The Digital, a Continent?

> What any country expects *first* from migrants, namely that they learn to speak and write the language of their guest country, this we should perhaps also accept as being expected, in analogue fashion, from all of us, with regard to that *digital continent* to which we find ourselves, whether we want to or not, forced to immigrate.[1]

I want to depart from this formulation, which in my opinion is as unsettling as it is timely, and unpack a particular implication that presents the question of nativity in a new light: What is so peculiar about this novel Continent, the Digital, if it can be called so, is foremost perhaps that no one is native to this strange, insubstantial kind of quasi-territory.

So, what kind of a mother tongue might be at stake here? What kind of language is there to be learned? We cannot approach this question by ask-

1 https://www.architektur-aktuell.at/termine/veranstaltungen-vortraege/towards-a-quantum-literacy-vortraege-und-seminar-an-der-tu-wien (accessed January 19, 2019).

ing about regulations regarding something like Immigration Status because whom should we be asking for this? Who, indeed, might be in a position to give us paternal protection regarding the developments underway? Picking up a term recently introduced by Homi K. Bhabha, Judith Butler, and others, I want to approach the issue by asking about the peculiar kind of citizenship that pertains to the locus in question as the subjects of a Spectral Sovereignty.[2] In my approach, the citizenship at stake is that of civic citizenship, a citizenship that obliges everyone who is to be a political subject to compulsory schooling. Let's remember where this comes from: Civic modern nation-states grant rights to their citizens insofar as they are subject to a manner of service to the public and accept their duties in order to be granted rights, and among those duties is the famous Dare to Know! Have the courage to use your own understanding (*Sapere aude*). This

2   This term, spectral sovereignty, has been introduced by Homi K. Bhaba in order to address issues of collective identity in relation to vernacular cosmopolitanism and cosmopolitan memory, and picked up by Judith Butler and others in relation to an increasing tendency of suspending the rule of law out, with regard to issues of globalization that need to bridge concerns for International Law (whose subjects are Nation States, not individual persons) and National Laws. See Bruce Robbins and Paulo Lemos Horta, *Cosmopolitanisms,* ed. by Kwame Anthony Appiah, New York, New York University Press, 2017; as well as Judith Butler, *Precarious Life: the Powers of Mourning and Violence*, New York, Verso, 2004.

entails that citizens must affirm to be educated, and this puts "education" in an odd middle-ground between "emancipation" and "oppression"—as becomes strikingly clear in its conflictual setup if we listen to Kant's formulation: "Enlightenment is man's emergence from his self-imposed nonage," as he put it, "Nonage is the inability to use one's own understanding without another's guidance." And a bit later, he continues:

> Laziness and cowardice are the reasons why such a large part of mankind gladly remain minors all their lives, long after nature has freed them from external guidance. They are the reasons why it is so easy for others to set themselves up as guardians. It is so comfortable to be a minor. If I have a book that thinks for me, a pastor who acts as my conscience, a physician who prescribes my diet, and so on—then I have no need to exert myself. I have no need to think, if only I can pay; others will take care of that disagreeable business for me.[3]

3   Immanuel Kant, *What is Enlightenment*, 1784. Here following the translation by M. C. Smith, http://www.columbia.edu/acis/ets/CCREAD/etscc/kant.htm- l#note1 (accessed July 28, 2017). In the original German version the passage reads: "Aufklärung ist der Ausgang des Menschen aus seiner selbst verschuldeten Unmündigkeit. Unmündigkeit ist das Unvermögen, sich seines Verstandes ohne Leitung eines anderen zu bedienen. Selbstverschuldet ist diese Unmündigkeit, wenn die Ursache derselben nicht am Mangel des Verstandes, sondern der Entschließung und des Mutes liegt, sich seiner ohne Leitung eines anderen zu bedienen. *Sapere aude*! Habe Mut dich deines eigenen Verstandes zu bedienen! ist also der Wahlspruch der Aufklärung. Faulheit und Feigheit sind die Ursachen, warum ein so

I want to think about the relevance and actuality of this famous motto for our own time. I want to think of the language spoken in the Digital Continent as the language of coding. I want to address this language, as I hope to explain in a while, as the language of *Quantum Literacy*.[4]

But first, and in terms of spatial metaphorics, how *can* it possibly be adequate to speak of a "Continent" with regard to the Digital? Isn't this allusion rather misleading since a continent promises stability and a static reference amid unsteady waters, which is the opposite of the fluidity of the seas? For doesn't the digital world feel more like something that *ripples in* and *swells*, like a threatening rising flood of pre-emptive inklings that reach us from

großer Teil der Menschen, nachdem sie die Natur längst von fremder Leitung frei gesprochen (*naturaliter maiorennes*), dennoch gerne zeitlebens unmündig bleiben; und warum es Anderen so leicht wird, sich zu deren Vormündern aufzuwerfen. Es ist so bequem, unmündig zu sein. Habe ich ein Buch, das für mich Verstand hat, einen Seelsorger, der für mich Gewissen hat, einen Arzt, der für mich die Diät beurteilt, u.s.w., so brauche ich mich ja nicht selbst zu bemühen. Ich habe nicht nötig zu denken, wenn ich nur bezahlen kann; andere werden das verdrießliche Geschäft schon für mich übernehmen." (Immanuel Kant, "Beantwortung der Frage: Was ist Aufklärung?," *Berlinische Monatsschrift*, IV, 1784, pp.481–494).

4 Cf. Vera Bühlmann, Felicity Colman, Iris van der Tuin, "Introduction to New Materialist Genealogies, New Materialisms, Novel Mentalities, Quantum Literacy," in *The Minnesota Review: New Materialist Genealogies*, Durham, Duke University Press, 2017a, pp.47–58.

the strange, a total amount of what is considered possible? Are we not drowning in contingency and, *therefore,* forced to affirm the status of a migrant subject? Isn't the digital *percolating* from a kind of future that already seems to inhabit the here, now, a future that keeps informing us about ever more possibilities whenever we try to decide, to delimit, to decide, to reason critically?

If we can be Civic Citizens of this Digital Continent, there must be a lawfulness to it. And indeed, how could there *not* be one since everything digital is engendered by calculation, mathematics, or algebra? And yet, this lawfulness at stake seems to be precisely what is swelling with an abundant plenty of instructions and decrees; it presents itself—indeed like mathematics does—as *the corpus* of a *cornucopia.* And it is a *frightening* horn of plenty. One that, rather than being generous and helpful whenever we feel prepared for it, presents itself obtrusively, even oppressively, as we often feel. It tends to *erode and take away* our confidence in reason, critical judgment, and responsible self-determinacy. The most outrageous aspect of it is perhaps that the *erosion* it triggers is not a consequence of this lawfulness's principal unpredictability and irrationality but quite the opposite! This lawfulness drives the erosion *because it is* so very rational

and predictable. Indeed, it is *super-rational* since it is *computational*, and it functions best if left to *automatic* self-organization.

The more we try to reason the status of law-fulness in computation, the more we fuel its abundant "gifts."

The Great Greek Ruse

Are we then captured within a vicious circularity that is—as Martin Heidegger tried to explain[5]—the very ground (reason) of the Modern age's essential character, that of post-metaphysical science with its striving for innovation in research? According to the etymological dictionary, the vicious circle in reasoning is "a situation in which action and reaction intensify one another."[6] Any kind of critical agency that is caught up within such a space of vicious circularity would inevitably be a dangerous agency, a corrupting one, a pretentious one, even one that demonically mocks any idea of equilibrium from which moral notions of justness, righteousness, balanced valency and so on surely

5   Martin Heidegger, "The Age of World Picture," in *The Question Concerning Technology and Other Essays*, trans. by William Lovitt, New York, Harper and Row, 1977, pp.115–154.
6   https://www.etymonline.com/search?q=vicious+circle (accessed September 21, 2023).

are being derived. For Heidegger, modern science is an exact science that installs the conditions of measuring according to its essential value, that of exactitude. And because of this, Heidegger maintained, it is also a science that does not truly think, and reasoning is driven to greater and greater speed. It is hasting towards its own corruption.

And indeed, how else should the status of Law be understood, not mathematical now but Common or Civic Law,[7] when every plane we manage to expose as integrative, when every explanation that accommodates a variety of circumstances within one *plane of reference,* immediately produces novel circumstances that do not fit, and that are not yet accounted for by this explanation? How do we *break out of* this intensification of action and reaction? As Hannah Arendt famously put it, how to lead an active and free life?

---

7   It is important for following the discussions of "Civic Citizenship" in this paper to be informed about the philosophical underpinnings of the two dominant traditions in thinking about the status of law, that of Common Law (uncodified, largely followed by the Anglo-American World) and that of Civic Law (codified, prevalent in European Countries as well as in Russia and most Asian and African countries). For a short overview, see the article provided by the Robbins Collection, School of Law, University of California at Berkeley, https://www.law.berkeley.edu/library/robbins/CommonLawCivilLawTraditions.html (accessed July 28, 2017); see also Joseph Dainow, "Civil Law and the Common Law: Some Points of Comparison," in *American Journal of Comparative Law,* XV (1966–7), 3, pp.419–435.

I aim to propose a different approach to circularity. If we want to think of the language spoken in the Digital Continent as the "language" of "coding," we cannot distinguish between numbers and linguistic signs. What information technology confronts us with is exactly such a confusion: we are dealing with "information" as a mathematical quantity (Shannon and Weaver), but it is a quantity notion that introduces a notion of "order" that is, nevertheless, to be considered also as a *qualitative* order.[8] This is why I want to address this "language" of "coding" as the language of a quantum literacy.

This different approach to circularity does not aim to discredit the important distinction Heidegger foregrounded, namely the one between rigor and exactitude, rational reasoning, and geometrical measuring. Where Heidegger opted for subjecting the former (rigor) to the latter (measurement) in a cascade that is headed by History, with its essential witnessing and testimonial mode that he calls caring, a quantum literacy approach, in relation to digital citizenship, sets the modes of historical accounts relative to a respective "modeling" space within which the passing of time can be witnessed.

8   I refer thereby to Leon Brillouin's landmark text *Science and Information Theory,* New York, Dover, 2013. See Vera Bühlmann, "Negentropy," in *The Posthuman Glossary,* ed. by Rosi Braidotti, Maja Hlavajova, London, Bloomsbury, 2018c.

For now, let's switch back to the context of the language at stake (that spoken in the digital continent) and formulate suggestively: If Heidegger attributes the circle the scope of an axiomatized space of time, then I want to speak of a circularity that attributes the circle a "civic" scope in a space of discretion ("politeness," manners and forms of conduct) and cunning. We can think of such a space as that of the rotational scope of a circle based on algebraic geometry, which is within a geometric space that needs to consider both the bracketing discreteness of code as well as the continuity of consequentiality: the mechanical scope of an encompassing line that is "restless" between the points it connects.[9]

I must accept that this is diametrically at odds with Heideggerian philosophy. But it seems that an encounter can take place, that there is a crossroad in the very space where Heidegger faces what I consider to be his core dilemma: thought, principled by reason, tends to accelerate to light speed. Reasonable thinking thus appears bound to culminate in totalitarian, apocalyptic, or eschatolog-

9   Michel Serres's discussion of the Gnomon, the Sun Clock, as an observatory, elaborates on the kind of space I am thinking of here. See especially Michel Serres, "Gnomon," in *A History of Scientific Thought: Elements of a History of Science,* London, Blackwell, 1992, pp.73–123.

ical modes of discourse.[10] His own commitment to the modern legacy of Critical Reason is a reverted one: he asks to counter-weigh this trend towards acceleration by finding a non-mathematical kind of thinking in Art as an anti-dope to the viciously circular consequentiality that mathematics, in his understanding, inevitably installs and by which it is bound to render Reason bankrupt.

To think of the scope of a circle as the scope of a restless, encompassing line that considers discretion just as much as continuity is inspired by Michel Serres, who, in his book *Les Origines de la Géométrie* (1989), calls the Principle of Reason "*The Great Greek Ruse.*" I cite:

> Hierarchy remains inside reason, but since height, power, or king are no longer spoken of, it becomes transparent inside reason, so invisible that no one has seen it, that no one thwarts this intelligent Greek ruse.[11]

While for Heidegger, mathematics is *the source of the vicious circle's viciousness*, Serres looks at it differently, as someone who knows it well, that is, not as a Sovereign Principality but as the very condition

10   See the study by Wolfgang M. Schröder, *Politik des Schönens. Heideggers Geviert-Konzept, politisch ausgelegt*, Tübingen, Attempto, 2004.
11   Michel Serres, *Geometry, Third Book of Foundations,* trans. by Ralph Burkes, London, Bloomsbury, 2017b, kindle edition, loc. 1905.

of possibility for clarifying ideas by active, leaping, and daring, thought. We can now look at what to Heidegger is *the World-as-Picture* as an *Architectonic Model of the World,* from the lofty and unsteady point of view of *Reason as a Ruse.* What we gain thereby is something like an architectural approach to Heidegger's concern with the "*Geviert*"—his proposal for mytho-poetically "squaring" the world around the axis of history into four mutually adapting and reciprocally sustaining "quarters," one for the mortals, one for the divinities, one for the earth and for the sky. A model understood as such (as an architectonic model) is to be accommodated not within the space of mimetical representation and geometrical demonstration but within the abundant space of mathematical thinking, mechanical (resourceful) reasoning and civic cunning.

So how does it work, this ruse? Serres writes:

As soon as hierarchy is translated as reference one can finally prove as reason and show as theoretical vision to every reasonable animal that it is reasonable to transfer the autonomy that they owe the hazards of their existence to the element of reference, like the world to its earth or to its sun, like a variety of homogeneous space to its pole or any site in a system to its legislative centre. So, we naturalize the one who holds power, ineradicable

from his place like the earth or the sun, unavoidable because without roots and endlessly stable.[12]

Let us pause and ask: *Where* is the position from which Serres can talk like this, and what stance does he adopt? In a Civic Space, we said. But is he himself speaking as a juridical persona, defender, prosecutor, or judge even when he speaks of the Greek Ruse with a strange sense of admiration and respect? Serres concludes the cited passage: "Better *yet we theorize him* [the one who holds power]."[13]

Now, how can this be an option? Isn't this what Heidegger is warning us against? Theorizing theoretical depictions further accelerates reason*ing* and reason*able* "thinking." But does it really? The kind of theorizing that *algebraic geometry* proclaims does not acknowledge the eradication of roots claimed by the centrality of Principled Reason. It is a *projective* geometry whose every metric is rooted in a plane of reference. The Romantic intuition, that reason is rooted in—even actively roots! —tragedy may well be true and adequate. But the *conditions of possibility* of reasoning as a praxis, method, and technique consist in *mechanisms*, as the Algebraic Geometer insists—those mathematical procedures where *cause equals to effects* (Newton, 3rd Law of Mo-

12   Serres, 2017b, loc. 1907.
13   Ibid., loc. 1910.

tion), or at least *where effects correspond to causes*, as Galileo had it when he said that nature was written in the characters of mathematics.[14]

Through involving many planes of reference within one algebraic scope, mechanical usage of metrics has never been, strictly speaking, *reasonable*! How did we forget about this? How did it happen that the unbound, free—Serres speaks of *anarchic*—reason[15] of the artistic mechanic came to stand for its very opposite, namely strict determination and foreclosure of events?

Let's again hear Serres:

14 For Galileo, it was mathematics rather than Scholastic logics that affords a philosophy of Nature: "Philosophy is written in that great book which ever lies before our eyes – I mean the universe – but we cannot understand it if we do not first learn the language and grasp the symbols, in which it is written. This book is written in the mathematical language, and the symbols are triangles, circles and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth." Galileo Galilei, *The Assayer*, trans. by Thomas Salusbury (1661), 1623, p.178, as quoted in *The Metaphysical Foundations of Modern Science,* ed. by Edwin Arthur Burtt, New York, Dover Press, 2003, p.75.

15 Michel Serres, 2017b, loc. 1866. Serres writes: "The beginning expressed by the term 'archaism' is found again in the command of the word 'hierarchy.' Can, conversely and in general, an anarchical system be conceived, without reference or border, deprived of privileged place or referential, and yet rational? Yes, assuredly: it suffices to trace back to the multiple variations of beginning in Anaximander's indefinite. Things begin when the arche precisely goes absent, and command appears when they claim to begin."

Legendary, the cleverness, the shrewdness of the Greeks impelled them to invent a use of reason, the ruse-mathematics. They give us systems and schemas to see that are so distinguished from each other that, taking their word for it, we align them along a linear evolution, whether interrupted or continuous.[16]

In his book *The Origins of Geometry,* Serres explains how the postulation of Reason as a Principle was to *conceal* that all metrics are indeed *rooted* in planes of reference[17] that are, in fact, "templums" in the architectonic language, *Projective Dispositional Plans,* empty but planned and disposed of for something indefinite to happen.[18] There may well be a kinship

16 Serres, 2017b, loc. 1937.
17 Ibid., loc. 1939.
18 In his book on Leibniz, Serres addresses the generalization of such plans as 'un géométral.' See Michel Serres, *Le Système de Leibniz et ses modèles mathématiques,* Paris, Presse Universitaire de France, 2015e. In the Introduction entitled *Scénographie, Ichnographie*, Serres writes with regard to "un embarras qui subsiste" in Leibniz, namely that it appears impossible to embrace Leibniz's overall organization *as* a system, and still understand it consistently and exhaustively *in* systematic terms—there remains an obscurity. But this, for Serres, needs no excuse but is, quite inversely, the crucial point with regard to his appreciation of Leibniz *as* a systematical thinker. As Serres puts it: "le sentiment confus d'une ordonnance potentielle qui se laisse toujours entrevoir et qui sans cesse se refuse, l'idée vague d'une cohérence perçu mille fois en vue cavalière et qui dérobe son géométral, la sensation de progresser dans un labyrinthe dont il tiendrait le fil sans en avoir la carte. Perspectives offertes, point de vue multipliés, possibilités infiniment itérées: il ne parait jamais qu'on puisse parvenir aux limites exhaustives d'un plan synoptique, étalé, complet, actuel" (ibid., loc. 163).

between Reason and Tragedy, but there is also one between Mechanics and Comedy. Again Serres:

> Aristophanes or some other stage director must be bursting with laughter in their graves from seeing us trying to understand [a linear evolution of math]! They take a bowl and a jar out from of their horn of plenty, let us see then, like poor farmers, pots, then they put these objects back into the horn, and lastly suddenly take the same ones out again so that, from our place, we see a column and a sphere.[19]

Let's state our point clearly, for this is a serious issue: Reason, to Serres, is the *Great Greek Ruse* in that it sets mechanics equal to the mathematical demonstration—without problematizing the manner in which such "equivalence" is being identified.[20] He calls this a ruse because it thereby *conceals*

19 Serres, 2017b, loc. 1976. Serres writes for example: "The distinction of the homogenous and the heterogenous, of the continuous and the discontinuous, dominate the descriptions of space and time in Mircea Eliade for example. Profane, space is isotropic; sacred, it isn't, he says. In addition, profane time flows continuously, but sacred time presents ruptures. As a result geometry, cut off from sacralisation, posits an undifferentiated space. But this isn't tenable, for there are as many scientific spaces as you please, orientable or not, centered, or metric, chaotic or regular, only some of which are homogenous. To say the converse amounts to underestimating geometry, to forcing it into impoverished reductions. Thus formal thought knows the spaces said to be mythic or cultural."

20 In fact, Plato addresses this very point where he seeks to establish a difference between opinion and truth: there is an interesting, but seldom attended to, discussion about what Plato calls "mobile" or

that what every metrics does (as the very condition through which it affords metricity) is *projection*: an *architectonic transformative projection* that comes together with a *procedure* of how projections can be produced.

The question we want to take from this is: having recognized, with Serres, this Great Greek Ruse, how *not* to become misologists? How do we hold on to reason in a manner that does not subject it to a definite central and transparent position of power, as Reason's Principle? Serres asks: "Is reason defined by indifference toward all difference?" He puts it even more drastically: "Reason demands that there be no reason."[21] We must make defined spaces ceaselessly refer to the indefinite, suggesting that we should call the universe "that which holds by this principle without principality."[22] With such a way to think of the circular, let us now come back to the issue of a "Digital Continent." The proposal

---

"run-away" statues (called "deadalus" in the manner of the mythic persona's [*Deadalus*] mechanic art), as opposed to statements of knowledge to which he also refers to as "statues," but statues that must be "owned," statues that are in someone's "possession." See A. Frost Benedikt, *Runaway Statues: Platonic Lessons on the Limits of an Analogy*, presented at the Twentieth World Congress of Philosophy, Boston, August 10–15, 1998, published online at *Paideia, Ancient Philosophy Archive*, Boston University, https://www.bu.edu/wcp/Papers/Anci/AnciBene.htm (accessed July 28, 2017).

21 Serres, 2017b, loc. 2078.

22 Ibid., loc. 2080.

I would like us to consider is to think of the Digital Continent in just this manner: as a Universe which *holds by this very principle without principality.*

The Mechanic's Anarchic Cunning

What I want to suggest, with raising the idea of a *quantum literacy* of a Digital Citizen in relation to the Mechanic's Anarchic Cunning, is to take from quantum science, especially this one aspect: namely that "form," in the domain of probabilistic amplitudes and their propagation, needs to be considered in terms of *technical spectra* (each rendering regularity in terms of frequencies, due to the particle-wave character of each quantum). Hence, I want to suggest that it is a spectral kind of agency attributable to the Cunning Reason of the Mechanic as a Digital Citizen. It is a kind of projective spectrality that is perfectly reasonable; it is just *not principled.* It is anarchic. It is, so to speak, Reason *trespassing* the Reign of a Definite Rule of a Center that puts itself up as Principle. The point thereby is that Mechanics as an Art can pick up the ancient legacy that related it to humanist ethics that does not accept fate without standing up against it and challenging it.[23]

23 The Greek noun "Mechane" or "Mechanema" meant "cunning" as well as "means to an end, a supportive device," and often appears in classical texts in relation to situations of distress, accounts of

What do I mean thereby? From a logical point of view, something is either at rest or moving, but not both at the same time. Exactly this famous statement by Aristotle does not hold for the mechanical: how to describe, for example, logically, a rotating spinning top that is at once at rest (its center) while moving (its periphery)? Mechanics is an art and not a logical discipline in that it introduces a certain scope of deliberation that is objective, independent of a *Cogito*'s belief or interpretation. Mechanical descriptions are *mathematical* but not logical. *Mechanical knowledge* is objective *and* ambiguous, undecided. There belongs a peculiar kind of agency and activity to the knowledge in which the mechanic is proficient that is not a subjective will or an arbitrary intention.

To make a long story very short, both logical inferences as well as mechanical constructions, crucially depend upon geometry. The former depends

_____

emergencies, and how to get out of them. See *Propyläen Technikgeschichte*, Vol. 1, ed. by Wolfgang König, Berlin, Propyläen, 2000, p.181ff.; a short note perhaps at this occasion also with regard to the notion of cunning in Hegel: whereas Serres is interested in exactly this link between mathematics and cunning, Hegel's interest appears to have been in severing this link, and in contrasting cunning as the mark of phenomenological reason as against merely mechanical, deterministic and automatic rationality. Such an attempted "hygienic separation" remains untenable for Serres in antiquity (see footnote 14) and also today. This is the crucial message when he addresses the origins of geometry in the plural.

on the axiomatic set-up of theoretical geometry in the manner of Euclid. With the latter, the relationship is more complex. The whole point of logic, we can say, is to yield *definitions*—to treat things within the scope of their finitude and delimitations. Thereby, axiomatic deduction follows one principle above all others: it shall not be possible to derive *contradictory statements from the same set of axioms.* The middle ground of an undecided, restless third state is what logical rigor seeks to exclude. Until the modern era, people thought of mechanics as an art and as an ethics—indeed, it was considered the twin to logic, aligned with sophistication rather than truth because, in mechanics, one is concerned with treating things in their finitude, that is, without need for belief of any sort that could not be objectively tested. This is why I suggest addressing the space of cunning reasoning as an object-space, the space of objects among objects. Because at the same time, every mechanical construction lives exactly *from* such a third, middle milieu, where opposites co-exist undecidedly. This is what makes mechanics architectonic. One could even say that the art of mechanics is to *modulate* and *articulate* this transitory milieu of indefinite decidedness.[24]

24   See a very interesting article on the notion of "stasis" in rhetorics, O. A. Loeb Dieter, "Stasis," in *Speech Monographs*, XVII, 1950, pp.345–369.

The question remains, however: *where* in what kind of space is the Cunning Reasoning of the Mechanic to be situated? We can think of this space as an architectonic space that consists of projective transformations. The ruse of which Serres speaks is that of concealing that "The Greeks" production is projection. And the optimization of a projecting site: the fly-over from on high or from outside the world."[25] The anarchic reasoning of the mechanic is like Atlas, whose power results from a projective point of reference, daringly placed in an outside.

Citizens of the Digital, as Public Personas, are Social Servants too, but they are not Heroes of Alternative Identities or of Minority Cultures. They are Atlases—all of them. The space of Cunning Reason is the space indexed by all those projective points of reference *out there*. We can think of it as the immanence of a space of translation, encryption, and deciphering. Let me try to explain.

Hors-Là

In his book *Atlas* (1994), Serres cites a short story by Guy de Maupassant entitled Le Horla (1886) on several occasions. Maupassant therein invents a character called Horla, which the protagonist in his

25   Serres, 2017b, loc. 1945.

short story keeps encountering in a peculiar shadow. Horla is a phantom that is *trans-parent* (passive, lets shine through) but not without an irreducible lucidity of its own. It sits in front of the mirror and catches the images the mirror is about to reflect before the mirror can actually do so. Serres writes about this peculiar character:

> What a strange shadow: it is and is not, present and absent, here and elsewhere, the middle which ought to be excluded but cannot, hence contradictory. This is why he [Maupassant] calls him Horla.[26]

Horla is, to Michel Serres, the fictitious character of a quantum-physical kind of spectrality that actively sums up all projections that could possibly be reflected in a manner of summation whose total is indefinite and, not despite of but because of that, determinable. To Serres, this story is a *realist* story—even though its main character is entirely invented. It is a realist story because it allows us to philosophically address the particular kind of "spectrality" at work in communication media: The space of Horla allows us to address the rendering of appearances that technical spectra afford (in all

26   My own translation based on Michel Serres, *Atlas*, trans. to German by Michael Bischof, Berlin, Merve, 2005, p.59.

quantum physics-based science like chemistry or electro engineering).[27]

Now, within epistemological registers, the predominant question regarding quantum physics is that of location and the point of view of the observer. This famously poses a dilemma and puts reason in crisis. But remembering the algebraic legacy of the Mechanic's Cunning regarding circularity (circuitry, indeed) at once relaxes the situation *and* poses novel challenges: We can no longer think of objective reasoning as having an absolute reference. The space where Cunning Reason is localizable is a space of communication that is not, strictly speaking, logical but also rhetorical and poetic: The mechanic has always known how to bring opposites into balanceable constellations by inventing a third, a mediate space to think in, a statuary structure that does not properly "add up" to a consistent, non-contradictory domain—the space of Cunning Reason is an *architectonic* and an *inventive* locus. The space of Horla helps us address the active role of measurement in those spectra, i.e., their active rendering of appearances in a manner that is, even

27   Cf. for an elaboration of this argument, Vera Bühlmann,"Generic Mediality, On the Role of Ciphers and Vicarious Symbols in an Extended Sense of Code-based 'Alphabeticity'," in *Philosophy After Nature*, ed. by Rosi Braidotti, Rick Dolphjin, London, Rowman & Littlefield, 2017b, pp.31–54.

though it has trespassed the domain of Reason's Principle, not a bit less objectively reasonable.

The space of Horla is the space where phenomena are rendered apparent that are *engendered by mediation* by resorting to a middle ground that, *from a logical point of view, ought to but cannot be excluded.* Of just such a strange "nature" is the quasi-physical domain that communication channels have been establishing for real and for nearly a century now. How does this still sound so spooky, ghostly, and untrustworthy to our ears?[28]

Technically speaking, electronic information/communication technology channels are literally technical spectra: They render apparent a certain generic order which can be observed only before a "plentiful back-ground" of noise (entropy) rather than one of an empty *tabula rasa*. Serres illustrates this idea of a plentiful background with the color spectrum, where white light stands for such a "plenty" because it expresses any color at all, and this in a material, physical manner: "white light" is, ultimately, radiating nuclear activity of quantum-physical mass. Within such "materiality," channels are established for "surfing" on top of the

28   See for an elaborate discussion of this strange situation Wendy Hui Kyong Chun, *Programmed Visions, Software and Memory*, Cambridge, MIT Press, 2011.

singled-out frequencies, but nevertheless amidst the massive agitation of what is, technically, called Brownian motion. The vicarious space of spectra is not empty in the sense of "lack" as a substantive, but in that of "lacking" as a kind of *frequentative preposition*: the zero-neutrality of white light *lacks* in that it *leaks*, and in the same sense as technical spectra *lack* in that they *leak*.

What if we thought of the digital as a percolating universe, an active container, a container that leaks reason, reason that accumulates into continental plates, here and there, always with its reference to the principle without principality, *hors là*? Out there, here. Speculative, but *anarchic* and *civic* rather than *utopic* and *innocent*. This might be what it means to be Quantum Literate, as Citizens of Digital Continentality.