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Michel Serres's "Dream of Another Epistemology": Provoking Somatic Encounters with the Universe

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Abstract: This essay explores Michel Serres's "poetic dream of another epistemology" connected to an anti-Cartesian, sensorial view of knowledge. The philosopher alludes to empirical studies from the field of cognitive neuroscience, which have demonstrated that the mind and body are interwoven as part of one integrated entity, in order to propose an alternative epistemological framework for (re-) envisioning the nature of knowledge. The philosopher's rehabilitation of our senses illustrates that our body is replete with overlapping epistemological channels that bifurcate in all directions. Serres explains how somatic encounters with the universe enable us to constitute a stable sense of self in relation to the larger world. However, he recognizes that there are a plethora of obstacles standing in the way of allowing his epistemological dream to come to fruition. In what he refers to as the Exo-Darwinian, hominescent era, the (post-) modern, urbanized lifestyle affords very little contact with the remainder of the planet. Moreover, Serres laments how climate change has already forever eradicated spaces of meaning that are indispensable as part of an epistemological quest of knowing what and who we are as planetary beings.

Keywords: Michel Serres; epistemology; sensory studies; biocentrism



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1. Introduction

Rejecting much of mainstream Western philosophy, the unconventional epistemologist and philosopher of science Michel Serres poses the following questions in his sensualist, non-Cartesian reworking of the process of knowledge formation: "[r]etracing my steps on this sloping path. I am evoking a still poetic dream of another epistemology. Can I reconstruct knowledge starting from this understanding? How does the ear know things? Additionally, how does our skin, pulsating from others and the world, know things as well" (Serres 2011, p. 89).¹ From the publication of the first installment of the *Hermès* series in 1968 until his death in 2019, Serres deconstructs the shaky edifice of mind–body dualism as part of a larger epistemological vision that represents both a way of knowing and being in the world. Whereas traditional Western thought maintains that the senses play a negligible role in the (re-) construction of knowledge, the philosopher-sailor attempts to rehabilitate our much-maligned sensorial faculties "through which we feel, touch, taste, and see the world" (Tucker 2011, p. 150). Serres contests deeply ingrained binary logic pitting the mind against the body and puritanical worldviews warning us to the "wary of the flesh." In place of dominant oppositional thinking that devalorizes the senses or removes them from the equation entirely, Serres alludes to the discoveries of modern science including findings from the field of cognitive neuroscience to promulgate an alternative epistemological framework. Serres's non-dogmatic epistemological paradigm (re-) envisions the body as one integrated entity in which our brains and sensory organs work in tandem in order to enable us to *make sense* out of the "world of things" to which we are inextricably linked as planetary beings during our ephemeral time on this earth. From a philosophical and ecological perspective, Serres contends that knowledge is *relational* in the sense that it is connected to a greater understanding of our small place in the larger cosmic whole.

Without claiming to have access to universal, definitive truths through our senses, Serres posits that the act of reestablishing a direct, sensorial connection to the biosphere actuates a heightened state of ecological self-actualization. It may initially appear to be paradoxical, but the philosopher's ultimate goal is to provoke somatic encounters with the rest of the cosmos and to implore the reader to transcend the text itself by plunging herself-himself deeply into the inner workings of the universe.

Nonetheless, Serres recognizes that there are a plethora of obstacles standing in the way of allowing his epistemological dream to come to fruition. Given that millions of individuals all around the world spend nearly every waking moment in their "padded cells," or in front of computer, tablet, or smartphone screens, it is debatable how many people would be willing to embark upon the "sensual journey" for which Serres advocates (Chare 2012, p. 100; Tucker 2011, p. 158). In simple terms, the (post-) modern, urbanized lifestyle affords very little direct contact with the remainder of the planet. Moreover, Serres himself argues that the increasing sophistication of human innovation and the dawn of modern medicine have profoundly altered human corporality itself in essays such as *Hominescence*, *L'Incandescence*, and *Petite Poucette*. Owing to our increased life spans, the reduction in human suffering in the form of vaccines that have virtually eradicated many diseases that used to decimate our predecessors, and our ever-evolving relationship to information in the digital age, Serres concludes that we no longer have the same body. Instead of succumbing to apathy or despair, the philosopher is cautiously optimistic² that what he refers to as our exo-Darwinian, *hominescent* bodies can still be retrained through "somatic encounter(s) with a turbulent, physical world" that are laden with epistemological and spiritual value (Paulson 2009, p. 24). For "*Homo negligens*" suffering from the nefarious effects of ecological deterritorialization³ who have forgotten what it is like to taste, touch, smell, hear, and see the "magic of (somatic) relations" firsthand, Serres theorizes that it is still possible, at least momentarily, to remove ourselves from our ontological prisons and to heal our fractured environmental consciousness (Serres 2003, p. 66; O'Keeffe 2009, p. 28, my insertion). With the advent of the Anthropocene-Technocene, Serres avers that this "strange dialogue" connected to his epistemological dream has become a moral imperative in defense of an imperiled planet on the brink of collapse (*L'Interférence*, Serres 1972, p. 97). Not only is anthropogenic climate change an existential threat to all sentient beings that roam this earth, but Serres also implies that the ecological calamity is an ontological and epistemological crisis. Similar to Dominique Lestel, Serres laments the ecological destruction that is emblematic of the postmodern condition, because it forever eradicates the spaces of meaning that are paramount to "knowing who and what we are in relation to the world" (Abbas 2). Unless we deviate from our current *ecocidal* trajectory, Serres affirms that we will become more intellectually impoverished each day before we ultimately perish in the process.

2. Serres's Deconstruction of Mind–Body Dualism

As several critics including Pierre Saint-Amand, William Paulson, Gaspare Polizzi, and Trina Marmarelli have noted, "the somatic encounter of the living body in relation to itself and to its environment," which is the heart of Serres's epistemological approach, is predicated upon a "non-Cartesian reason" that strives to reconnect the mind and body (Johnsen 2005, p. 68; Polizzi and Marmarelli 2000, p. 249). Serres's renewed focus on the pivotal role of the senses as epistemological vectors that should be honed rather than suppressed "consists of calling Descartes to task and shaking the foundations of his method" (Saint-Amand 1997, p. 101). As evidenced by numerous passages in multiple works, Serres rarely misses an opportunity to poke fun at Descartes demonstrating that many of his anthropocentric hypotheses such as his "notorious *bêtemachine* theory" were conceived in a vacuum with utter disregard for the ecological realities that govern the existence of all organisms including *Homo sapiens* (Batra 1996, p. 156). To be more precise, Serres mostly criticizes the basic tenets of Cartesian thought on two different fronts in the aforementioned passages that are written "against Descartes again" (Serres 1990, p. 17). First of all, Serres

illustrates that many of Descartes's core theories fail to take into account how our species was arbitrarily tossed into the chaos of existence by indiscriminate ecological cycles starting with a *big bang* as part of a larger web of life.

Furthermore, the mind–body distinction representing Descartes's vision of knowledge is inseparable from his mechanistic view of the universe in which humans are the only “thinking machines” that have somehow been magically endowed with a “mind” by the previously mentioned indifferent cosmic forces compared to all other animals that merely obey “the fixity of a program” as mere automata (Visintainer 2002, p. 1; Derrida 2008, p. 117). In other words, Descartes's fears about the alleged “unreliability of the senses” that cannot be trusted from an epistemological angle are plagued by the same faulty, dualistic logic throughout his oeuvre (Wade 2005, p. 248). This sharp ontological gap between *Homo sapiens* and other animals does not hold up to any kind of empirical scrutiny. Whereas humans rely solely on our mind to comprehend the world around us, Descartes describes other organisms as unreflective machines that reactively display “sensations of hunger, pain and so on” through robotic sensory stimulation that is of no interest to philosophers (Descartes qtd. in Voelpel 2010, p. 39). In reference to the Cartesian understanding of knowledge formation that continues to linger in Western civilization, Serres muses, “philosophy forgets the house that it lives in [. . .] this house of sensation [. . .] [w]hat if philosophy were to come to us through the senses” (Serres 1985, pp. 141, 211). Serres reminds us in this passage that Descartes's disdain for the senses is related to the doctrine of human exceptionalism. Mind–body dualism and the epistemological vision that it represents is yet another misguided attempt to separate us from other sentient-semiotic beings that runs counter to contemporary scientific erudition. The Cartesian view of the “animal” inspires pity for the soulless automata that are deprived of minds and only possess insignificant, sensorial faculties. Serres underscores that anthropocentric, Cartesian oppositional thinking is not an innocent delusion of ontological grandeur, because this distorted method for investigating all of the complex nuances involved in knowledge creation obfuscates our understanding of the intricate forces at play by focusing exclusively on the brain in complete isolation from the rest of our body. If we want to comprehend our connection to the universe and the nature of knowledge more fully, we need a “philosophy of this world for this world, we have to return to things, return to things” as sensuous beings that are woven into the tapestry of life in all of its divergent forms (Serres 1968, p. 69).

Research from the field of cognitive neuroscience lends credence to Serres's defense of the epistemological value of the senses. The philosopher's lyrical affirmation that “magic is feeling, seeing living with one's heart, lungs, and nerves [. . .] We remain on the earth, with our two feet firmly planted on the ground, we only know what we see, what we touch” is now unequivocally supported by a large body of data (Serres 1985, pp. 57–59). Cognitive neuroscientists have discovered that “you cannot think without a body, body and mind are bound in a continual and inseparable process that shapes our experience” (Deligiannis 2018, p. 168). For this reason, scientists have coined the expression “the knowing body” referring to the “forceful case for the role of the body” in knowledge (re-)construction (Gray and Kontos 2018, p. 441; Stuart 2010, p. 46). In stark contrast to Descartes's mistrust and dismissal of the validity of the information obtained from our senses, empirical studies have established that “the human person [. . .] (is) an integrated body-mind system produced by evolution” through which “concepts can be formed through the body, therefore what we know of the world, of others and of ourselves is shaped and molded by our senses” (Slingerland 2011, p. 80, my insertion; Deligiannis 2018, p. 168). Based on findings from cognitive neuroscience, the Cartesian view of knowledge formation is reductionistic and simplistic to the extreme, because it severs all connections between the mind and all of the other epistemological pathways throughout the body. Given that knowledge has no center from which it emanates from an objective lens, Serres's astute observation that “Mind and body are not separate, but instead they are inextricably blended” should be the point of departure for a reevaluation of knowledge acquisition (Serres 1985, p. 23). In this

regard, Serres demonstrates that “[t]here is an ecstasy to being in relation, a joy to be had in contemplating the magic of relations” in an integrated corporal system in which the entire body is the “seat of knowledge” (O’Keeffe 2009, p. 28; James 1991, p. 44).

3. Serres’s Sensualist Outlook on Life as a Way of Knowing and Being in the World

For those who are looking for a greater understanding of the cosmos and our minute place in it, there is nothing gratuitous about the sensorial inebriation that Serres describes. The anti-Cartesian, alternative way of knowing and being in the world that Serres promotes is a veritable epistemological quest compelling us to go beyond the text itself and to reopen “our eyes to the sensible world” (Salisbury 2006, p. 43). This sensualist lifestyle is connected to the timeless philosophical pursuit of knowing thyself through somatic encounters with the biosphere from whence we came. According to Serres, there is no epistemological substitute for “direct human experience” (Serres 1997, p. 94). Specifically, Serres’s epistemological method entails removing all of the obstacles preventing us from tasting, touching, seeing, smelling, and hearing the earth directly. When we reestablish a direct, sensorial connection to the rest of the planet, the myriad epistemological channels throughout our body open up.

In addition to modifying the symbolism of the Christian Eucharist, Serres takes advantage of erotic metaphors revolving around nudity and copulation to paint a vivid portrait of his sensualist ethos. It is in this context in which his declaration in *Les cinq sens* “Skin without doors or windows, chain mail, armor, what do you feel” should be understood (p. 74). Serres unearths the etymological origins of the word “impressionism” in *Les cinq sens* to propose a sensualist interpretation of the post-impressionistic artist Pierre Bonnard’s nude paintings. Speaking to the reader in what is a rather thinly veiled promulgation of a hedonistic worldview, Serres proclaims:

To live or survive, you have to relate to the senses. Take away the leaves, take off the bathrobe, touch the skin of the brown woman or the canvas of the painting [. . .] Bonnard threw himself naked into the pool of the garden, in the middle of the bath of the world. Nudity, launching ourselves naked into the ocean of the world, impressionism returns to its true sense of origin, to contact. (Serres 1985, pp. 27–35)

The philosopher goes a step further in *Biogée* in several passages in which he provocatively insists that we should engage in coitus with the universe. After reminiscing about the intense sensorial pleasure that he derived from the Garonne river in Southwestern France as a child from a long line of bargemen, Serres asserts, “Don’t ever stop making love to Garonne and being born from it, emerging from it, flowing from my maternal abode [. . .] conjugal bedroom, conjugal bed, beloved woman, birth canal [. . .] belly from which I was driven out when I became a solitary nomad on this Earth. But my flesh has retained these motherly waters” (Serres 2010, p. 34). From an epistemological standpoint, Serres argues that we need to fall in love again with our “lover, our mother the Earth” (Serres 2010, p. 34). As the Serres scholar William Paulson elucidates, “Serres is thus an artificer of words who does not believe that the world revolves around words” (Paulson 2000, p. 216). Serres is cognizant of the limitations of the literary space for fostering the intimate, sensorial bond that he maintains is essential as part of an epistemological quest. Hence, he beckons the reader to thrust herself-himself into direct contact with the larger cosmic forces that “guide and define us” on a regular basis (Serres 1985, p. 137). Serres’s erotically charged metaphors imply that the act of “playing hooky” is a philosophical endeavor *par excellence* that transcends the somatic ecstasy of the moment (Bensaude-Vincent et al. 2000, p. 203).

The notion that we should sometimes remove our noses from a book, or a digital screen, and make love to the earth in an attempt to comprehend our cosmic essence to the greatest extent possible also recalls Albert Camus’s aptly named collection of essays *Noces* (nuptials) in which the *pied-noir* philosopher espouses the ideal of ecological matrimony for the same reasons as Serres. For both Camus and Serres, the metaphor of marrying the cosmos recalls the Eastern and indigenous concept of “fusion” (Grieves 2006, p. 10). In

his aforementioned reappropriation of the symbolism of the Christian Eucharist, Serres ponders, “How is it that philosophy had to wait several centuries to ask that we wait a little until the sugar melts in a glass containing water? How is it that on the occasion of such evidence, we did not immediately associate with time itself the mixing and fusion of one body in another” (Serres 1985, pp. 182–83). Serres reiterates a few sentences later, “Eat and drink. Do this in memory of me. Let’s go back to the immediacy of the senses” (Serres 1985, p. 183). When we get rid of the barriers preventing us from encountering the universe directly, Serres hypothesizes that we are able to reestablish a more perfect union with the larger whole (i.e., the biosphere) to which we are linked. The somatic communion for which Serres advocates not only eviscerates the mind–body schism that has haunted Western philosophy for centuries, but it also discredits another remnant of outmoded dualistic thinking: the subject–object distinction. Serres’s insatiable thirst for knowledge and *joie de vivre* in general lead him to the conclusion that “[t]he soul and body do not separate, but mingle, inextricably, even on the skin. So two mingled bodies do not make a subject separated from an object, I caress your skin, I kiss your mouth, who, me? Yes, yes, soul and body, subject facing the object, I kiss you, here we are melted into it” (Serres 1985, p. 51). For Serres, the most important question is what is the relationship between what cognitive neuroscientists call the “knowing body” and the larger object to which it is connected. As opposed to defining the subject in isolation from the object, the Serresian, epistemological method is to weave connections between them by “melting” into, “fusing” with, or “becoming one with the one.” As Steven Connor explains, “[t]he subject and the object do not give rise to each other once and for all [. . .] Rather, they enter into each other’s composition, such that the reciprocal constitution of subject and object is both inaugural and ongoing” (Connor 2010, p. 4). Based on his deep-seated conviction that the roots of knowledge are *relational* and cosmic, Serres encourages us to reduce the distance that separates us from the earth through somatic encounters, as we rediscover what and who we are as planetary entities.

4. Serres’s Epistemological Vision as a Preliminary Roadmap for a Heightened Sense of Ecological Self-Actualization

Owing to his postmodern sensibilities, the philosopher is careful to “not let himself still believe in definitive and closed truths” (Serres 2014, p. 38). Nonetheless, Serres adamantly affirms that a sensual communion with the cosmos triggered by keen senses in direct contact with other material entities results in a heightened sense of ecological self-actualization. This cosmic awareness represents a non-dogmatic form of enlightenment corresponding to an “ecocentric vision of the world” (Krell 2012, p. 1). The Cartesian “outmoded view of reality,” which creates a chimerical, ontological separation between *Homo sapiens* and all other animals, gives way to a biocentric, epistemological framework that is much more in line with the discoveries of modern science (Johnsen 2005, p. 39). Our illusory sense of “false transcendence,” which we have partly inherited from Cartesian philosophy, Renaissance humanism, and monotheistic religions, collapses when we reconnect ourselves to the larger object of knowledge (Johnsen 2005, p. 39). The anthropocentric hubris, which puts “the animal on the side of the machine and the human on the side of the mind,” is replaced by a biocentric outlook on life reflecting the principles of biotic egalitarianism in addition to the philosophical insights that can be gleaned from scientific breakthroughs (Guerlac 2012, p. 696).

Serres’s reworking of Cartesian epistemology is a “type of decentered thought” that remove us from the ontological pedestal upon which we have placed ourselves as members of an allegedly superior species (Serres 1972, p. 144). As Steven Connor outlines, “For Serres, it is via humility (that) the human subject comes into being” (Connor 2010, p. 5, my insertion). Serres counterpoints dominant epistemological models centered around arrogant, universal, definitive truths with a heavy dose of scientific realism. Observing that *Homo sapiens* have the same intrinsic right to exist as any other random byproduct of indifferent evolutionary forces, Serres muses, “But who am I, I who sees? And these

living beings, plants or animals, mushrooms and algae, single-celled that live in me and that I do not see? Fountains of time, streaming among others [. . .] As for me, I only count like any other step of the stairs" (Serres 2003, p. 17). Even if Serres decries the notion of a single "subject of knowledge", or the "Moi-Soleil" disconnected from the greater object, he persuasively demonstrates that a rudimentary comprehension of how the universe operates demystifies anthropocentric frames of reference entirely (Serres 2014, p. 25). Delivering the final proverbial *coup de grâce* to anthropocentric explanations of the world, Serres states, "[t]he order structure does not classify animals into a straight line, it distributes them within the network" (Serres 1977, p. 106).

With their misleading dualities, anthropocentric abstractions conceived in a cosmic bubble conceal the indisputable, scientific fact that we are part and parcel of the earth. When the Serresian narrator fuses with the biosphere through the force of somatic encounters, the bubble immediately bursts. From an existential and epistemological perspective, the narrator realizes,

Who am I? A tremor of nothingness, living in a permanent earthquake. Yet for a moment of profound happiness, the spasmodic Earth comes to unite herself with my shaky body. Who am I, now, for several seconds? Earth herself. Both communing, in love she and I, doubly in distress, throbbing together, joined in a single aura. I saw her formerly with my eyes and my understanding; at last, through my belly and my feet, through my sex I am her. (Serres 1995, p. 134)

Putting all eroticism aside, which once again suggests that we need to *know* the earth in the biblical sense in order to catch a small glimpse of the cosmic mystery of which we are but a small part, Serres firmly (re-)anchors epistemology into the universal ecological laws from which there is no transcendence. Even for readers who may not appreciate Serres's sensual metaphors, his main point in the above passage is cogent. Serres answers the quintessential philosophical question "how do we know what we know?" as follows: our senses. Without discounting the role of our highly developed brains in the process of knowledge formation, Serres insists that our sensory organs are epistemological passageways for rediscovering our planetary roots as citizens of the earth. We will never uncover all of the enigmas that concretize life on this planet, but Serres illustrates that true knowledge always leads us back to the cosmos.

Numerous critics such as Maria Assad, Webb (2003), Ian Tucker, Berressem (2005), and Steven Connor have documented how Serres's (re-)conceptualization of knowledge acquisition bears the stamp of pre-Socratic thought. Heavily influenced by Lucretius, Democritus, and Leucippus, Serres subscribes to the doctrine of philosophical materialism stipulating that there is only substance (i.e., matter) that temporarily manifests itself in a given ontological shape before it is recycled by the previously mentioned ecological cycles to generate new life. Serres's emphasis on the "primary materiality of the human condition" is linked to his biocentric, epistemological approach (Tucker 2011, p. 150). Serres's adoption of a "purely materialistic worldview" focuses on "the intimate nature of life, of matter" in a universe where "the initial absurdity of fate [. . .] has thrown us in a given spot on Earth" (Assad 1999, p. 219; Serres 1997, p. 10; Hénaff 2005, p. 181). The philosopher's materialistic *weltanschauung* compels us to delve as deeply as possible into the heart of matter itself through the philosophical exercise of fusion.

Serres's sensualist appreciation of life encourages us to commune with other material particles to which we are bound as part of an epistemological journey. Moreover, the core principles of philosophical materialism take aim at "humans (who) think they are the rulers" (Serres 2008, p. 137, my insertion). Scoffing at anthropocentric theorists who do not recognize fundamental material realities, Serres declares in *La Distribution*, "[w]hether we like it or not, it's matter that gives the orders: the best government in the world can only give what it has. It sometimes happens that it cannot contain water pockets. And, the rainy season can come late" (p. 257). Thirteen years later in *L'Incandescent*, Serres reiterates, "In spite of how high he has risen in the saddle, every Matterhorn⁴ knows all too well that he is made up of the same dust as a molehill. We all come from the same

earth, from the same mother, from the same universal matter" (p. 203). Serres responds to those who cling to anthropocentric wishful thinking by reminding them of inescapable material realities. The idea that our species is somehow *different* from other material beings that have also been arbitrarily distributed within a network is a comforting illusion that is not supported by evidence or sound logic. In a biosphere in which "none of the parts of a living organism violates the physicochemical laws of inert matter," the knowledge that we obtain through tasting, touching, smelling, seeing, and hearing fosters a profound sense of ecological interconnectedness and humility (Polizzi and Marmarelli 2000, p. 156).

5. Serres's Promulgation of a Revitalization of Our Senses in the Hominescent Era

Although Serres is the epitome of a *bon vivant* who is in love with life itself, as his erotic metaphors demonstrate, he does not offer any facile optimism that his preliminary blueprint for a different way of being and knowing will be easy to realize. Not only are there many ideological stumbling blocks in the form of pervasive anthropocentric dichotomies that still need to be uprooted, but Serres also recognizes that fundamental differences exist between contemporary *Homo sapiens* and our ancestors. Due to the increasing complexity of human inventions that have ushered in the era of information and the breakthroughs associated with the birth of modern medicine including the discovery of antibiotics, Serres theorizes that we no longer have the same bodies as our predecessors. If human corporality itself has been drastically modified throughout our evolutionary saga, as the philosopher maintains, this historical phenomenon further problematizes the epistemological quest to which Serres refers. If we have "morphed into a very different sort of animal," albeit an animal nonetheless, this new epistemological challenge must be addressed (Moser 2016, p. 15).

The philosopher's interrelated theories of "Exo-Darwinian evolution" and "hominization" (or *hominescence*) try to shed light on all of the philosophical repercussions of the new human condition that Serres contends only vaguely resembles the former one. Serres's expansion of the concept of "hominization" closely parallels contemporary theories from the field of biological anthropology. Providing an operational definition for this term, Ajeet Jaiswal reveals,

The Hominization process consists of evolutionary transformation of hominoids into Hominids. It is a process that has occurred in the hominoid-line since its divergence from the last common hominoid ancestor shared with any living ape. Initially the term has a restricted meaning and implied emergence of modern man, different from all other forms. Currently, however, the term is broadened and includes all those aspects of structural and behavioral changes that occurred in the Hominid line finally leading to man. (Jaiswal 2007, p. 43)

According to most biological anthropologists, our *hominescent* journey began with the first tools created by our distant human ancestors. As our inventions became increasingly sophisticated, they started to permeate more facets of our quotidian experience, thereby profoundly altering what it means to be human. In reference to the evolutionary force of human ingenuity, Serres explains, "[o]ur organs sometimes empty themselves of their forms and functions to transfer them to the outside [. . .] These externalized apparatuses produce [. . .] a history which I call exo-Darwinian evolution" (Serres 1999, pp. 105–7). Our hammers, shovels, drills, rakes, etc. all perform tasks that used to be done by our bodies themselves. Evidently, these rather primitive inventions pale in comparison to more recent types of ingenuity that have transformed human society and corporality in ways that our predecessors could have never imagined. Owing to the sweeping nature of these changes, Serres concludes, "In short, in the last few decades, a new body was born. More than a historical development, this break touches anthropology, the evolution of the *hominian*, the global process of *hominization* [. . .] this new body reconstructs aesthetics, morality, and politics, violence and cognition, even greater still, our *être-au-monde*" (Serres 2001, pp. 46–47, italics in original).

Serres's nuanced appreciation of technological advances connected to exo-Darwinian evolution lauds human innovation that has improved the quality of life of millions of people around the planet while simultaneously lamenting the deleterious effects of these same evolutionary developments. Specifically, Serres is concerned that our new bodies no longer have the same kind of direct, sensorial contact with the universe that he argues is indispensable to (re-) construct knowledge. In a recent interview with Jean-Pierre Bernajuzan (2019), Serres bemoans, "Man is an animal that is losing his body, each time that we invent a tool, the organism loses functions that are externalized through the tool." Serres posits that our sensorial faculties have become desensitized, because of "various forms of ingenuity that no longer require us to use certain body parts like our human ancestors" (Moser 2016, p. 146). In essence, "[w]e are losing our senses" which are the very epistemological pathways that render knowledge formation possible as part of an integrated mind-body system (Serres 1985, p. 231).

William Paulson notes that Serres's sensualist outlook on life and epistemology resonates with "[r]eaders who know (or at least remember) what it's like to use their bodies in encountering the world" (Paulson 2000, p. 218). In this vein, Serres himself wonders how many people have maintained, or have a desire to reestablish, this primordial connection to the cosmos in the exo-Darwinian, *hominescent* era. Fully aware of this daunting new epistemological landscape, Serres declares, "come, the last child of man capable of listening and seeing, come feel and touch, you will learn rather soon the science (of knowledge), rest assured that you will learn" (Serres 1985, p. 112, my insertion). This passage could be described as a plea urging contemporary *Homo sapiens* to break free of their ontological prisons in an effort to revitalize their deadened senses in an age epitomized by ecological disconnection. Additionally, it should be noted that the vast majority of *hominescent* humans are "concentrated in cities," a phenomenon that Serres and other theorists have termed the "rural exodus" (Hénaff 2005, p. 170). Our walls of brick, concrete, steel, or wood in our "urban megapolises" in which we spend nearly every waking moment further complicate the practical implementation of Serres's epistemological dream (Hénaff 2005, p. 170).

Given that meaning and knowledge are at stake, Serres refuses to resign himself to hopelessness. Serres offers the following piece of pragmatic advice that could be a realistic starting point for initiating an epistemological quest that reawakens our new bodies: "if you have lost your body [. . .] you need to walk two hours a day" (qtd. in Moser 2018, p. 101). The opening lines of *Variations sur le corps* are in keeping with these epitextual comments. Attempting to bridge the gap between theory and practice, Serres elucidates,

I am walking on a soil whose slope is rising softly. At a certain point. I stop and "place my hands on it": the real mountain begins, I am climbing. While my body was bent over, did I return to the state of a quadruped? Almost: my body has been transformed . . . I remember what we were . . . How could we have forgotten this rudimentary and animal-like relationship with the world. (Serres 1999, pp. 1–3, ellipses in original)

Serres opines that it is not too late for *Homo negligens* to make a concerted effort to renew our relationship with the earth. The road ahead may not be easy, but Serres reminds us that things that are lost can sometimes be recovered, at least partially. Our *hominescent* bodies may be different, however, our dormant sensorial faculties are still there lying beneath the surface waiting to be reinvigorated.

6. Serres's Explanation of Climate Change as an Ontological and Epistemological Crisis

As one of the first French philosophers to address anthropogenic climate change with the publication of his landmark essay *Le contrat naturel* in 1990, Serres positioned himself to be one of the foremost ecological voices in the Francophone world along with Edgar Morin, Jacques Derrida, Félix Guattari, Dominique Lestel, and Eric Baratay. In a time period in which very few other French thinkers were discussing the environmental crisis at all, Serres realized that our "unprecedented (*hominescent*) power" to reshape nearly every last parcel

of matter around us for our exclusive benefit was on the verge of eroding the foundation of collective life on this planet (Paulson 2009, p. 121, my insertion). Serres would continue to refine his theories about the impending ecological catastrophe that threatens the existence of all sentient beings with whom we co-inhabit the cosmos for decades in other works like *La guerre mondiale*, *Musique*, *Le temps des crises*, and *Biogée*. Climate change is undoubtedly the greatest existential challenge that humanity has ever faced. Unless we are able to practice “mastery over our (partial) mastery” of the universe in the coming years, the world’s eminent climatologists have unequivocally concluded that life as we know it will soon cease to exist (Serres 2004, p. 199).

In his explanation of how the environmental predicament is also an epistemological crisis, Serres asserts that the disconnected, *hominescent* lifestyle has induced a sort of *ecocidal* forgetting that must be combatted at all costs. The philosopher takes advantage of apocalyptic imagery to attack the sensibilities of readers in an atmosphere in which the other material entities upon which our continued existence depends are continually out of sight and out of mind. For “our culture without a world” in which the essence of human corporality has been altered, the first epistemological principle that Serres strives to (re-)instill is a basic awareness of the interconnectedness that sustains all abundant life (Serres 2009, p. 47). To those who have forgotten that we will ultimately survive or perish along with all other creatures whose existence is governed by the same ecological laws, Serres poses this question: “When there are no more men on earth, when we will have destroyed all other living species, who would eat what, aboard our ghost planet” (Serres 2010, p. 88). The philosopher avers that this crucial, rudimentary knowledge of the fragile cycles that support the existence of all organisms, which have been disrupted by human activities in the Anthropocene, often escapes *hominescent* man who lives in a dangerous bubble in isolation from the remainder of the biosphere.

For a biocentric, sensualist thinker like Serres who insists that knowledge is *relational* and actuated by an intimate rapport with the rest of the planet, this disconnect must be remedied in order for the postmodern subject to internalize a form of wisdom connected to ecological interdependency that is paramount to stemming the tide of the environmental apocalypse that is upon us. Numerous researchers including Julian Yates, Jonathan Krell, and Brian O’Keeffe have noted that Serres’s multifaceted theory of the parasite is a key concept in his reevaluation of dominant epistemological paradigms. Since all species must take the life of something living from the earth on a continual basis for the sake of sustenance, Serres affirms that every organism is a parasite in the ecological sense. Even if “parasitism is just a fact of symbiotic-life,” we must rediscover “a modality that will not turn deadly” (O’Keeffe 2009, p. 10; Yates 2005, p. 205). Reminding us of what happens to a parasite after it has completely consumed its final host, Serres reveals, “if the parasite eats too much, he’ll kill his host, and it’ll die by the same token” (Mortley 1991, p. 57). This fundamental recognition, which could be labeled *ethical parasitism*, is a guiding principle of Serresian ethics and epistemology.

From an epistemological angle, it is not merely a matter of avoiding “collective death” that is on the horizon, but Serres also suggests that fighting climate change is a question of preserving spaces of meaning that are essential in the process of knowledge formation (Serres 1995, p. 39). After proclaiming that “Coming back to things themselves requires throwing one’s shirt and shoes into the fire and heading towards them in this simple attire,” Serres asks, “Who am I? [. . .] without a doubt, relationship creates being” (Serres 2003, pp. 262, 265). Serres’s philosophical claim that our sense of identity and how we know the world are connected to the biosphere to which we belong as planetary beings that is on the brink of destruction is reminiscent of the philosopher-ethologist Dominique Lestel’s position that the sixth mass extinction is an ontological, epistemological tragedy. Lestel describes climate change as a type of intellectual impoverishment that forever eradicates “the spaces of meaning in which living species can live together,” thus weakening our “relations with all living beings on earth” (Lestel 2013, p. 309). When yet another endangered species vanishes permanently, an epistemological thread is torn from the

fabric of knowledge. Serres's solemn declaration in defense of the tattered web of life in *Musique* should be understood in this context. Mourning the disappearance of other sentient organisms without which our understanding of the universe is fractured, Serres exclaims, "Listen to another Requiem for massacres. As we destroy every day a number of species, we definitively turn off their voices [. . .] This is the real magnitude of human deafness. Responsible for this Babylonian destruction, deaf to this Pentecost, how can we pretend to listen to our brothers in tongues if we forever gag our cousins in voice" (Serres 2011, p. 62). For both Lestel and Serres, we cannot ignore the epistemological toll of our myopic exploitation of the cosmos.

7. Conclusions

In conclusion, Serres's anti-Cartesian (re-) conceptualization of knowledge formation has a lot to offer contemporary *Homo sapiens* living in the exo-Darwinian, *hominescent* era at the precipice of utter oblivion in the Technocene-Anthropocene. The philosopher alludes to empirical studies from the field of cognitive neuroscience, which have demonstrated that the mind and body are interwoven as part of one integrated entity, in order to propose a convincing alternative epistemological framework for (re-) envisioning the nature of knowledge. The philosopher's rehabilitation of our senses illustrates that our body is replete with overlapping epistemological channels that bifurcate in all directions. Although Serres is vehemently opposed "to the Platonic ideology of a single *solar* truth," he maintains that the reestablishment of a direct, sensorial connection with the earth is a philosophical exercise linked to the pursuit of knowledge (Serres 2014, p. 25, my italics). Even if "there is no longer a single reference for the truth" from a postmodern vantage point, Serres explains how somatic encounters with the universe enable us to constitute a stable sense of Self *in relation* to the larger world (Serres 2014, p. 25). As evidenced by the ubiquitous zest for life that pervades much of Serres's writing, the philosopher is clearly an optimist. However, the poignant, dystopian vision of climate change that Serres conjures up in numerous essays is indicative of an extreme realism corresponding to dire warnings from the scientific community. Moreover, Serres is also keenly aware of the negative effects of what he calls exo-Darwinian, *hominescent* evolution that have important implications for human corporality itself. Despite these unprecedented challenges, which have resulted in cosmic estrangement, alienation, and an erosion of the vitality of our sensorial faculties, Serres never wavers in his conviction that the "strange dialogue" with the biosphere that he incessantly promotes is still within reach. We desperately need to conserve the endangered spaces of meaning that permit us to catch a glimpse of our small place in the cosmic whole. When we embark upon an epistemological quest that reconnects our severed bodies to the world as sensuous beings, Serres optimistically implies that we can restore our senses and potentially save our beloved planet at the same time.

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Notes

¹ All translations are my own unless otherwise indicated.

² In fact, Serres's many detractors including Julien Gautier assert that the philosopher is far too optimistic about the perceived positive aspects of the age of information in works like *Petite Poucette*, *Le gaucher boiteux*, and *C'était mieux avant!* See Gautier's article "La douteuse fable de Michel Serres." (Gautier 2013).

³ I have borrowed this expression from Ursula Heise. See Heise's book *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (Heise 2017).

⁴ This word is capitalized in the original.

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