

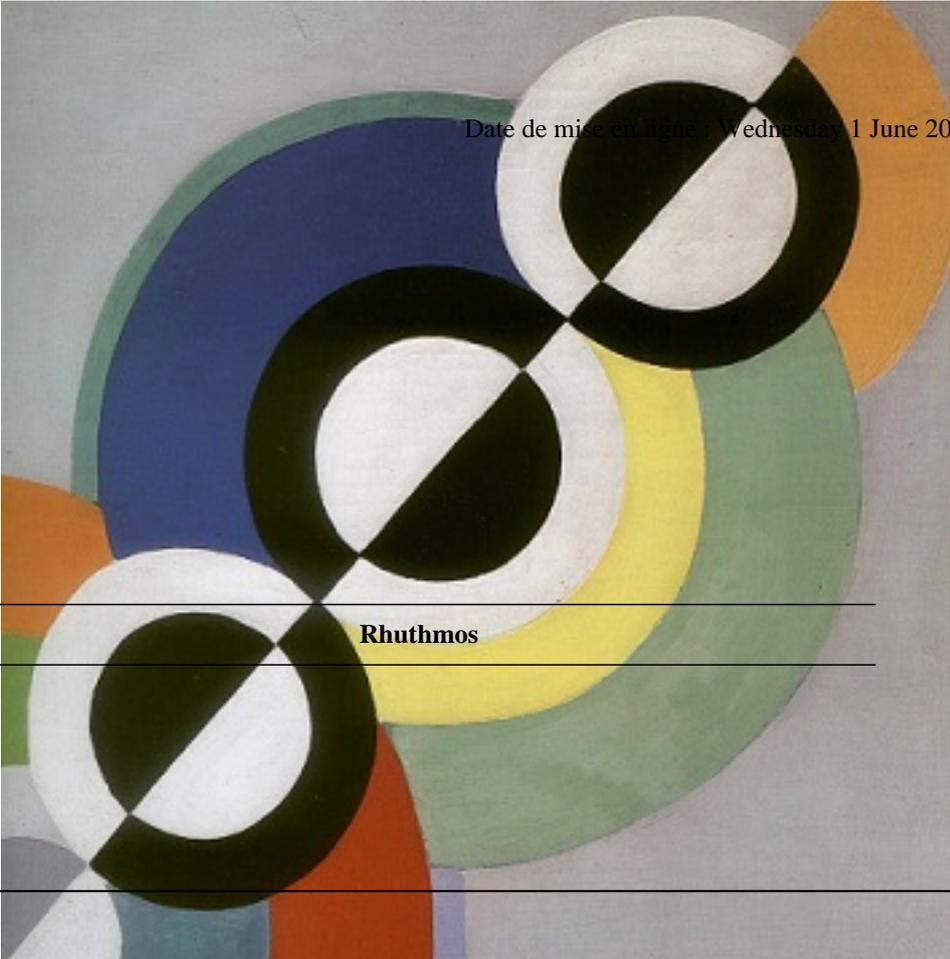
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Rhythm as Rhuthmos - Denis Diderot (1749-1777) - part 1

- Recherches
- Vers un nouveau paradigme scientifique ?
- Sur le concept de rythme

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Rhuthmos

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The 18th century witnessed important changes in ontology and epistemology that greatly matter to rhythmology. Like all their contemporaries, Spinoza and Leibniz had reflected from the queen sciences of their age: physics and astronomy, backed by mathematics, especially arithmetic, calculus and geometry. Diderot in turn took advantage of the considerable progress in certain experimental and observation sciences: chemistry, natural history, medicine, and some research announcing certain human sciences: history, linguistics, geography and anthropology. Furthermore, he considered mathematics, or at least their uncontrolled use, as likely to cause excessive abstraction; he accused them of often leading to a certain dogmatism. Finally, he drew lines connecting ontology and epistemology to the poetic and artistic thinking through the theory of language. This last feature is the less well documented in the specialized literature but not the least important, as we will see.

Ontological rhythms (1749-1770)

Throughout his life, Diderot reflected on the nature of the universe (for details, see Michon 2015). In the early *Letter on the Blind for the Use of Those Who See* (1749), the *Thoughts on the Interpretation of Nature* (1753), but also in late works like *The Dream of d'Alembert* (1769) and *Philosophical Principles on Matter and Movement* (1770), he claims that the world is operated by a single principle. He sometimes calls this principle "substance," usually "matter," but this matter bears no resemblance with its common Aristotelian representation still common in the 17th century. Certainly, it is still, somehow, plastic, but it is neither homogeneous nor purely passive nor insensitive, nor blind. The interplay of its molecules is not reducible to a simple mechanical play. Matter is itself "active" and "sensitive" and therefore requires no other additional immaterial principle that could account for the appearance in it of life and thought.

Diderot's matter is not, either, an analogue of Spinoza's substance. Like the latter, it is unique, has a dynamic nature and unfolds in the form of a multitude of corporal combinations. It comprises a bodily as well as a spiritual aspect. But Diderot sees nothing divine in this dynamism; life and sensitivity of matter are for him just hypotheses which should not be reified; spirit is not strictly parallel to body, it is always present in it at least in an infinitesimal way; finally, the ways in which bodies appear and interact are not regulated by intangible laws nor by singular essences.

At first glance, Diderot's matter seems closer, by its pluralism, its dynamism and its sensitive part, to the multitude of Leibniz's substances but for Leibniz monads are not material and Diderot, in turn, radically excludes that these substances could follow trajectories predetermined by a divine calculation.

In his view, the matter is *molecular*; it is also *heterogeneous* because its molecules are of different kinds; its molecules are internally endowed with infinitesimal forces that can be combined and become very powerful, but also disaggregate and become imperceptible, the matter is therefore *active*; if each molecule exerts a force on its fellows, it implies that each one receives at the same time, in a manner varying according to a number of factors such as

remoteness or sympathy, the influence of each of these forces, the matter is thus as *sensitive* as active; the matter also has *self-organizing capabilities*, which result in the emergence of life and the proliferation of sheaves of singular and collective individuals, but these capabilities are not permanent and they regularly give way to *disorganization processes*; the matter preserves in itself *infinite potentialities* that may become real with time; the matter has produced and continues to produce *arrangements capable of thinking*, the human beings, but the latter are totally contingent, no essence preceded them when they appeared in nature nor precedes them today, and their existence is *in no way necessary*: not only each individual had a finite duration but the human species itself should disappear one day; finally, *all the arrangements of matter*, in both senses of the genitive, compose nature.

Because of their common dynamic origin, these arrangements have a certain ontological unity: they compose a continuous series of beings ranging from the dispersed molecules of matter to thinking beings and inversely. But they have neither the order nor the fixity assigned to them by the creationist doctrines, nor the serene and steady course Spinoza's and Leibniz's theories would still give to them. The species, the individuals and even the substances composing the world are all swept away in a ceaseless and chaotic transformation flow. Diderot thus fits in the Heraclitean trend of Western philosophy, but by basing his thought on both the new scientific knowledge and the new anthropological conceptions of his age, he radicalizes the position of his predecessors of the 17th century. Laws and actual or active essences disappear. Modes (manners) or monads no longer have any guaranteed consistency or duration. Nature and the bodies that populate it are in turn included in history; they witness not only *changes* but also incessant *innovations*.

A large part of Diderot's thought is thus inspired by the *ta panta rhei* principle. It is his rococo side which he opposes sometimes ostentatiously to classicism and the spirit of order prevailing during the previous period. Yet Diderot cannot accept a doctrine where any form, any order disappear, a doctrine according to which everything is ceaselessly flowing, at best composing arabesques and whirlpools, and where de facto human beings are deprived of any possibility to know the world in which they live. He sees very well the dangers entailed by such a conception: skepticism, artistic, political and ethical relativism. Therefore, he never stops proposing new ways to define what could still be forms and order in a fundamentally dynamic world, to describe them and possibly to criticize their defects and shortcomings. In this regard, he stands clearly in the wake of Spinoza and Leibniz: he too cannot be satisfied with a simplistic Heraclitusean worldview, he too seeks what one might call a *baroque rhythmology* (Michon, 2015).

But he does it in a different way: as he rejects the idea that there may be essences, be they only "actual" as for Spinoza or "active" as for Leibniz, and eternal laws of nature, as for both of them, he resolutely parts from "expression" models of the previous century (Deleuze, 1968); furthermore, he extends his reflection simultaneously in two fields which were previously and are still today, according to many of our contemporaries considered as distinct: on the one hand, the natural sciences and the epistemology which accompanies them, and language theory, poetics and art theory, on the other.

Let us start with the former. For Diderot, the present order of nature and the singular and collective individuals which populate it are the results of an infinitely diverse range of "combinations" of "material elements" which were originally dispersed. A number of these combinations have constituted the first "living points" that have themselves generated an indefinite series of organized life forms. From this, Diderot concludes that this order and these life forms are totally *contingent* but it does not stop there: he also argues that they are *not eternal*. Without being very specific about the period involved, he also envisages involution processes defeating orders and destroying individuals. One day their profusion will be reduced to the uniqueness of the original embryo that in turn will vanish and return to the primary dispersion of the matter.

Diderot's specialists often draw from these claims the idea that nature would have according to him no order, no organization at all, and would be in a perpetual chaotic becoming. But we have already noted that this becoming is not itself completely amorphous. The evolution of beings and especially living beings appears in fact to Diderot as a

skein of waves browsing through a powdery material, multiplying from one single originary generation and becoming more complex, then, after a certain period, de-complexifying, reuniting and climbing down the ladder towards the suppression of life and a new dispersion of the matter. Despite the randomness and openness of these developments, at least two principles still remain constantly at work: the infinitesimal sensitivity of the material molecules and multicyclic evolution of individuals and species from the first living point; two others concern more limited but still considerable time periods: the random appearance of life and the complexity that nature has reached today.

If we now observe specifically how Diderot accounts for the individuation phenomena that occur in this combinatory and flowing ensemble he calls Nature, we find even more original theoretical innovations. Like Spinoza and Leibniz, he rejects the main conceptions that prevailed in Western thought since Antiquity. First, he challenges the old Aristotelian hylomorphic conception that considered individuation as the result of a molding process of a plastic and corruptible matter by eternal and intangible forms that would exist in themselves; then, he dissociates the new materialism from traditional atomistic conceptions, which saw individuation as random clumping of atoms; finally, he repels modern subjectivist view which considers individuation as the result of the reflection of the thinking substance upon itself.

However, he does not take up the conceptions elaborated by his predecessors, which he actually knows quite unevenly. He retains the concept of *conatus* but rejects its essential and eternal counterpart; he retrieves the idea of *organization* but he introduces in it the concept of *operation*; finally, he adopts the idea of *activity* but detaches it from the idea of *expression*. Instead of defining, like his predecessors, the existence as deployment or "explication" of eternity in time, of potential in the actual, Diderot seeks to completely wean existences of any link to essences, to separate the duration from eternity, the actual from the potential, and to think the *fluent forms* or the *formed flows* or, even better, the *forming fluxes*, which compose the universe, in a radically immanent and dynamic way.

Regarding living beings, Diderot proposes a model of individuation which can already be called "complex," in the sense of the modern theories of complexity, that is to say a model both hierarchical and dynamic, bottom-up and top-down: at the elementary level, the molecules merge, by virtue of a number of chemical processes, in living beings that are born, grow, become more complex, age and die; but at the same time, from the viewpoint of the entire animal, these creatures are traversed by nerve fiber networks, distributed into subunits, themselves composed of combinations of molecules. Each living ensemble is therefore simultaneously molecular and innervated, distributed and unitary.

Each of these "organizations" is endowed with "drives" that allow them to stand, to endure and thus to individuate themselves. But these "drives" are no longer considered as the expression of an essence, they do not pertain, like in Spinoza or Leibniz, to an eternal identity that would unfold through them and give each individual its way of flowing. On the contrary, each specific way of flowing support a drive and participate in giving to those organizations if not an identity at least a certain consistency or better yet, a certain "manner."

At this stage in his reasoning, Diderot, however, offers nothing very precise to replace the concepts of "actual" or "active" essence that he rejects. Except by recognizing again their existence *in themselves*, he cannot, in fact, really *characterize* and *explain* these ways of flowing. He can only *take notice* of them. Reflection on the individuation of human beings allow him to give a more solid theoretical support to his maximization strategy of immanence.

Like all living beings, human beings have a complex organization, simultaneously molecular and innervated, distributed and unitary; but what one could call the *anatomical* existence of these organizations, if necessary, is not enough to account for their individuation; they must be observed primarily in their dynamics, their *functioning* Claude Bernard would later call it "physiology." Certainly, the body, the networks that innervate it and the brain to which the latter leads are essential to the development of the Self, but they are so only because innumerable flows of

"sensations" and "instructions" pass through them in every direction, because these sensations and instructions can be stored in memory, and because the comparison of experience that the latter allows opens to the possibility of reasoning and thinking. However, since many phenomena among other things, loss of consciousness, amnesia or sleep show that this *operation* is not constant, that it suffers disruptions, shorter or longer suspensions, there must also exist something that ensures, despite these discontinuities, the continuity of the Self which is recovered, barring accidents, after each of these episodes. The *molecular* substrate of the organization plays this role: at the elementary level of each animal, there exists an "esprit de corps" to which each new molecule that is absorbed gradually complies and which provides a certain steady deportment of the organs and more generally of the whole being in question.

This second level of analysis shows a new approach to the concept of "way of flowing," i.e. of *rhuthmos*, at least to that concerning human "organizations." Their ways of flowing comprise two distinct and interrelated aspects, which are divided in turn into two levels themselves distinct and interdependent. This tense conceptual construction appears in the loop Diderot's analysis follows: *continuity* is established both by the relentless substitution of molecules in accordance with the "esprit de corps" of the masses composing the body, and by the recording in "memory" of the flow of "sensations" and "instructions" running through it; *singularity* is in turn guaranteed simultaneously by a "tone," a "tension" or "usual energy" of the "sensitive fibers" determined by the "nature" of each human nervous system but which can also have been incurred without one excluding the other by "education" or "habit," and the activity of confrontation of stored experiences which constitutes the thought.

This division of the issue of individuation into two aspects *continuity* on the one hand and *singularity* on the other in its systematic repetition by a *molecular* and a *holistic* approach seems quite innovative. This novelty allows Diderot to replace, this time much more effectively, the concepts of "actual or active essence" and "expression" which supported 17th century *rhuthmos* theories. Human individuation, as more generally animal individuation, stems out of a purely material base, which necessitates no previous essence, no eternal form, no immaterial substance, which would express through it and trace the course of a life. Each way of flowing is actually determined by a living body which, thanks to its molecular, distributed and innervated organization, endures and memorizes its experiences, while manifesting its own energy and thinking.

From this one may conclude, as it is often done, that the Self has in Diderot's eyes a certain duration and a certain singularity but it is not a rational and stable agent, self-constituted or from divine origin, who steers the lives of individuals like the captain of a boat. But we can also conclude which is less often noticed that Diderot introduces here a fundamental innovation in rhythmology, replacing the *essences* and their *expressions*, i.e. the most common concepts in the 17th century, by the *bodies* and their *functioning*, in general, the *expressive* activity by the *constructive-destructive* activity. The Self is the ever-changing but also enduring result of the operation of the entire body. This, I think, is the first very significant contribution of Diderot's research.

This ontological radicalization stresses, however, even more glaringly the need for a theory of knowledge that can account for individuals in their singularity and not reduce them to abstract notions totally inadequate to the proliferating and heterogeneous aspects of nature.

Epistemological rhythms (1749-1755)

On the epistemological side, Diderot has been quickly confronted with two main difficulties which clearly appear in his early texts *Letter on the Blind* (1749), *Encyclopædia Prospectus* (1750), *Preliminary Discourse to the Encyclopædia* (1751), *Thoughts on the Interpretation of Nature* (1753) and the article "Encyclopédie" of the *Encyclopædia* (1755).

The first was raised by Berkeley, certainly from an idealistic viewpoint but also on an empiricist basis which required Diderot to consider it thoroughly. If, as Locke claims, all our ideas come from our senses and if none of them is innate, we never have access to anything but to representations of things. Their own natures, their essences, escape and will always escape us. All our representations of things lack any certainty and the most general ontological concepts, such as "sensitive matter" are nothing but unverifiable assumptions. The second difficulty results from his own materialist ontology: since nature appears as a huge material flow, where multiplicity and change prevail, there seems to be in it no general order, no specific form, no particular facies. Orders, forms, facies we can spot are always local and transient, and therefore species and individuals always ephemeral.

Both challenges seriously jeopardize not only Diderot's own presuppositions, but also science and philosophy in general. What value may well have the latter if, on the one hand, the ideas they handle are nothing but necessarily limited representations of reality and if, on the other hand, things as well as thoughts, objects as well as subjects, are hopelessly swept up by a chaotic becoming? Are the former as much as the latter not undermined from within simultaneously by an insurmountable inadequacy to their objects and an inevitable obsolescence? Can they keep elaborating general discourses on a universe to which they have very limited access and which constantly metamorphoses?

At the epistemological level Diderot bumps into difficulties similar to those he has encountered in his ontology and tries to overcome them in the same way: by producing new tools which are, as we are going to see, his second significant contribution to rhythmology.

First, Diderot concedes to Berkeley that one never reaches the inner essence of things, but he rejects the idea that this would prevent *all* knowledge. Certainly, to approach the truth requires a long and tedious work of empirical verification of one's own representations, certainly it is likely that such work can never be completed, but a sufficiently accurate knowledge of nature is possible.

Then he develops, to work around the second problem, a version of the empiricist knowledge theory which aims, *starting from the thought process itself*, at keeping away from idealistic reductions as much as from physicalistic ones. The thought does not result from a *pure activity of the mind* hopelessly attempting to get to the things through the sensations it receives, nor, conversely, from a kind of *free expression of the things* through the human senses into the mind. In this instance, Diderot retrieves ideas already developed by Spinoza, Leibniz, and Condillac, and which will be plainly elaborated by Kant. If no science can be done without sense data, none either can spontaneously emerge from these data alone. Knowledge requires some intervention of the mind, involving its semiotic and discursive activity, which allows to articulate and confront feelings and ideas, then to develop observation, conjecture, experimentation and finally theory. Knowledge is by essence an *organized process* and that is why Diderot's brand of empiricism can properly be called *rhythmic*.

This organization is considered simultaneously in two different ways so to say, vertically and horizontally. Diderot describes, first, the rhythm of *the generation of ideas from the stream of sensations*, weaning the classic empiricist model of its last metaphysical supports. The "real" is not approached as if science would simply read a book already written, but as something to build by an interpretive act. Far from being passive recorders or, conversely, abstract designers of the rational structures of reality, scientists must patiently reconstruct its fragmentary and uncertain meaning. They must follow a complex and never-ending process intertwining sensitive reception, observation, memorization, thinking, imagination, intuition, experimentation, discussion. Diderot here anticipates the hypothetical-deductive experimental method which will be formalized in the 19th century by Claude Bernard in the series: Observation / Hypothesis / Experiment / Results / Interpretation / Conclusion. But he places it in a broader context taking into account poetic imagination as much as linguistic exchange.

Therefore, scientists, scholars and philosophers must accept, first, to consider their interpretations as mere

hypotheses explaining the phenomena they study with sufficiently high probability, second, to base their ultimate truth on nothing but the agreement of those seeking the concordance between representation and reality, and finally, to no longer define science as definitive knowledge of Being but as a never ending research on nature.

Diderot operates the same metaphysical deflation regarding *the organization of ideas in the flow of the spirit*. The best way to achieve the latter is no longer deducted, as in Spinoza's *Ethics* or Leibniz's *Monadology* from logic or mathematics, or even as in Locke's *Essay Concerning Human Understanding* from a mechanics of ideas similar, if not in its principle at least in its operation, to the mechanics of the world, but is modeled on the ways each of the various faculties of the mind unfolds through its corporal substrate.

Memory is the first "faculty" considered in Diderot's theory of knowledge. He indicates the fundamental role he gives to it when he compares the mind-body to a harpsichord and its sound effects. Rejecting the idea that memory could be an immaterial faculty of the soul, he sees it as entirely determined by the nervous system whose "fibers" resonate long after they were "plucked." Ensuring both the permanence of past experiences and the ability to "evoke" them, or to make them "resonate" with each other, memory gives thought its most fundamental *rhuthmos*. With it, the mind can compare, evaluate, associate, oppose, but also evoke or invent.

Imagination, like memory, is a bodily power. But where the latter collects and combine the sensations and ideas we had, the former makes new ones appear. Far from considering it, as in the classical tradition, as an imaginary and combinatory faculty associated with memory, Diderot assigns to it invention or innovation capabilities that sublimate the associative qualities of the latter by projecting them toward the *unknown*. This feature explains why *fiction*, traditionally considered as a vector of falsity, is promoted by Diderot as an essential means for discovering the truth. To propose philosophical or scientific theories is no different from "fictionizing," inventing stories or writing poetry, composing philosophical dialogues or drama: all consist in getting closer to the things thanks to the imagination.

Finally, while memory and imagination refers to the conservative and innovative aspects of the body activity, reason designates its organizing part. In this case, the idea developed by Diderot, following Locke and Condillac, is that reason is closely related to language. It is by *reading* or *listening* that one educates his mind and progresses in the knowledge of the world; it is by *discoursing* orally or in writing that one organizes his ideas; it is by *debating* and *confronting one's arguments to other's* that one have a chance to approach the truth.

Let us conclude. Both ontology and epistemology developed by Diderot delineate the contours of a theory of the ways of flowing of the singular and collective individuals composing the Universe as much of the Thought that may know them, what we may call a *rhythmology*. This rhythmology incorporates, or more often reinvents while radicalizing them a number of ideas developed in the previous century by Spinoza and Leibniz. It is both materialist and radically historical, and provides answers to a series of questions that remained unanswered in the previous theories: how to get out of the Aristotelian dogma of the impossibility to scientifically know the individuals? How to grasp, with concepts that are necessarily generalizing, qualities, characteristics or specific features? How to identify the *rhuthmoi* responsible for the singular or collective individuals which populate nature? On all these points Diderot supersedes quite clearly his predecessors: ontologically, individuals differ by the ways of flowing of their bodies, determined by their operation, their internal tensions, their drives and their interactions; epistemologically, those four features should be determined, as best as possible, by observation, experimentation, theorizing and discussion.

However, these answers are still inadequate to capture the human individuation. Humans are certainly living beings but they also speak, build societies and support values. Therefore, they do not *stand* in the universe only biologically, but also poetically, politically and ethically. Their individuation is not only a material and bodily event, which would only need an objective description; it also involves a multidimensional *subjectivity*, and even as we will see a *transsubjectivity*, which changes the very conditions of its knowledge. It is this anthropological dimension of Diderot's thought, this dimension by which he gives their plain share to art, language and history, that we must now turn to.

Language rhythms (1751)

In the *Letter on the Deaf and Mute, for the Use of Those who Hear and Speak* (1751), Diderot presents a radically new perspective on language.

The thought, he notes, seems to flow according to the means offered by each particular language and to follow its formal determinations. This is the case, for instance, for the "mute by convention" previously imagined in the essay, who is a bad informer about natural language because he is used to speak in his maternal language to express his thoughts and ideas, whose order is thus predetermined. But it is also the case, for the "inversions" practiced by Cicero in the *Pro Marcello*. According to Diderot, "the order of ideas pre-existing in his mind did not coincide with the order of the words." The ideas present in his mind were in "a completely opposite order to that of the phrases, to which he had to comply without realizing it, overwhelmed as he was by the long habit of translating." The order of the language, especially when it is already very advanced in its evolution, imposes itself upon that of the thought.

But Diderot does not stop there. Continuing his reflection, he also observes that the thought runs both in multiple and simultaneous manners, and that unfortunately language functions as an analytical and simplifying instrument. At the end of his commentary on the inversion in Cicero, he questions the existence of a natural order of succession of ideas and suggests that we should perhaps at least for the ideas carried by certain short phrases think of them as present "at the same time" in the mind. Similarly, a little further, he notes that when we say "*the beautiful fruit! I'm hungry, I would gladly eat it,*" we distribute in a succession of words external sensations, inner sensations and desire that are actually concomitant. Language lags behind thinking. This deficiency explains not only the difficulties we face when we want to precisely express our states of consciousness, but also the false belief that the mind is constituted by a series of ideas linearly linked to each other, whereas it is actually as a "picture" that "entirely and at once exists" but is always "moving" and "from which we are constantly painting."

Number of specialists present these two viewpoints as complementary. But one cannot but note, on the contrary, the theoretical shift that takes place from the first series of analyzes to the second. In the first one, Diderot presupposes the existence of a natural order of thoughts, which would be betrayed by the formal organization of *the language* (la langue). But in the other, if there is still betrayal and failure, it is the *discourse* that is this time involved, and it is not in regards to *the consecution of the thoughts*, but rather to their *simultaneous presentation in the mind*. In other words, *the natural order of ideas and its diversions by language* disappear and are replaced by a *system of affections that is both complex and dynamic, represented and performed by the speech*.

The stake of this shift appears very clearly in the image which supports it. Precisely at this time of his reasoning, Diderot compares indeed the human being to a "walking clock," launching his reflection into a completely new, or to put it in more appropriate terms in a truly *unheard of* dimension. Not because this image is itself very new: it replicates a very famous Cartesian suggestion in a letter written in 1646 to Newcastle where Descartes proposed to compare animals to clocks. Nor because it is not imbued with a certain dualism: the "soul" there appears, like the "fountain-keeper," both inside and separated from the hydraulic machine Descartes compares the human body with in another famous text, the *Treatise of Man* (1633), as "one of these small figures with which we adorn our clocks" and that "as a musician [...] would listen if his instrument is well tuned." But because this image turns suddenly the questioning about the relationship between thought and language into an inquiry on the *significance* (Benveniste, 1974, Meschonnic 1982) pushing Diderot, at a time to endorse some of Condillac's insights and enter in still completely unknown territory. He will resume his reflection in *The Dream of d'Alembert* in 1769, this time through the more sophisticated form of a comparison of the body-mind of the philosopher with a harpsichord.

In a quite different way from Descartes, who was mainly interested in hydraulic or purely mechanical machines which only served to represent the body, the image of the clock leads Diderot to compare the mind to an acoustic automaton in which an infinite multitude of threads starting from the body would lead to small hammers striking the

same stamp. All sensations, whatever the senses through which they arise, are thus placed under the aegis of hearing and not under that of the sight. Ideas are not any longer considered as images but as sounds.

This change in the conception of the sensitive constitution of ideas involves a reinterpretation of Condillac's principle of inseparability of ideas and words, signified and signifier (Michon, 2015). While globally maintaining the latter, it involves reversing the primacy of meaning upon sound claimed by Condillac. If thoughts are from the beginning as sounds, speaking or, to put it differently, bodily-verbally acting cannot mean any more thinking while emitting articulated sounds according criteria indexed on the signified, but utter sounds which produce a semantic flow organized by their continuities and discontinuities, their resonance and dissonance, that is to say, as with his predecessor, their "prosody" and "rhythm." That is why Diderot then adds that judgment entails "formation of chords" and speech "their succession." The best order of discourse is no longer a logical order, as for the rationalists, or even simply a pragmatic order, as for the sensualists, but a global harmonic and rhythmic organization, which replaces the one and the other.

Note the brilliance of the theoretical intuition exposed in these very few lines and the radicalism of the position introduced here: to make the order of discourse a harmonic and rhythmic organization, that is to imply that the language is not taking its source in thought but in the body, and, since language and thought are inseparable, that it is ultimately the body which thinks. Moreover, speaking is no longer communicating outward to other individuals considered as equally equipped with a thinking interiority, a thought that would pre-exist within them, whether by imitating its supposedly universal order or by varying according to the circumstances. The thought occurs simultaneously with social interaction by the same discursive gesture. It is the language which is the prosodic and rhythmic source both of our relation to nature and social interactions, of knowledge and society the language which itself takes its source in the body.

So the image of the clock or at least that of the acoustic automaton are the signs of a radical *modernity* of Diderot which remained unnoticed until recently (Sejten, 1999, Leca-Tsiomis, 2011). It incorporates and extends Condillac insights but also announces the definition of the language cycle by Humboldt, the differences between language and discourse, semiotic and semantic, meaning and signification and the primacy given by Benveniste to the second terms of these couples; finally, Meschonnic's theory of poetic rhythm and the recent theory of rhythms of singular and collective individuation to which I myself have tried to contribute.

It is this image that opens a few pages further onto his famous theory of the "hieroglyph," that is to say a use of the language which is not limited to linearly articulate logical statements but takes charge simultaneously, by linking them to each other by the signifiers they are associated with, the ideas and the emotions, the concepts and the affects, that is to say all kinds of energies rising from the body.

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