Michel Serres and the *Rhuthmoi* of the Flow – Part 4

Wednesday 4 December 2019, by Pascal Michon

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On Some Limitations of the Atomist Physical Paradigm

In order to remain as objective as possible, I would like to finish this discussion with a few comments concerning some limitations of Lucrecius' as well as Serres' atomist physical perspectives. Actually both lacked consistent and adequate poetics and theory of language, and this is maybe the main reason why Serres did not understand the significance of Benveniste's 1951 philological contribution concerning the notion of *rhuthmos*, which had been probably the very first step towards the *rhuthmic* linguistics of discourse that he had eventually developed and presented in his two famous collections of essays in 1966 and 1974 (see Michon, 2010a).

Lucretius, due maybe to his legitimate distrusts towards some aspects of Aristotle's biology and physics—especially his equating of formal and final cause—did not pay any attention to his *Rhetoric* and *Poetics*. Instead, he indulged in a vague Epicurean imaginative reconstruction of the origin of poetry in the idyllic time of aboriginal men. His extreme naturalistic strategy, which had wonderful critical virtue regarding Platonism and mainstream Aristotelism, was quite limited when it came to accounting for language and poetry.

Men, he claimed, did invent language to express their "needs," just as children do when they "point with fingers" at things and animals when they cry to express their "fear or pain" or when "they burst with joy" (Book 5, 1028-1061). Music appeared as imitation of the "liquid notes of birds" and the "whistlings of the wind athrough the hollows of the reeds." (Book 5, 1379-1383) And poetry in turn was born from the music played and danced by shepherds "lounging with friends in the soft grass beside a river of water, underneath a big tree's branches." (Book 5, 1392-1398)

This was all that was to be found, in the whole poem, on language and poetry. But this regrettable lack was also imperiling Serres' approach. Around the middle of his study, he asked an excellent and inescapable question: "Why is this text on physics a poem, why did Lucretius, writing it in Latin for the first time, write in verse?" (p. 135) But his answer was not at the level one could expect after reading such a wonderful essay which contributed so much to the recovery of the ancient *rhuthmic* physics. Serres was not that far from his hero. He confused poetry and music, rhythm and music. Even worse, whereas Lucretius was writing poetry and concretely elaborating poetic rhythms, Serres was a committed Aristoxenian without knowing it (on Aristoxenus see Michon, 2018a). He remained on the wrong side of Aristotle, whose *Poetics* he strangely disregarded and replaced by a physical and informational theory of noise to answer his own question.

> How does this music [Lucretius' poem] emerge from the chaos-noise of the background, and how does the rhythm emerge from the pitcher's flow without return? (*The Birth of Physics*, 1977, trans. Jack Hawkes, 2000, p. 135-136)

Since he did not have the theoretical means to address this issue, Serres tried to apply physics to an object that was much too complex to be accounted for by a theory of vortices emerging from the "background noise." Such an explanation could possibly account for the formation of articulated sounds but what about phonemes in their differences? What about words in their idiomatic variations? What about texts? What about poems? The few answers he provided to these questions were quite limited, to say the least.

Language, according to him "emerge[d] from noise" by "declination, by drift" (p. 135). Poetry was limited to verse or parallel lines; rhythm was close to metrics; meaning arose from an absence of meaning by "something like a rotation" (p. 146).

Lucretius' poem was "written in a vortex," it was "a vortex," as any other natural production. It "turn[ed] back on itself without meeting itself *[Il se boucle sans se boucler]*" (p. 139).

These descriptions were so vague that they could even be true. But what made a poem different from a simple rock or an animal? How was it specifically organized? How did it flow? Why, for instance, the choice by Lucretius of a Greek genre, the didactic poem? Why the hexameter? How was the story told? How did it sound? How did it affect the reader or listener? What made it still interesting, moving, valuable to us? All these simple questions, that Aristotle addressed so carefully in his *Poetics* (for a thorough analysis, see Michon, 2018a), remained without answer in Serres' essay. Although he uncovered in Lucretius' poem a physics that had been forgotten for centuries, an essential part of it disappeared, probably because it did not fit in a simplistic physical approach. Lucretius' writing, poetry, prosody, poetic *rhuthmos*, and the poetic *transsubject* that animated it, all these aspects that fascinated Aristotle seemed irrelevant to the modern philosopher of science.

I think that these limitations concerning language and poetry were partly responsible, since the concept of subject—I do not say subjectivity or Self—depends on that of language, for the lack of convincing ethics too (for the concepts of "subject" and "transsubject" that I borrow from Meschonnic see Michon 2010a). It is quite difficult indeed to elaborate a convincing ethics based on human beings who are not only treated as rocks and rats but also as mute and deaf. Something was utterly lacking in this rhythmic physics: the bright side of Aristotle that was however brilliantly heralded by Meschonnic during the same period (see chapter below).

In Serres' account, Lucretius' ethics might be reduced to a naturalistic ethics, which ended up being utterly individualistic and merely consisted in a mystical retreat from the turbulences of society. The *telos*, as Barthes put it, was to identify with the world as it remained still underneath the conflicts and disasters of history and "rejoin material being […] where no ripple has yet troubled the surface of the waters."

> The soul is knotted like the world. And like the world, it is unstable, deviating from equilibrium.

> Physics, psychology, give an account of these scattered knots where disturbances form. […] Ataraxy returns to the initial turbulence, before any disturbance in the straight line of the flow. The wise man *is* the fundamental world. He rejoins material being, this ground of being itself where no ripple has yet troubled the surface of the waters. (*The Birth of Physics*, 1977, trans. Jack Hawkes, 2000, , p. 127)

But this did not account for the obvious fact that Lucretius was part of intellectual and artistic circles and painfully aware of the violence of the Roman society during the dreadful times of the end of the Republic. Neither for that other fact that Epicureans explicitly rejected the Stoic ideal of the wise man, living in complete autarchy, needing nobody's company, and preferred the paradisiacal image of a pleasure shared by a circle of friends gathered together in a garden. Actually, as many other philosophers, Serres confused what a poet said explicitly, the enunciated, *l'énoncé*—his proclaimed naturalistic worldview—and his way of saying it, the enunciation, *l'énonciation* —his poetry, his particular use of language, his specific *rhuthmos*, and the *transsubject* he launched thanks to it through time towards us. Lucretius *did write for* his friend Memmius and for us. Hence Serres did not wonder if the *rhuthmos* of the poem itself could not imply another ethics, a socially and politically oriented ethics that would contaminate from within Lucretius' naturalistic discourse.

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With Serres' essay on Ancient atomism, we have reached another edge of the French rhythmic constellation of the 1970s and 1980s.

1. Whereas Lefebvre, Foucault and Barthes had mostly explored the ethical and political potential of the rhythmic perspective, and left aside, except in a few cases, its ontological, physical, and epistemological aspects, Serres focused on the latter and developed them into a comprehensive worldview, while inversely neglecting social and historical issues. In short, he provided a remarkable physical counterpart to his predecessors' social critiques, that could have help them to improve their theoretical sharpness and consistency, had they paid attention to it, just as he could have himself complemented his physics with their social reflections, if he had taken them into account. But as in any other constellations, although those stars appeared from afar to be close to each other, they were not acting together and had actually very few intellectual relationships.

2. However, something that was still missing from the first reflections on rhythm had now clearly emerged—at least in retrospect. Just as Barthes in his course on idiorrhythmy the very same year 1977, and in patent contrast to Lefebvre and Foucault, Serres firmly endorsed the opposition between the pre-Platonic concept of *rhuthmos* and the Platonic concepts of rhythm. For him, there was a clear opposition between two scientific paradigms: a "metrical" and a "fluid" one that we may call *rhuthmical*. The latter was the key towards a more innovative kind of thought, whereas the former could only recast any critical and imaginative scientific attempt into the deterministic dominant order.

3. Although Serres, unlike Barthes, did not acknowledge his debt, he actually brilliantly prolonged Benveniste's seminal study. Emulating Barthes' elaboration of a renovated ethical and political theory from the concept of *rhuthmos*, Serres engaged in a comparable reworking of physics from

that of *turbo*. In Lucretius' poem, the term *turbo* meant, exactly as *rhuthmós* as a matter of fact, an impermanent form appearing and lasting for a certain period of time in a flow, observable by human beings. It fully complied with Benveniste's definition. But it had also some new features that made it more precise than its predecessor and that are worth summarizing here.

3.1 First, it was coupled with another concept, the *clinamen – the inclination* or *turning aside*, i.e. an infinitesimal angle appearing by chance in a flow, which explained the *turbo's* generation as well as its vanishing. The *clinamen* was a necessary conceptual extension that provided to the *rhuthmós-turbo* an ontological basis consistent with the new mathematical knowledge on minimal angle between a curve and its tangent.

3.2 The new mathematics made it also possible to overcome the ingenuous simplism of the older definition of *rhuthmós* based on an observation at a "certain moment of time" that was not very clearly specified. Thanks to the possibility to think of a mobile infinitesimal limit between time-lengths, it was now possible to present a rigorous account of the concepts of "way of flowing" or "mode of fulfilling a process or an action," "appearance" and "disappearance."

3.3 Lucretius provided a philosophical basis for the development and duration of things which did not call neither upon Plato's nor Aristotle's theory of individuation. Things appeared through stochastic gatherings of atoms in vortices and they lasted for a certain amount of time, due to an original tiny disequilibrium that made their temporary equilibrium possible.

3.4 Lucretius' physics provided a larger frame that extended the concept of *turbo* to nature as a whole. The latter was a *turbo* of *turbines*, a vortex of vortices, a network of interlacing and turbulent fluxes. It therefore powerfully opposed the Stoic model of a hierarchical and ordered system and anticipated our present idea of a complex system. Better yet, since it took into account the notion of decay, loss of energy, it anticipated the most recent concepts of open system and irreversibility. In nature, the circulation of fluxes never occurred as perfect circles and rather followed spiral and vortex patterns.

3.5 Time was not conceived any more as "an image of Eternity moving according to number" (Plato) nor as "number of motion in respect of 'before' and 'after'" (Aristotle). It was not considered as completely regular and homogeneous. It looked like a turbulent and *rhuthmic* flow providing accelerations, decelerations and returns, generations, stabilizations, mutations and disappearances.

3.6 Space was not either an abstract, empty and neutral room furnished with figures which could be perfectly measured and mastered. As time, it was not considered as homogeneous and metric (in the modern sense of metric system). It was endowed too with a certain turbulent quality that made it *rhuthmic*.

3.7 Anthropology was also thought of according to the physics of *turbines*. Body and soul, the latter with its two parts *animus* and *anima*, made up just one single vortex of vortices plunged into the larger dynamic system of nature. They constituted an open system, a seat of an exchange of flows that remained stable for a time.

3.8 This conception of the human being as mere element of nature supported a theory of perception which, Serres argued, was largely based on the new Archimedean mathematics. Indeed, the concept of flow of *simulacra* was not only coherent with the atomist worldview, it was also consistent with the differential calculus of the shapes that, so to speak, enveloped the things. This theory of perception gave a quite powerful account of a transfer of information whose infinitesimal bits most perfectly fitted the complicated surfaces of things.

3.9 This novel theory of perception was associated with a new theory of form. Forms were inner-worldly entities that appeared by chance and that could be best described through physical examination and mathematical calculus. Since they were impermanent yet observable, they were properly *rhuthmoi*. But since their perception depended on the flows of *simulacra* that perfectly fitted the things which sent them towards us, this transmission could also be characterized as *eurhythmical*—in Xenophon's sense (see Michon, 2018a).

In short, through his innovative study of Democritus' poem, Serres demonstrated the remarkable, yet entirely forgotten, extension of the Ancient *rhuthmic* thought that had covered no less than mathematics, ontology, individuation theory, physics and space-time theory, perception theory and theory of forms, at least until the 1st century BC. It also allowed him to draw some possible lines between this forgotten Ancient thought and the most Modern theories of chaos and complexity that were emerging at the time.

Naturally this remarkable achievement had also some limitations that should not be deemed as marginal. Let us summarize them here briefly.

1. These limitations pertained first to Lucretius' as much as Serres' ways to treat language and poetry. Since the former disregarded Aristotle's contribution to rhetoric and poetics, and the latter ignored the posterior traditions that stemmed out of it, particularly in his time in the works of Benveniste and Meschonnic, language and poetry were unaccounted for, or only through myths. Language miraculously hatched from animal cries or natural sounds—sounds of the wind "athrough the hollows of the reeds" for Lucretius or plain noise for Serres—while poetry idyllically developed in aboriginal shepherd groups resting under trees on some river banks or, less romantically if not less mysteriously, as vortices of word. In both ancient and modern physics, nothing accounted for the fact that human beings speak and even turn, sometimes, speech into art.

2. Another problem, which was closely related to the previous one, concerned the ethics resulting from the physicists' naturalistic premises. As Barthes as a matter of fact, Serres agreed with the weak suggestions made by Lucretius who advocated small communities of friends enjoying leaving together and developing artistic activities. His concepts of society and State were even less elaborated than those of Barthes. He too was faithful to the anarchist and aesthetic spirit of 1968. It was difficult anyhow to imagine how such an ethics based on retreat—that is, somehow, on an inconsistent condemnation of the *rhuthmic* nature of things—could oppose the overwhelming *rhythmic* ethics and politics set up by Plato on authoritarian basis and circulated by his countless followers. It would be closer, actually, to some features of the original Aristotelian ethics and politics (see Michon, 2018a), but the paradoxical lack of poetics impeded any rapprochement.

3. Last problem: Serres did not realize that writing or composing poetry in a certain *manner*, with a

certain *rhuthmós*, was in itself an ethical stand. It generated a *transsubject* that transformed in the first place the poet than the reader or the member of the audience (Michon, 2010a). As a poet, Lucretius knew that *practically* but he never mentioned it and made no comment on this particular dimension of poetry in which aesthetics and ethics merge.

Unlike Diderot, Goethe, or even Nietzsche, who had in the past succeeded in joining their materialist views of nature with a non-reductive view of humanity based on an independent theory of language and art (Michon, 2018b), Serres was unable to associate them within a common frame. To put it in a nutshell, Lucretius' physics—and by the same token Serres' philosophy—was a wonderful piece of *rhuthmic* thought that shed a bright light on numerous ontological and physical issues, but, because it lacked a theory of language and a poetics, it also lacked a credible anthropology, indulged in a simplistic naturalism and, consequently, only proposed very poor ethics and politics.

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