

## Edgar Morin on Evolution of Complex Systems

Edgar Morin (1921-) is an eminent French sociologist and philosopher whose transdisciplinary work integrates science, philosophy, sociology, politics, as well as cybernetics, information theory and systems theory. He theorized *la pensée complexe* (complex thought), a transdisciplinary way of thinking which weaves together all realms of thought and in which the word “complex” is to be understood etymologically as *complexus*, meaning ‘*what is woven together in an intertwined entanglement*’ (*plexus*).

*La Méthode*, his major work comprising six volumes in total, discusses the topics of nature on nature from a physical point of view; life on life from a biological point of view; knowledge on knowledge from anthropological and societal points of view; the life of ideas, which he calls ‘*noologie*’; the notions of the language of philosophy and the logic of paradigm; and the concept of human identity and ethics.

Professor Morin’s distinctions include: *Directeur de recherche émérite* of the *Centre national de la recherche scientifique* (CNRS), *Président du conseil scientifique* of the *Institut des sciences de la communication* of the CNRS, and President of other organisations such as the *Agence européenne pour la culture* (Unesco), the *Association pour la pensée complexe* and the *association La Voix Du Net*. He has been awarded *honoris causa* by fourteen international universities and has authored over thirty books and hundreds of papers.

Edgar Morin is an Honorary Member of the Club of Budapest Foundation and he has worked closely with Ervin Laszlo for many decades.

**Gyorgyi Szabo (GS):** Professor Morin, your philosophy rests upon the notion of systems theory, which explains that all objects in nature are composed of systems and interact in a specific way. You talk about system complexity and a sense of connection between the internal parts of a system and the external

connection between systems. What is that particular sense or type of connection within a system and how does connection bind unity with diversity?

**Edgar Morin (EM):** It depends on the types of systems. With physical systems, the interesting phenomenon is that the association, which organizes diverse elements produces new qualities, which are emergences and which may inhibit qualities that are specific to the isolated elements. But in the living systems, and in the human and social systems of course, the connections between the parts are a lot more complex. For instance, take a human society: we find both complementary relationships, obviously, and antagonistic relationships of competition and rivalry.

The Germans say *Gemeinschaft* for 'community', and *Gesellschaft* for 'elements of society'. I think a nation, for example, is a mix of both *Gesellschaft* and *Gemeinschaft*. When the nation is at war, *Gemeinschaft* is more important. When people from the same country meet abroad, they perceive this *Gemeinschaft* feeling much more strongly. In everyday life, different levels of relationships may interact, as a mix of the *Gemeinschaft* of the family, of the political party, of the nation, etc.

The problem comes from the fact that antagonism is always present, that we may try to regulate it but it never goes away.

Deep down, the problem of unity and diversity lies in their inseparability. When we acknowledge the unity of the human genre, which is a plain evidence on a genetic, physiological, anatomical, even emotional level, we can see that this unity manifests itself through differences, in individuals, in cultures, languages, etc. Unity produces diversities, and diversities, to my mind, when they isolate themselves from unity, produce nationalist or religious fanaticism, for instance.

The link between unity and diversity is inseparable, which means we must always save unity within diversity and save diversity within unity.

**GS:** In your view, what are the emergent qualities of a system?

**EM:** The emergent qualities of a system depend on the elements and organisation of that system. If we look at, for example, an organization of

macromolecules, which we call the 'living organisation', we can see it has the qualities of life, reproduction, reparation, knowledge, etc. Each system has its own emergences according to its specificities.

**GS:** When a system of any kind is unable or lacks the capacity to overcome its fundamental problems, it either disintegrates and regresses or it reproduces new properties and reintegrates for change to survive. Such change is a sort of metamorphosis, which is, as you said, a continuity and transformation. How would you explain the evolution of complex systems? What do you mean by this in terms of society as a complex system ?

**EM:** In fact, when a system is unable to overcome fundamental problems, it enters a crisis. What is a crisis? It is a systemic accident, which renders the system incapable of regulating itself normally and of eliminating deviance which could disintegrate it. With a physical system, this leads to disintegration. With a human or social system, there are three possible outcomes: either a return to *status quo* – nothing changes; or a regressive solution – a lot of complexity is lost; or a progressive solution, which is the discovery, invention or creation of a new complexity, of a new organisational factor which allows the system to transform. Nevertheless, if the crisis lasts a long time, is very brutal, then either destruction or metamorphosis is possible.

**GS:** Some people adhere to a worldview, which views individuals as separate from each other and the universe. Do you think that this notion of separation created our current crises in the world?

**EM:** It is quite obvious to me that we find ourselves in a contemporary Western civilization where weakening solidarities and communities have produced stronger individualism, which has positive sides as it allows for more autonomy, and negative aspects as individuals tend to retract over their own egoism. This is a very serious problem and I believe we really need to build more solidarity not only nationwide but worldwide, for all humanity.

In truth, everything, which is separated in the universe is at the same time non-separated. This is easily verified at the quantum level, and we can also admit it is a wider reality. Individuals in society, for example, are separated, but then they are not, they are part of a bigger whole. Individuals of a biological species such as the human species are separated, but there is continuity, a non-separation. One can't envisage separation as an absolute.

On a social level it is obvious that separation is a big danger and does a lot of damage.

**GS** For many decades, you and Ervin Laszlo have been drawing attention to the dire state of our planet and our world in crisis. We face ongoing challenges in the economy, ecology and business and we are possibly heading towards the brink of major catastrophes. You both explained before that humans are products and producers of society. I am in society, and society is in me. Buddha and Jesus Christ introduced new ways of thinking and living. Do we need another Buddha or Jesus to change humankind's way of thinking and living in order to solve humankind's problems? What can society or an individual do to overcome local and global problems? Are there limits to humans' power of decision-making?

**EM:** Neither Buddha nor Jesus has had analogues. Each one delivered a very crucial message and I think even today what is important in their messages should be revived. It is quite obvious that the message of universal compassion brought by Buddha is very important and that the message of universal brotherhood given out by Buddha is just as important. But nowadays, these values have become secularized. We can advocate fraternity even if we don't believe in religion. We can believe in compassion even if we are not Buddhists; we take this message within us and we transform it.

I believe the role of eminent personalities is necessary to renew these messages according to the dangers humanity is facing today. That is the big problem! Jesus lived in the world of Palestine, Buddha in India! We are now all together in the same crazy adventure. A humanist message is necessary. Already a lot of people say so but their action is limited: people such as the Dalai-Lama, Mandela in South Africa, even Laszlo and I are trying! But obviously it would be great if

someone rose, not a prophet in a religious sense but a 'messenger' someone who knew how to raise awareness amongst people to do what is needed – save humanity.

A pessimistic point of view would say that this world is lost because there is no savior, but one can't artificially create a savior. I believe great minds will play today a universal role.

**GS:** Creativity of life or creation of life, which one do you believe in?

**EM:** I am for creativity of life. I am, because I can witness it in the way, for example, wings appeared in insects, reptiles, mammals, in the evolution of the heart, of the brain... The evolution of life is creative. Furthermore there is creativity in humanity. I believe this world has created itself and has self-evolved in a very mysterious way, but the notion of 'creator' is too external to this world. I think we ought to say, like Spinoza, that creativity is in nature and not that nature was created by an external architect.

**GS:** In your view, what is unique about Ervin Laszlo's philosophy? Do you agree with his concept of the Akasha Paradigm?

**EM:** From my point of view, Laszlo's philosophy has something very specific: the Akasha paradigm. I agree entirely with Ervin Laszlo's conceptions; I believe his role is very important and I help him whenever I can. The question of the Akasha paradigm remains to be studied. There is, as in David Bohm, an idea of something unspeakable, that can't even be conceptualized, that classical reason is unable to conceptualize. I believe there is in the Akasha paradigm a vision of this 'thing', which lies at the core of everything. But I would have to discuss it with him!

**GS:** What do you think about the evolution of complex systems? How do you understand it?

**EM:** The complexity of evolution comes from the fact that evolution is never linear. How does evolution happen? It starts with a creative deviation, which, if

not muzzled, will develop, have disciples, become a trend. This trend may become a historical force. In other words, evolution always starts with a deviant event. Buddha and Jesus for instance were two deviants in their own societies. In fact, they had problems because they were deviant. Take Islam as well – Mahomet was a deviant –, or modern science, which arose as a deviation of theology. Capitalism was born as a deviation of feudal societies; socialism is its turn... Complexity is that there is no linearity. Complexity advances with trial and error, risks of failure, uncertainty, and also with a lot of creativity!