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# Edgar Morin and the Rhuthmoi of Information - Part 3

- Recherches
- Le rythme dans les sciences et les arts contemporains
- Linguistique et théorie du langage



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## Towards a *Rhuthmic* Theory of Information?

From a rhythmological viewpoint, Morin's doctrine of information was much more elaborated than the one we found in Serres' study on Lucretius (see above chap. 4). We remember that when Serres faced language and art, he vaguely alluded to a most questionable physical theory of "sound vortices" emerging from the "background noise" and banally confused poetry with music, as well as rhythm with music. Although he rightfully asked the question: "Why is this text on physics a poem, why did Lucretius, writing it in Latin for the first time, write in verse?", his answers was remarkably weak and, most surprisingly, had no relation whatsoever with the wonderful re-discovery of Lucretius' *rhuthmic* thought he had accomplished hitherto. In other words, due to his ignorance both of Humboldtian linguistics and Aristotelian poetics, he resumed with Aristoxenus' metrics, whereas he had been on the opposite side for the rest of his study.

In comparison with Serres' *Birth of Physics*, *Method* presented a much larger *rhuthmic* worldview. It extended the physical *rhuthmic* paradigm revealed by Serres not only to the modern world but also to biology and, last but not least, to information theory.

We have noticed, when discussing the concepts of system/organization/machine, that Morin correctly recognized Saussure as one of the founders of a systemic theory based on the radical historicity of language and consequently of man and not, as it was most common in his time among structuralist thinkers and even beyond, of a theory of language as an almost immobile and coercing set of structures. In the second part, he also noticed, without yet mentioning Austin nor Benveniste, that what he called the language-machine "functions only when there is a speaker [...] possibly causing actions and performances." With great insight, he underlined both the *pragmatic* and *poietic* qualities of the language, whose constitution was, he claimed, "*the great revolution of hominization*." In the third part, he also rightly insisted on the significance of Martinet's concept of universal "double articulation" in human languages.

As we saw in analyzing his critiques of cybernetics and communication theory, or his discussion of the genetic and ecological implementation of life, the same noticeable intuition allowed Morin, in the third part, to regularly point towards thinkers belonging to the linguistic and poetic *rhuthmic* paradigms, such as Humboldt, Benveniste, and Meschonnic. As I already mentioned, these linguists had shown that language was not a treasure of words, a set of grammar rules, or in more modern terms, only a phonological structure combined with syntactic rules, but primarily an *activity*. They also insisted on the *creativity* that was involved in this activity: the language was not only flowing, it was also expanding the humans' world. It was not a tool-box but a creative power that allowed to think, express feelings, interact, give orders, thank each other, perform social tasks, etc. (Michon, 2010a).

Similarly, in his critiques of cybernetics and communication theory, Morin contended that information was an *activity*, that it was always *strategically actualized* according to the pragmatic situation, and that it was not only a transfer of data but was *creative*, that is, *expanding and complexifying* the sphere of existence of the living. Correspondingly, in his discussion of the genetic and ecological implementation of life, he insisted on the *creativity* and the *pragmatism* of the information process. The communicational process supporting life, both on genetical and ecological levels, was *strategically* and *creatively* addressing the conditions and perturbations of the environment.

It is true that, in both instances, Morin drew mostly his inspiration from the latest ethology, genetics and neuroscience, but if we look closely at the way Morin concluded this ultimate line of argument, we observe again a significant, if unconscious, proximity with the linguistic and poetic *rhuthmic* paradigm.

Following the previous discussions, Morin developed a critique of the age-old concept of sign, that closely replicated that elaborated in the wake of Humboldt's revolutionary work by Saussure and Benveniste. Since they were involved in larger "organizational competences," the nucleotide signs inscribed in the DNA were not only *re-ferring* to the "production or reproduction of real processes" as "the word cat evokes the being cat" (p. 331); they also carried out *re-starting, re-production, re-organization*. They contained a genuine genetic power that made them fundamentally different from mere designative tools. In other words, they were firstly parts in a pragmatic enterprise, and had, only secondarily, some referential functions.

Consequently, the sign appears to us as *guardian (engram) and source (program) of organizational negentropy*. Therefore we can read information only in the dynamic of the RE-starting, of the [RE-production], of the RE-organization. It is present at each instant, active in each operation, without however being consumed or wasted, since it remains engrammed, and it can serve indefinitely, that is to say in a way indefinitely multiplied. (*Method*, vol. 1, 1977, trans. J.-L. Roland B elanger, 1992, p. 331, my mod.)

These views were much more consistent, Morin noticed, with what we know, since Darwin, about the evolution of species. Due to random variations of its genetic patrimony but also to its singular experience, each individual does not strictly reproduce a "model" or "an intemporal and general mold" but introduces small informational differences. In short, "informational generativity creates alterity in identity."

Thus, the new being is formed in rebeginning [...] even identical, it is different because its informational patrimony has undergone, in the course of reproductions, random variations, and because this individual is living a singular phenomenal experience according to a self-referent logic; by that fact, it is distinguished from its begetter as its begetter was distinguished from its begetter. Through reproduction, therefore, informational generativity creates alterity in identity, identity in alterity. (*Method*, vol. 1, 1977, trans. J.-L. Roland B elanger, 1992, p. 333)

But this was not all. In a remarkable section entitled "Generative Mnesis," Morin joined once more with the other trend of thought that had been reemerging, along with the development of the Humboldtian linguistics, at the end of the 18th century and in the second half of the 19th century: the Aristotelian poetic paradigm (see Michon, 2018b, chap. 3, 4, 8, 9).

Morin strikingly compared the informational aspect of the reproduction process of life to a "rememoration" of "what ha[d] already been played."

*Everything happens as if the chemistry of rebeginning obeyed an alchemy of rememoration. Once again, we are no longer in the "digital" framework of programmatic instructions; we are also in a sort of analogical or mimetic [re-play] of what has already been played. (Method, vol. 1, 1977, trans. J.-L. Roland Bélangier, 1992, p. 334, my mod.)*

A few lines below, he concluded, in the same spirit, that "the generative informational apparatus [...] preserves, translates, reproduces, *re-presents*" the past (p. 334).

One familiar with Ancient Greek philosophy will immediately here recognize the very terms used by Aristotle to describe the ethical and political power of poetry through "*mimesis* - re-presentation" of life, which similarly did not mean sheer reproduction of a model but properly a *re-invention* of the past *opening new paths* for humans' life (Michon, 2018a, chap. 3).

It is as if the best theoretical tools to address the particular way of flowing of the indivisible bundle composed of information and life were not the traditional nor the more modern theories based on the concepts of signs, code and combination, but either those intuitively induced from the latest *rhuthmic* theory of genetic of evolution and neuroscience, or those borrowed from marginal forms of linguistics and poetics based on the observation of the fundamentally *rhuthmic* nature of language or literature. Although Morin did not elaborate on it, this association is worth noticing because it resumed with a very few attempts at bridging the divide separating, since the Antiquity, the Aristotelian poetic paradigm and the Democritean physical paradigm of rhythm. Contrary to Serres, in these few pages, Morin luminously continued Diderot's and Goethe's endeavor (Michon, 2018a).

## On Some Limitations of Morin's Information Theory

Naturally, Morin's evolutionary theory of information had also some significant limitations that should be clearly identified.

Most of his intuitions pointing towards the linguistic and poetic *rhuthmic* paradigm were not fully elaborated and lacked theoretical bases. Compared to his scientific knowledge, which was rich and articulate, Morin's knowledge on theory of language and art was most often insufficient and sometimes even simplistic. To name only a few, Saussure was quoted only twice in *Method* vol. 1, Austin and Benveniste were spectacularly absent, Jakobson and Meschonnic never mentioned. Even when he recognized the significance of Martinet's concept of universal double articulation, he did not realize that the key point in this instance was not the concept of difference itself but that the difference was based on distinctive units of *sound*. He entirely missed the sonorous part of the double articulation, and consequently according his very own criterion of the whole language.

It is of no surprise then if, like Serres, he sometimes merely put the theory of language in line with a technical theory of noise borrowed from Shannon. Language was, he claimed, the ultimate "informational machine" that had emerged from noise. This might be not untrue but it told nothing about language itself, except that the latter was meaningful instead of senseless, organized by articulated speech sounds instead of sheer noise. Such platitude provided no usable theory.

Morin's critique of cybernetics and Shannonian communication theory was itself limited by the comparison he used with the physical debate on light between "corpuscular" and "undulatory" theories. This argument was efficient in debunking the reduction of communication to an exchange of binary signals or bits. However, it functioned, with respect to language, more as a metaphor than as a real alternative theory. His suggestion of a "dialogic between digital and analog" was quite unclear and had, as a matter of fact, eventually no linguistic or poetic counterparts.

Perhaps the most important limitation of Morin was linked to his conviction that "information" could become the master-concept that could bridge *physis*, life, and the socio-anthropological sphere. But the very relationship between information and language presupposed by this idea was utterly inconsistent: on the one hand, Morin recognized that language was necessary to define information, that it fully supported its meaning power, but on the other hand, he

treated language as a limited part of a larger ensemble which not only covered all "exchange of information" from the earliest proto-biotic machines, but which also currently encompassed the language within a higher and bigger system.

This fundamental inconsistency had recurring negative consequences that appeared, for instance, when Morin reproached cybernetic and Shannonian theories of information for not taking account of the "anthropo-social meta-system" in which, he argued, information "takes meaning."

There appears here a deficiency which I will come back to further on: *the Shannonian theory of information hides the anthropo-social meta-system which it supposes and in which it takes meaning.* (*Method*, vol. 1, 1977, trans. J.-L. Roland Bélanger, 1992, p. 308)

If Wiener's or Shannon's presupposition of a meaning system independent from any anthropo-social framework was certainly naive, Morin's own presupposition concerning the status of the language was no less debatable. It ignored the power of the language to *institute* society, as well as the *reification* by sociologists of their own subjects of study induced by this very ignorance. Yet, only a few years before, Benveniste had convincingly shown that language is not a mere "institution" of human society among others, and that it should be considered as the fundamental basis of all human organizations (Benveniste, 1968 and 1969 in 1974, Michon 2010a, chap. 6).

Similarly, he reproached most communication theories for bracketing the "noological sphere" that is, as he himself put it, the "lastborn" and most complex "form of organization" comprising "a set of spiritual phenomena" such as "ideas, theories, philosophies, myths, phantasms, dreams" (p. 345).

This evolution from matter is in fact the evolution of organization, which is going to continue, after the living cell, with organisms, societies, and, lastborn, ideas, noological forms of organization... (*Method*, vol. 1, 1977, trans. J.-L. Roland Bélanger, 1992, p. 135)

This argument was again as efficient against any simplistic reduction of information to a mere technical issue as inefficient concerning the question of the actual relationship of "ideas, myths, phantasms, and dreams" to language. It was as if the former could exist without any support from the latter, without never being spoken. It unsurprisingly ended up by mistakenly reducing the linguistic, poetic, and artistic spheres to a "noological sphere." As in the most traditional Idealist theories, art, poetry, and discourse were, according to him, primarily dealing with ideas.

Finally, we remember that Morin many times emphasized the fundamental dynamism of the cosmos and that he even started the second part of the book with a section entitled: "In the Beginning Was Action." "*Physis* is active, he claimed, the cosmos is active." (p. 153). But this actually meant dissolving *language pragmatic* into a much different *ontological pragmatism* [1]. In Morin's view, which was not that different from Serres' or Deleuze and Guattari's, language was considered only secondary to energy, force, and action. An elaborate link was severely missing that could explain how sheer energy, force and action could have resulted in double articulation of speech sounds, flows of meaning, culture, poetry and art. The ultimate layer in Morin's evolutionary theory remained entirely mysterious. The physical *rhuthmic* paradigm was still ignoring, at its expense, the poetic *rhuthmic* paradigm.

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Morin is best known for his contribution to a new kind of "complex" epistemology that was critical of "the fragmentary and reductionist spirit" of the mainstream "scientific enterprise" and that advocated a "radical reformation of our organization of knowledge" involving "recursive thinking" and "feedback loop between terms or concept." In a short presentation of his "ongoing reflection" published in 1992, he himself insisted on this point. ("From the concept of system to the paradigm of complexity," *Journal of Social and Evolutionary Systems*, Vol. 15, Issue 4, 1992, pp. 371-385)

1. Yet, as far as we are concerned, Morin's work appears in a somewhat different light. Although he never mentioned the term rhythm, we have gathered sufficient evidence that he rightfully belonged to the rhythmic constellation which briefly illuminated the heavens of the 1970s and early 1980s. As a matter of fact, with Barthes' first lecture course at the Collège de France on idiorrhythmy, and Serres' essay on the *Birth of Physics*, Morin's *Method* certainly made 1977 as significant a year for the rhythmic paradigm as 1966 had been for Structuralism.

2. In this constellation, *Method* was clearly located not far from Serres' essay but introduced new concerns. By contrast with Lefebvre, Foucault and Barthes, who had mostly explored ethical, social, and political issues at the expense of the ontological, physical, and epistemological ones, but also with Serres, whose interest in the latter had resulted in neglecting the former, Morin indicated a middle way. Although he was by training a sociologist, since the beginning of the 1970s, he had turned his attention towards natural science and technology, and had determinedly aimed at overcoming the divide between natural and social science. In Morin's opinion, new progress could be made only by introducing into the latter notions borrowed from physics, life science and information theory, such as "retroactive loop," "complexity," "self-organization," "emergence," etc., but also, conversely, by introducing into the former historical, social and cultural concerns, that could not be any longer left out since the observation of nature directly depended from the human complex machines called "societies" and "cultures." Naturally, due to the usual resistance to innovation of established intellectual and institutional positions, this move was not acknowledged by his contemporaries who, most often, considered Morin, not without contempt, as both a "pop sociologist" and a mere "popularizer" of hard science.

3. Like Serres', Morin's work strongly suggested the possibility of shedding the *metric* paradigm, which was dominant in classical science, and replacing it with a comprehensive *rhuthmic* view of the universe from its very beginning in the *big bang* to its ultimate, expanding and complexifying forms. This view, which capitalized this time on the latest knowledge in physics, biology, and social science, described the universe as based on "recurring loops," "generativity" and "event-ness." Everything, even scientific knowledge and thinking practice, was swapping between order and disorder, forming and deforming, emerging and disappearing. Ontology, physics and space-time theory, theory of becoming, as well as theory of knowledge, all described a *rhuthmic* worldview.

4. Unlike Serres, though, Morin developed, based on this cosmological and epistemological foundation, a full-fledged *rhuthmic* theory of individuation and self. To describe individuation, he substituted the motionless concept of "system," which was ubiquitous in modern science, with concepts of his own such as "active organization" and "machine," which implied the notions of "generativity" and "creativity." Consequently, contrary to Lefebvre and Foucault, who considered the self mostly as structurally determined, he described the self as the flowing principle that allowed an "active organization" or a "machine" to maintain its being through time in a particular environment, through adaptive, strategic and creative behavior, and that simultaneously resulted from this adaptive, strategic and creative behavior. This move allowed him to outline a *rhuthmic* ethics and even some elements of a *rhuthmic* politics, that were quite close to Barthes'. While Barthes envisaged a social group even if it was a limited one in which everyone would be able to freely chose the way his or her life flows, that is, to reach a real "idiorrhythmy," Morin suggested a "homeorrhhetic vision of modern society," that is, a dynamical system that would maintain its trajectory while being "simultaneously open, creative, and self-regulating," in other words a society whose "steady flow" would not impede the possibility for individuals to diverge from it or even oppose it.

5. Finally, by contrast with Serres but also with Lefebvre and Foucault, Morin was able to develop a theory of "information" which started substituting the most common structuralist views drawn from the phonological model, with a more adequate *pragmatic* and *poietic* perspective. The "information" that circulated within and between the living "machines" could not merely be split down into signs and interpreted through code and combination rules. It was always *performed* within an environment and this pragmatic nature of information already implied that it was endowed with a certain degree of adaptation and even creativity. Even better, when during performance a living machine was using memorized information, whether of genetic, linguistic or poetic nature, it never merely reproduced it but it *re-invented* it, opening thereby new paths for its life. These views drew him quite close to the *rhuthmic* linguistics and poetics that had been developing since the end of the 1950s.

On the other hand, paradoxically, Morin was and remained eventually totally unaware of the multiple reemergence of the *rhuthmic* paradigm.

1. He not only ignored the innovative practices and theories introduced since the mid-19th century by artists and theoreticians such as Baudelaire, Hopkins, or Mallarmé (Michon, 2018b), or even philosophers such as Bergson or Whitehead (except in a very few instances), but he also paid no attention to the more recent linguistics of discourse and poetics of rhythm developed by Austin, Benveniste and Meschonnic. Contrary to Barthes and Serres, in his own twisted way, or as we will see now Deleuze and Guattari, who had recognized the great significance of the concept of *rhuthmos* revealed by Benveniste, Morin took no notice of a contribution that could have supplemented the physical and biological views he had so clearly synthesized and, in particular, helped him to overcome the obvious shortcomings of his own information theory.

2. Morin wrongly believed that he had covered the whole range of modern scientific knowledge. Even though it was already a remarkable achievement, he had "only" if I may say so covered physics, chemistry, astronomy, biology, ecodynamics, mathematics, cybernetics, and social science. A large section of disciplines comprising the humanities, cultural studies, linguistics, poetics, and art theory was lacking or was treated in a rather superficial way.

3. Due to the priority given in turn to society, ideology, or action, in other words, to extreme sociologism, extreme culturalism, or extreme pragmatism, even when he recognized important points concerning the *rhuthmic* nature of language and art, he never realized their real significance. Except in a few points, the gap between the Democritean physical and the Aristotelian poetic *rhuthmic* paradigms, that had regularly marred the *rhuthmic* thought since Antiquity, remained largely open.

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[1] To avoid any misunderstanding, I must say here that, by the terms "ontological pragmatism," "generalized pragmatism" or "hyperpragmatism," I am not referring to the Anglo-Saxon tradition which developed in the wake of the work of Charles Sanders Peirce, but to a philosophical position to which at least part of the Peircean tradition seems, however, to adhere which holds that language is secondary to energy, force and action (pragma).