On the Concept of Rhythm Episteme

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Abstract: *In her book* Die Form des Werdens: Eine Kulturgeschichte der Embryologie, 1760-1830 *published in 2010, Janina Wellmann claims that around 1800 the concept of rhythm emerged and penetrated the entire Western culture. In literature, in theoretical reflection on art, in philosophy, and above all in the newest life sciences, rhythm became, she argues, a new "Episteme." In this paper, I would like to propose an alternative view of the rhythmological change that happened between 1750 and 1850, based on a new perspective on the history of the rhythm concept going back to the most remote period of Antiquity.*

In a book published in 2010, *Die Form des Werdens: Eine Kulturgeschichte der Embryologie, 1760-1830*, Janina Wellmann claims that around 1800 the concept of rhythm emerged and penetrated the entire Western culture. In literature, in theoretical reflection on art, in philosophy, and above all in the newest life sciences, rhythm became, she argues, a common scientific "Paradigm" or better yet, a new "Episteme" (Wellmann, 2010, p. 12, 33, 116).

Wellmann claims that, after a slow development during the second half of the 18~~th~~ century, the concept of rhythm suddenly spread around 1800, first in physiology, in which experiments by Johann Christian Reil on nerves and vital forces (1796) and Ignaz Döllinger on secretion (1819), made "rhythm" a crucial aspect of the organism operation. This extension was accompanied, around the same period, by an analogous spreading of the rhythm concept in the works of poets, theorists of poetics as Klopstock, Hölderlin, Moritz, Novalis, A.W. Schlegel, Schelling, and even some music theorists. The link between arts, poetics and life science was, she argues, embodied in Goethe who was interested as much in poetic rhythm as the rhythm of plant growth. He published, for instance, in 1790, an *Essay to Explain the Metamorphosis of Plants*. In short, according to Wellmann, after 1800 a "Rhythm Episteme" would have dominated the whole Western knowledge and artistic expression.

I have already shown the main reasons why one may legitimately question the historical relevance of this fantastic thesis (Michon, 2018, chap. 5). Wellmann's claim bears too many serious flaws and must be rejected: 1. It takes no account whatsoever of the previous and quite ancient contribution of

medicine to the spreading of the concept of rhythm, which is now quite well documented (Michon, 2018a, 2018b). 2. It does not mention either the noticeable contributions of music specialists who were paying new heed to rhythm, at least since the 17th century. 3. It lacks factual basis, to say the least: as a matter of fact, the term rhythm was never used—as the evidence gathered by Wellmann's herself convincingly shows—by the specialists of the new living science. Its only use was actually related with medicine but she strangely does not mention it. 4. Wellmann's concept of rhythm is much too imprecise since she equates it with the notions of *series*, *cycle*, and *period* which are only one way to look at rhythm and, as we shall see, not the most interesting one. 5. Last but not least, Wellmann's claim of the existence of a general rhythm episteme during the first half of the 19th century erases the acute conflict that broke out, in these very years, between, on the one hand, the poetic and artistic rhythmologies—inspired by neo-Heraclitean, neo-Democritean and neo-Aristotelian viewpoints—and, on the other hand, the medical, biological, metric or philosophical rhythmologies, that quickly established their domination based on neo-Platonic models.

Metric domination

Far from being under the rule of a commonly accepted concept of rhythm, the last decades of the 18th century and the first years of the following one witnessed a fierce struggle between poets, poetics theoreticians, language specialist, on the one hand, and metrists, specialists of aesthetics, and idealist philosophers, indirectly joined by physicians, on the other. Due to the progress of the new metrics initiated by Gottfried Hermann and the Idealist philosophies of Schelling and Hegel, which converged with the progress made in medicine, embryology and physiology, the contributions brought by the philologists and poets of the previous decades (Moritz, Schiller, Goethe, Schlegel, Hölderlin) were repelled and pushed into the background. From 1800-1805 until the mid-1850s, the reflection on rhythm, with a very few exceptions such as Humboldt's, was no longer irrigated by artistic experience but subjected to medical and natural sciences, abstract metric theories, and Idealist philosophies.

This reactionary wave—I call it reactionary because it was, with the exception of medicine of course, clearly related with the reestablishment of authoritarian powers all over Europe—lasted until the middle of the century when it was again challenged by a surge of new artistic experiments. I have studied Baudelaire's, Wagner's, Hopkins' and, finally, Mallarmé's contributions: all of them show a desire to repel the metric and philosophical concept of rhythm, based on the Platonic idea of "numerical order of movement" and to develop new rhythmological insights based on actual artistic experience. To put it in a nut shell, I would say that the artists were at the forefront of a new materialist and democratic offensive against the idealist and authoritarian worldviews that had been imposed during the first half of the 19th century (Michon, 2018b).

Yet, to fully grasp what was at stake during these years, one must actually go back to the most ancient period of Western culture when the concept of rhythm formed. By doing so, one will realize that the acceptation of the term rhythm which is nowadays the most widespread is actually only one interpretation of the original concept and not the most useful, to say the least, to artists.

Rhythm before metrics

In a famous article, Emile Benveniste has shown that the word ῥυθμός *(rhuthmós)* was commonly used from the 7th to the 4th century in Greek lyric and tragic poetry, as well as in prose, and that it became a technical term only with the ancient Ionian philosophers, especially the creators of atomism, Leucippus (5th cent. BC) and Democritus (c. 460-c. 370 BC) (Benveniste, 1951-1966).

From all identified uses of the word *rhuthmós* among lyric poets, tragedians and philosophers, Benveniste concludes that it meant, at least since the 7~~th~~ century (p. 330), "form" or "shape," σχῆμα *(skhêma)*. Related verbs as ῥυσμῶ, μεταρρυσμῶ, μεταρρυσμιζῶ *(rhusmô, metarrusmô, metarrusmizô)* meant identically "to shape" or "to transform, physically or morally sth./sb."

But Benveniste notes that there were in ancient Greek several other terms meaning "form" and that *rhuthmós* should in some way differ from them. To show that, he switches from his survey of lexical uses to morphology and etymology, a move that allows him to introduce a revolutionary idea: the term-ending –(θ)μός *(–(th)mós)* "does not designate the fulfillment of the notion but the particular modality of its fulfillment."

In other words—Benveniste does not elaborate this point but he makes it quite obvious—*rhuthmós* is a concept of form that is completely opposite to Plato's. A *rhuthmós* is not a "Form," an "Idea," an εἶδος *(eîdos)*, but a shape "as it presents itself to the eyes" of the observer. Far from being outer-worldly, it belongs to the phenomenal or empirical world. Moreover, it is not fixed, immobile, and eternal; it has a life of its own. It does not "designate the fulfillment of [a] notion but the particular modality of its fulfillment." That is the reason why it is "appropriate for the *pattern* of a fluid element" and commonly denotes an "improvised, temporary, changeable form."

Benveniste, still without referring directly to Platonic Forms, emphasizes the philosophical significance of the term *rhuthmós*. It actually designated the most common concept of form in the Ionian school, i.e. *before Plato imposed his own concept*. In this sense, it still remains a very powerful tool against Idealism.

Thus, before Plato, *rhuthmós* meant either "a temporary disposition of something flowing," or more deeply, according to Benveniste's morphological analysis, "a particular way of flowing" or "a particular modality of fulfillment of an action." Although it has been long forgotten, this last acceptation of the term is the most interesting to us.

The last pages of Benveniste's article are dedicated to the question of how this particular concept of form disappeared. And the answer is quite simple: it is Plato who is responsible for the semantic shift of the term *rhuthmós* towards its actual meaning as a collateral development of that of Form which somehow *replaced it*.

There are passages in the *Symposium* (c. 385–370 BC) and in the *Philebus* (360–347 BC), which refer to *rhuthmós,* but the most innovating one is in the *Laws* (360–347 BC) where Plato explains that young men are fiery but that they can "attain a sense of order" *(τάξις – táxis)*, which is a human privilege. This "order of motion" is called "rhythm," while the "order of voice" is termed "harmony."

The new meaning of rhythm emerged in the Platonic dialogues around the middle of the 4~~th~~ century. The *rhuthmós* which was previously considered as an ephemeral disposition of something varying, an "improvised, temporary, changeable form," or a "way of flowing," became "an ordered sequence of movements" subject to "numbering" and "divided into alternate times." It was entirely subjugated by the *métron*, i.e. "that by which anything is measured," be it a rule, a measure of content, of size, a due measure or a limit (Liddell-Scott-Jones, *Greek-English Lexicon*). Moreover, these natural forms

which were knowable through the senses, i.e. scientific or artistic observation, would now consist of more or less perfect reflections of transcendent Forms and were to be judged accordingly through the intellect. In short, Democritean forms would be erased for the centuries to come by Platonic Forms.

The Platonic innovation radically changes the meaning of the term *rhuthmós* and endows it with the universalizing power of numbers and mathematics. Since everything that has a certain duration can be regularly organized in a succession of alternate times, the rhythmic model—which is fundamentally a *metric* model in the mathematic sense—becomes applicable to any phenomenon developing in time (Benveniste, 1966, p. 335).

With Plato begins "this vast unification of man and nature under a consideration of 'times,' intervals and identical returns" by which Benveniste started his article. A cosmic and mathematical rhythmic paradigm, one of the most solid support of Idealism, is now under way and will develop with neo-Platonic philosophers as Plotinus (206-270 AD) or Boethius (480-524 AD), theologians like Augustine (354-430 AD) or more modern thinkers as Novalis, Schelling, Steiner, and many others.

Rhythm from poetics

Following the opposite materialist Democritean and idealist Platonic interventions, the concept of *rhuthmós* was again reshuffled by Aristotle, in the second half of the 4~~th~~ cent. BC, in his *Poetics*. Nobody can deny that, in this essay, Aristotle pays more attention to character and story than to rhythm and melody. It is clear that the poet must be, according to him, a "maker" not of verses but of stories, since he is a poet in virtue of his "representation," and what he represents is action. (*Poetics*, 1451b). This primacy of storytelling is a very well-known fact and a lot has already been written about it, but I would like to emphasize another aspect of the *Poetics* that has been less often noticed. In order to answer the central poetic question—that of the value of the artistic works—Aristotle strikingly starts by comparing the means used by the main performing arts of his time. Dithyrambic poetry, tragic drama and comedy, he says, represent experience, actions and characters through rhythm, tune and language; flute-playing or harp-playing through rhythm and tune; dance only through rhythm (*Poetics*, 1447a).

This comparison is usually interpreted as showing that art—whatever its kind and without forgetting painting of which Aristotle speaks very highly in other passages—is based on *mímêsis* – *representation*. But it has less often been noticed that it also shows quite indubitably, that according to Aristotle the *rhuthmós* is the common denominator of all performing arts and, for that very reason, the main means of the *mímêsis* itself. Technically speaking, as "the art which employs words," "poetry in itself" is certainly opposed to dance and music. But genetically, Aristotle emphasizes, poetry in its most complete form, i.e. tragedy, derives from dance and song. Moreover, since it uses rhythm and tune it is also clearly similar to the latter and can be considered as a kind of dancing and music playing in language, or performing of rhythm and tune with words.

In this instance, Aristotle's view is diametrically opposed to Plato's: whereas the latter viewed mimetic rhythms as extremely dangerous and art as a treacherous activity that should be strictly controlled by the State, art appears to the former as, in essence, liberating and rhythm as the deepest and most solid basis of *re-presentation*, i.e. endowed with positive ethical and political effects and therefore one of the main concept of poetics.

It is worth noticing, here, that the pleasure provided by this *re-presentation* is not aesthetic in the modern sense of the word, i.e. it is not related to our sensibility. It is plainly intellectual, cognitive. Roselyne Dupont-Roc and Jean Lallot have convincingly argued that any mimetic work uncovers a *specific form* (*idían morphèn*, 1454b 10) by disentangling it from the matter with which it is associated in nature. The artist reveals the formal cause of the object and provides the intellect with the opportunity of a *sui generis* activity, a reasoning about causality that is accompanied with a kind of pleasure that is both pleasure of wondering *(θαυμάζειν – thaumázein)* and learning *(μανθάνειν – manthánein)*. (Dupont-Roc & Lallot, 1980, p. 164, n. 2).

Yet, Roselyne Dupont-Roc and Jean Lallot claim that since this pleasure is intellectual, it is exclusively related to the story *(muthos)* "which is the representative part of the work *par excellence*," while rhythm and melody seem to be put aside by Aristotle on the ground that they do not have "independent representative virtues" (1980, p. 164, n. 4). But even if it hurts our firmest beliefs, which put rhythm on the aesthetic side, we must consider rhythm and tune as participating in the intellectual pleasure given by *re-presentation* and *re-cognition*. They both are genuine agents of *mimêsis*. But the reverse is also true: *we also must regard this intellectual pleasure as involving the sounds and rhythms of speech*. And this is not surprising since Aristotle already noticed in the *Rhetoric* that speech involves not only *arguments* but also *manners of elocution*: voice, pronunciation, tone, tempo, etc. This role given to rhythm and tune on the complex effects induced by poetry is another revolutionary Aristotelian innovation that should certainly be kept in mind vis-à-vis a large number of contemporary conceptions which still do not recognize it.

There is in chapter 6 of the *Poetics* a passage that constitutes strong evidence in favor of this theory. Aristotle compares rhythm and tune to "seasonings" of language *[hêdusménôi lógôi]*.

> Tragedy is, then, a representation of an action that is heroic and complete and of a certain magnitude—by means of language [seasoned with all kinds of spices] *[ἡδυσμένῳ λόγῳ – hêdusménôi lógôi]*, each used separately in the different parts of the play: […] By "language seasoned with spices" I mean that which has rhythm and tune, i.e. song, *[λέγω δὲ ἡδυσμένον μὲν λόγον τὸν ἔχοντα ῥυθμὸν καὶ ἁρμονίαν [καὶ μέλος] – légô dè hêdusménon mèn lógon tòn ékhonta rhuthmòn kaì harmonían [kaì mélos]]* and by "the kinds separately" I mean that some effects are produced by verse alone and some again by song. (*Poetics*, 1449b, trans. W.H. Fyfe, my mod.)

Literally the verb *hêdunô* means *"to render pleasurable,"* but the noun *hêdusma* which is applied further down to music (1450b 16) means (as in Aristophanes, Plato or Xenophon) *"that which gives a relish* or *flavor*, *seasoning*, *sauce*," and in plural *"spices*, *aromatics*." Roselyne Dupont-Roc and Jean Lallot rightly underline the fact that this metaphor is a novelty but they conclude, wrongly in my opinion, that "melodic and rhythmic elements (*harmonía – rhuthmòs*) are thus presented as spices which, when *added* to language, give to it charm/attractiveness." They see in this metaphor an evidence for a dualistic theory of poetic language. (Dupont-Roc & Lallot, 1980, p. 194, n. 4, my trans.)

I would rather suggest that this metaphor tries to convey a non-dualistic view of poetic language and maybe of language itself. Whereas "ornaments" are superficial add-ons to a unchangeable underlying "structure" as in architecture or in rhetoric, the "seasoning" cooking metaphor evokes a perfect poetic blend where it is precisely impossible to distinguish any longer between the basic

material, the “bare language,” and the “additions.” Moreover, one cannot help noticing that the cuisine comparison links poetic language with the body and especially the mouth, where the words are as much articulated as savored. Thanks to its rhythm and tune, poetry tastes like a good meal.

This is of tremendous importance: maybe for the first time in the West, the language is observed from a non-dualistic poetic viewpoint or better yet, from poetics, which departs from a sheer philosophical view and, by anticipation, from many modern linguistic views. After a very long period of scientific oblivion, this revolutionary perspective will reemerge in the 18~~th~~ century and put again the language in line with the body.

Rhythmic modernity *vs.* Modern world

We now better understand the meaning of the struggle that developed in the second half of the 18~~th~~ century and finally burst out into the open in the first decades of the 19~~th~~ century.

Through the works of Diderot, in France, then Moritz, Goethe, Wilhelm Schlegel, Hölderlin, in Germany, then again through those of Baudelaire, Wagner, Hopkins and Mallarmé, in the second half of the 19~~th~~ century, the *Aristotelian poetic paradigm* came back to the fore and demonstrated the poverty of the opposite idealist conceptions of rhythm—what we may call the *Platonic metric paradigm*—that had continuously ruled over the West since the first centuries AD and was again gaining momentum through the works of Novalis, Hegel, Schelling and their countless followers.

Moreover, in some cases, as in Diderot and Goethe, the Aristotelian perspective merged with the older *Democritean materialist paradigm*. Rhythm was not only the fundamental element of art, that which gives it its “taste,” it was also a specific “way of flowing” of any reality and, by extension, of any artistic medium. It was not primarily an arithmetic organization of duration through segmentation—even, naturally, if an arithmetic way of flowing could possibly be part in the forming of a specific rhythm.

Notably, most of what we now could call this *rhuthmic* intuitions were brought forth by artists; philosophers and sociologists came to *rhuthmos* only a bit later. The only exception to this rule is Nietzsche, who especially between 1868 and 1875, benefited from his intense reflection on art, particularly Wagnerian music and poetry, but also his extensive research on pre-Socratic ontology and his passionate philological studies of ancient literatures and languages (Michon, 2018b).

This precocity of artists, especially poets, is quite puzzling but it may have something to do with their absolute dedication to the *activity* of language, to the problems and visions it raises, but also, certainly, with their particular sensitivity to the rapid *change* in European societies that occurred after 1850. As Baudelaire quite clearly put it, by getting rid of the traditional constraints specific to their arts, mainly metric rules, these artists wanted to better “adapt” their poetry either “to the lyrical impulses of the soul, the undulations of reverie, the jibes of conscience,” and to the hectic life in the “huge cities” and “the medley of their innumerable interrelations” that were developing at the time.

I agree on this with Walter Benjamin: besides and maybe beyond the willingness to produce new aesthetic effects making a greater share in music to random, continuity and fuzziness, and in poetry

to unevenness, irregularity and suggestion, the main objective of the novel *rhuthmic* quest was to find artistic equivalents to the new freedom gained by the individuals, to the smoother flow of social life, but also to the constant rhythmic dis-adjustments and incessant shocks that this freedom entailed in the emerging industrial societies and new urban monsters. (Michon, 2005, chap. 7 and 8)

Naturally, after 1860, due to their particularly good adaptation to the new social situation, the metric, philosophical and scientific models of rhythm continued to spread out, but there were not without any opponents. The *rhuthmic* conception of rhythm became for many years a real critical force which, despite its subterranean aspects, its great fragility and sometimes its ambiguity—in Wagner for instance—has been very influential. While metric, Idealist philosophy and science of the living, partly colonized by mechanistic schemes, faithfully reflected and participated in the establishment of the so-called *Modern world*, i.e. a rigid power and class system, artistic practices and conceptions brought forth and popularized a new *rhuthmic Modernity*, i.e. a set of original but sharable ways of deploying speech, making the body flow, and organizing the functioning of society, that were at odds with those of the late industrial and capitalist world.

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