²

However, what does organic worldview mean for Mumford? In his thought this notion can be defined as one which is totally opposite to the mechanical worldview being in a dominant position between the 17–19th centuries. The proponent of organic worldview does not interpret reality as a randomly existing conglomerate of entities. His/her approach is a holistic one. Organism living in its own habitat is the basic unit of reality. Organism is unable to survive without an adaptation to other

¹ To this problem see: Georg Wilhelm Friedrich Hegel, *Lectures on the History of Philosophy*, translated by E.S. Haldane (Lincoln: University of Nebraska Press, 1995).

² Lewis Mumford, *Technics and Civilization* (London: George Routledge & Sons, Ltd., 1934), 9–10.

organisms in the same habitat which is a complex coexistence of these organisms. There is a complicated equilibrium between organisms. They are not able to survive if they deplete the finite natural resources of the habitat and turn down this sensitive equilibrium. The adaptation of human race to its environment is an active adaptation and not a passive accommodation to the ready made living conditions as in the case of other biological species. Nature is a self regulating whole and the equilibrium of it is a dynamic one. In case of the ascendancy of a species to the detriment of others the processes of self correction are able to regenerate the disintegrated equilibrium. The human species does not passively accommodate to the circumstances but actively transforms its habitat, i.e. the Earth. The means of this transformation is technology. Mechanistic worldview approaches nature mechanically, i.e. sees it as a tank of separately existing entities without natural embeddedness connecting them into a living whole.

Conclusions

The arising of modernity in the 17th century was determined by the dominance of the mechanistic worldview represented by philosophers such as Francis Bacon and René Descartes. The philosophies of early modernity describe the universe as clockwork, which had been construed by God and runs according to its own laws. In this mechanistic worldview, man and nature are in opposition to each other. Man lives outside the nature and not in the nature as a part of it. Nature is not nature any more; it is an outer entity for man: an object which stands opposite to the man. Mumford believes, there is probably no other phrase that encapsulates better this attitude of early modernity than Francis Bacon's well known one: 'knowledge is power'. Power here means dominance over nature. Nature is object of exploitation and source of raw materials and not a habitat without which man is unable to survive. The inventions and technological devices produced by science-supported modern technology are sets of sophisticated and useful means but are not ends in themselves as they are presented in the distorted perspective of modern civilization. Science is unable to serve the ends which are indispensable for good life. We cannot acquire these ends by the help of modern techno-science. Science must serve the ends of human communities; but it is the value-system of a given community which has to set up these goals. But what about these values? What can Mumford say about the process of generation of this value-system? The first task is the elimination of the tragic split between reason and

emotion, between science and art, between local and universal and, at last, between humanity and nature. Science is a very shrewd, diligent and useful servant, but its service must lead to solving the problems of local communities and not for the realization of abstract universal goals. The main failure of modernity, Mumford argues, is substituting the idea of good life for the idea of goods' life.

In his first book entitled 'The Story of Utopias' (1922) Mumford highly appreciates utopias, his epigraph on the first page below the title is next: 'A Map of the World that does not include Utopia is not worth even glancing at...'. The concluding idea of this book is that we need not a universal utopia which automatically redeems the whole humankind, but many local or regional utopias which are incorporated in the network of little organic communities. The latter ones maintain a well-balanced relation with their natural environment, Mumford writes, anticipating an idea that would later become the main tenet of the green movement:

"The inhabitants of our eutopias will have a familiarity with their local environment and its resources, and a sense of historic continuity, which those who dwell within the paper world of Megapolis and who touch their environment mainly through the newspaper and the printed book, have completely lost. (...) The chief business of eutopians was summed up by Voltaire in the final injunction of *Candide*: Let us cultivate our garden. The aim of the real eutopian is the culture of his environment, most distinctly not the culture, and above all not the exploitation, of some other person's environment. Hence the size of our Eutopia may be big or little; it may begin in a single village; it may embrace a whole region. A little leaven will leaven the whole loaf; and if a genuine pattern for the eutopian life plants itself in any particular locality it may ramify over a whole continent as easily as Coketown duplicated itself throughout the Western World."¹

This train of thought reflects an interesting ambivalence in Mumford's worldview. On the one hand he rejects the abstract, generalized kind of utopias, and on the other hand he proposes the local utopias which are tailor made to the concrete needs of concrete places and people. This conception conforms to the mainstream of his thought which always prefers concreteness to hollow generalizations.

¹ Lewis Mumford, *The Story of Utopias* (London–Calcutta–Sydney: George G. Harrap & Co. Ltd., 1923), 305–306.