

3 – The “Right” Amount of Agency: 3 – Microscopic Beings vs Other Nonhuman Creatures in Contemporary Poetic Representations

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Introduction

As I set out to compare the portrayal of microscopic beings and perceptible nonhumans in various contemporary poetic texts, it soon emerged that the prism of agency made clear the difference which could be sensed in their treatment at first reading: the texts allow more agency and possibly more of a voice (through the illusion of a transfer of authorial agency) to perceptible nonhuman creatures than to microscopic beings. Agency here is used in its contemporary, non-humanistic sense: that of being a source of action, able to make a difference in one's environment, not necessarily associated with an intention or a rational consciousness. This study finds that microscopic beings are represented with either very little agency, or a very markedly contrasted agency, sometimes negated and sometimes fully present, while perceptible nonhuman beings' agency is retrieved through patient negotiations. The poems, however, also yielded another finding: images of a parasitic or viral relationship are used to establish the agency of perceptible nonhuman beings that are not viruses or parasites. The first part of this study examines two contemporary poets, Pattiann Rogers (United States, born 1940) and Les Murray (Australia, born 1938), in order to shed light onto the different types of agency and authorial power (another form of agency, that of *poiesis*) they construct for microscopic beings versus perceptible nonhuman creatures. Those specific contemporary poets were chosen because, even though they come from very different backgrounds, they share a will to ascribe more agency to the nonhuman natural world. Les Murray's book of poems on the indigenous flora and fauna of Australia is titled *Translations from the Natural World* (1993), which, even when not taken at face value, shows an interest in sharing authorial agency with a nonhuman object. Rogers' extreme and constant attention to natural beings throughout her works, from *The Expectations of Light* (1981) to *The Dream of the Marsh Wren* (1999) renders the doings of nature inextricable from her writing. The second part of this study examines more literal attempts at transferring authorial agency to nonhuman creatures, perceptible ones in the case of critic Aaron Moe (US, born 1976), and microscopic ones in the case of poet Christian Bök (Canada, born 1966). In those cases, the reflection on nonhuman agency is extremely explicit and it is for this reason that those texts were chosen: the analyses bear on meta-texts more than poetic works, and thereby can be easily paralleled.

I. The opposite fates of microscopic beings and nonhuman perceptible beings: Pattiann Rogers, Les Murray.

The archaeans, described at length by Rogers in “Address: The Archaeans, One Cell Creatures” (*Poetry Magazine*, 2005), are microscopic organisms which have long been mistaken for bacteria. Pattiann Rogers, who holds a degree in zoology, is a poet whose close observations of the natural world are scientifically informed. Here, she

undoubtedly strives to establish the significance of those microscopic beings, stating in the first stanza that “although they have no voice [...] / they are, / nevertheless, more than mirage, more / than hallucination, more than falsehood.” Through a form of *via negativa*, then, the presence of the archaeans in our world is somehow asserted: the archaeans, Rogers says, are genuinely and consistently *here*. The same, however, is not true of their actions. Archaeans are well-known for facilitating mammal digestion and contributing to the carbon cycle, making them essential actors in the living world, yet Rogers does not mention these actions, insisting, instead, on the monocellular organisms’ re-actions to their environment:

They have confronted sulfuric
boiling black sea bottoms and stayed,
held on under ten tons of polar ice,
established themselves in dense salts
and acids, survived eating metal ions.
They are more committed than oblivion,
more prolific than stars.

“More prolific than stars,” and, (later in the poem) “more mutable than breathing and vanishing,” the archaeans have in common with viruses the speed with which they reproduce, and their colonizing behaviour. Facing a hostile environment (many archaeans are extremophiles, thriving in places as hostile as sulphuric waters at the surface of volcanoes), brave pilgrims of the hostile world, they “confront,” “establish,” and “survive”; however, their actions affect only themselves: their role in the environment (mostly one of chemical “recycling”) does not appear. More than actions, the poem features reactions, performed in the sole aim to perpetuate the species.

To act is not only to react: a large part of contemporary thinking is devoted to ascribing nonhumans the attributes of a sensible existence which matters and must be taken seriously, and insists on their agency as an ability to act and not only to react. This vision of nonhuman agency counters a well-established argument according to which the age-old human / nonhuman divide rests on the difference between action and reaction. Indeed, for Cary Wolfe, “the juridical distinction between ‘response’ and mere mechanistic or instinctive ‘reaction’ [is] a distinction that, as Derrida shows, has anchored the ontological hierarchy of human and animal in the philosophical tradition.” (63-64) On the contrary, contemporary animal philosophy seeks to free animals from the deterministic conceptual frame in which their actions are traditionally perceived, and object philosophy strives to establish that things have a “positive, productive power of their own” (Bennett, 1). This is exactly what our archaeans lack. Moreover, a number of purportedly “human” actions are refused to them. As quoted earlier, “they have no voice / that I’ve ever heard for cry or song”; they do not either carry the burden of the (Christian) human:

Too meager in heart for compassion,
too lean for tears, less in substance
than sacrifice, not one has ever
carried a cross anywhere.

Engrossed as they appear in instinctual reactions and the dire business of surviving, they are denied an inclusion into the realms of signification, ethics and even embodiment, as the last line of the address makes them “too minimal for death,” as if they were, ironically, too busy surviving to be able to die.

The archaeans’ presence, as mentioned earlier, is asserted through a form of *via negativa*. To a certain extent, the same process is applied to the archaeans’ actions, yet less successfully: describing all of the “human actions” which the archaeans do not perform does not imply that they perform actions whose range go beyond human actions, but rather that they are unable to perform any proper action. One positive action, however, lies at the heart of the poem:

Far too ancient for scripture, each
one bears in its one cell one text-
the first whit of alpha, the first
jot of bearing, beneath the riling
sun the first nourishing of self.

This text-bearing sounds primordial, a proper beginning rather than a reaction to an external event. Interestingly, this action is precisely the expression of a viral agency: that of carrying information over. At this very moment only, the archaeans appear to be given agency, and more particularly a form of authorial agency: the text which they are carrying may very well refer to the text of the poem, and the only positive action ascribed to those beings is “the first jot of bearing,” a particle of the great, primordial action which consists in carrying information and expressing it. Thus, the shaping of the poem and the shaping of matter through the primordial text that is DNA are powerfully paralleled. Formally, it is the only moment in the poem when the language, otherwise simple, linear, and not very experimental, appears invaded by the presence of the creature. Indeed, the monosyllables in “each / one bears in its one cell one text” recall the small size and primal quality of the archaeans. However, this positive form of authorial agency is to be contrasted with the statement, in the first stanza, that the archaeans “have no voice.” Even if voice refers to spoken rather than written utterances, it denotes an ability to produce a message or a linguistic form that is denied to the archaeans in this line. This contradiction reveals microscopic agency as both asserted and ardently denied in our poems.

In “Cell DNA” (41), contemporary Australian poet Les Murray diverges from the rest of his sequence, *Translations from the Natural World* (1993), in that he does not address a particular nonhuman creature but an entity more abstract and less grounded in the Australian soil: a single DNA strand. The strand stands as a microscopic being whose agency is explored in the first person. The first stanza features it both in the most passive of positions, “in free fall,” and in an Atlas-like attitude of “carry[ing] it all”: from the outset, the oxymoronic structure of the DNA strand’s agency, similar in that respect to that of Rogers’ archaeans, is blatant. This structure unfolds again in the third stanza, the first one quoted here:

Presence and hungers

imbue a sap mote
with the world as they spin it.
I teach it by rote.
but its every command
Was once a miscue
That something rose to,
Presence and freedom
Re-wording, re-beading
Strains on a strand
Making I and I more different
Than we could stand.

While “presence and hungers” are performing what appears to be life-defining actions (to “imbue” a being “with the world”), they allow no part in this world to the DNA strand, as the latter asserts control over the process by “teaching it by rote.” In the last stanzas, such contrasts give way to a complete lack of agency on the part of the DNA strand, as the genetic “miscue” and the ensuing “presence and freedom” become able to affect the strand to the point of changing its identity, “making I and I more different than we could stand.” This form of oxymoronic agency, also to be found in Roger’s archaeans, may be a quality of viral agency (metonymically extended to other microscopic beings): just like the archaeans, just like the DNA strand, the virus’s mere presence, though not perceptible to most humans, engenders momentous consequences.

Contrast and negations also affect the construction of a nonhuman authorial agency in the poem. If the DNA strand is formally given a voice through the first person, the illusion is difficult to maintain. Of course, its invisibility hampers our identification with it, but the limpid quality of the language in the first stanzas also prevents any feeling of defamiliarization necessary to the impression that a nonhuman voice is speaking. Indeed, the playful assertion that life is “what I’m about” and “what I’m around” does not seem to convey a commitment on Murray’s part to make the DNA strand *speak*. Yet when the DNA strand becomes dominated by “presence and hungers” in the lines quoted above, the phrasing becomes more experimental and words lose their immediate meaning. It is the case in the third stanza with the uncanonical plural “s” added to “hunger” and the action depicted as “presence and hunger” “imbu[ing] a sap-mote / with the world.” It is even more so the case in the last two stanzas as the DNA strand is overtaken by “a miscue” in its encoding, which will make it lose its very identity: there, defamiliarization almost reaches unintelligibility with phrases such as “a miscue / that something rose to.” This gives the impression that the poet has yielded some of his authorial power to its poetic object, but it only happens once the object has been dominated by another agent. Here, the authorial power only appears to be granted to a nonhuman voice at the very moment the DNA strand is no longer able to *be* a voice since it does not recognize itself as itself. As with Pattiann Rogers and the archaeans, the authorial power of the poetic object involves very marked contrasts, which do not contribute to making less abstract the idea of a transfer of authorial power to the nonhuman being.

When the same poets turn to perceptible non-human beings, the creature’s agency and the degree of its authorial power are both more willingly asserted and more subtly

negotiated. Pattiann Rogers's "Crocodile God" (*Song* 107), for example, features a crocodile whose expression of divinity evolves from an ironic, crudely anthropomorphic figure, that of the Egyptian Crocodile God Sobek, adorned with trinkets and "oiled for beauty," to the lyrical description of his very animal "head" and "hiss" which "cause us to love him." The poem's narrative reveals the presence of an actual animal body within the idol: it smells (of salt clams), is warm, makes noises, and retrieves manufactured objects from the bottom of the swamps. Therefore, its representation as Sobek appears at first to be a human deed, as we pass from casually noticing that "From two fingers he dangles trinkets, /A ringed cross snapped from dark river silt" to the grotesque anthropomorphism of:

Sandalless,
He may swagger in his grand bodice,
Displaying mosaic wrist bands, biceps bracelets,
His sash relaxes navel high on his slender hips,
Yet this attempt at anthropomorphism through typical Sobek attributes fails, and the poem concludes that it is not the anthropomorphized image of an idol, but the crocodile's body in all its materiality (if such a claim at objectivity is possible) that makes it a god :
But it is his head,
Green as moss, bumpy as bark,
And the corners of his smile, the scaley cheeks;
It is the tilt of his long toad-spotted snout,
The exposure of numerous teeth in his cold pink smirk,
The slit-eyes (he never wonders)
And the hiss of his breath,
Smelling of salt clams, old blackbones,
That cause us to
Love him.

The whole poem can be seen as an attempt at negotiating the agency of the crocodile, its ability to move beyond or retreat from the role of a passive idol, "oiled for beauty" to *make himself a God* causing "us to / love him" and the poet to write about him.

"Crocodile God" was first published 24 years before "Address: The Archaeans," so that we cannot say that the former answers to the latter, but the recurrence of certain actions across them (breathing, and carrying a cross, actions that in both poems are construed as eliciting empathy) still make for noticeable correspondences. A breath-like rhythm informs "Crocodile God," which starts with an image of swelling ("His bronze calves swell like the bellies / Of round-golden fish") followed by a "relaxing" in the third stanza ("his sash relaxes navel-high") and the "hissing" in the last stanza, which makes the breathing more material as it can be heard, as well as less akin to a human one. While breathing is the human action that is explicitly absent from the archaeans' behaviour, "more mutable than breathing and vanishing," "Crocodile God" uses a defamiliarized version of it so that it can become an attribute of the crocodile, as well as a slow, underlying movement in the poem, coming out explicitly in the hissing in the last stanza.

At its most anthropomorphic, the crocodile as Sobek parodies the cross-bearing refused to the archaeans ("no one has ever carried a cross anywhere"), dangling from his fingers a "ringed cross / snapped from the river silt." The parody implies that there must be a third way, between no cross-bearing (archaeans) and mock-cross bearing (fake crocodile idol), for nonhumans such as the "real" crocodile to "bear a cross," or, in other words, to exert one's agency in a way that matters. This form of agency wildly differs from that of microscopic beings, and even more interestingly, takes microscopic agency as a counter-paradigm against which the crocodile pitches his own actions. Indeed, in the first stanza, the crocodile is said to be "oiled" like an idol, as if the enhanced surface of its skin barred any form of parasitic invasion. However, the protection is flawed, as the crocodile is colonized by instances dominating its movements: "flashing little fins, ripples of silk tails"; a form of parasitic agency is present, yet the crocodile is a host rather than an agent in that relationship. A large part of the crocodile's actions also consists in extracting all sorts of lost objects from the river silt: the "ringed cross" aforementioned, but also the "two-footed cane / dredged from the bodies of snails and eels" in the swamps. In letting itself be adorned with Sobek's attributes, the crocodile undoes symbiotic relationships present in the environment, such as the union of snails and eels with a cane which may form their vertebrae. The rest of the poem sees the agency of the crocodile build itself in a manner just as indirect, in reactions to parasitic invasions. The crocodile's parade (he "swaggers," "displays," etc.) is so flagrantly anthropomorphic that the colonization of the animal body by a human shape appears almost as explicit as the image of the parasitic movements under his skin.

This leads us to the question of the crocodile's authorial agency: the possibility of considering the crocodile as partly responsible for the form of the poem appears, for the usual identificatory reasons, less absurd than in the case of a DNA strand or an archaean. However, possibly because the idea may be taken more seriously, negotiations are more arduous and a struggle between human and nonhuman voices dominates the structure of the poem. If one takes as a premise that the crocodile *matters* in itself in the poem, and not only in what it says about humans (in a typical animal studies approach), this struggle is easily translated into parasitic terms. For a form of nonhuman voice to make itself heard in the poem, the crocodile's presence must open itself to the human form without being thoroughly colonized by it. While the third stanza features a completely anthropomorphized crocodile, whose voice, if it lets itself heard, is too humanized to be "true," the last stanza (quoted earlier, starting with "but it is his head...") shows the right balance between a human and a nonhuman voice in the poem: there is some anthropomorphism, as in the "smirk" of the crocodile, yet the comparisons are held within the crocodile's environment (the "bark," the "toad," "the salt-clams") so that they appear almost metonymic, and the numerous alliterations (s and t) become imitative. The language is slightly defamiliarizing, but not hermetic: the "right" amount of human invasion into the animal, or of nonhuman invasion into the human, may have been found, and allows for the voice of the crocodile to be heard. A form of parasitic symbiosis, therefore, appears particularly adequate to describe the workings of authorial agency in the poem.

This notion of a right amount of agency (authorial or not) informs the dynamics of "Great Bole" by Les Murray (29) to an even greater extent:

Needling to soil point
Lengthens me solar,
my ease perpendicular
from earth's mid ion.

Health is hold fast,
infill and stretch.
Ill is salts lacking, brittle, insect-itch.
Many leaves numb
in tosses of sear,
bark-split, fluids caramelled,
humus less dear,
barrel borer-bled.
Through me planet-strain
exercised by orbits.
Then were great holding,
earth-give and rain,
air-brunt, stonewood working.
(...)

In no one cell
For I am centreless
Pinked a molecule
Newly, and routines
So gathered on
That I juice away all
Mandibles. Florescence
Suns me, bees and would-bes?
I layer. I blaze presence.

As in Rogers's "Crocodile God," the poem narrates the loss and retrieval of a nonhuman being's agency. The first two stanzas describe the tree organizing the world around itself ("needling to soil point") and finding itself in full possession of its agential power. This control, however, becomes more uncertain when illnesses and parasites are evoked: "Ill is salts lacking, brittle, insect-itch." In the following three stanzas, the tree loses its agency as it becomes subject to forces transcending it ("through me planet-strain / exercised by orbits"). Finally, in the last stanza, the tree has retrieved the ability to act against some of the competing agencies ("I juice away all mandibles"). Furthermore, the nonhuman agency whose retrieval motivates the poem is, here as well, reminiscent of microscopic agency. The tree claims to be "centerless," undermining the traditional use of trees as symbols of the organic form, with a trunk from which roots and branches expand, and encouraging instead a horizontal mode of being reminiscent of viral ones. The syntactic structures in the poem support this image: the opening phrase, "Needling to soil point / Lengthens me solar" features a tree in the first person that is both the subject of "needling" and the object of the "lengthening," an action performed, according to the syntax, by the "needling" and semantically by the sun. The tree, its environment (the sun), and its actions, let agency circulate. Similarly, the phrase "Florescence suns me" in the last stanza weaves together three potential agents, the tree

which is blossoming, the “florescence” which “suns” the tree, and the sun which, semantically, makes the tree blossom. This horizontal and circulating agency is also present in the consistent depiction of the tree’s relation to its environment as a parasitic one, with “elements water-brought [...] enveloping [it],” and colonizers invading it, “insect-itch,” “barrel borer-bled,” triggering chemical consequences such as “fluids caramelled” and reactions such as “juic[ing] away all mandibles.” To a greater extent than in “Crocodile God,” then, the presence of parasitic agency is necessary to negotiate the fluctuating degree of agency of the tree.

As in “Cell DNA,” the “Great Bole” speaks in the first person. While the possibility of an authorial agency was easily discarded on the part of the DNA strand, the illusion of hearing the tree’s “voice” is more successful here. A closer look reveals that the tree’s degree of agency and the poem’s intelligibility both fluctuate in parallel trajectories. As the tree appears “in control” in the first two stanzas, the poetic language is both defamiliarizing and intelligible, as at the end of “Crocodile God.” When the tree’s level of agency decreases in the following three stanzas, so does the degree of intelligibility: “great holding” is quite a hermetic image, and so is the whole of the fourth stanza. Unlike “Crocodile God,” in which the crocodile’s colonization by a human shape implied perfect intelligibility, here, both “human” language and tree seem to suffer from the loss of control depicted, as if the tree’s loss of agency did not happen to the benefit of a “human” attribute of language, its intelligibility. As the “Great Bole” recovers some control in the last stanza, the last line, “I blaze presence,” features a poetic language that has reached a perfect balance between a human and a nonhuman voice. Indeed, “presence” appears as a human abstraction while “blaze” is the odd treatment given by the nonhuman instance to this presence. This last line almost assumes a performative dimension as it lets the presence of the tree show through.

Thus, while “Crocodile God” shows a parasitic kind of symbiosis between human and nonhuman authorial instances, here, the human (the poet, or poetic language) works together with the nonhuman (the tree, or poetic object) in a relationship that may be symbiotic, but of the mutualistic kind, since the tree’s loss of agency does not favour but rather alters the human quality of the poem, its intelligibility. The mutualistic quality of this symbiosis, where what is beneficial to one party is beneficial to the other, enhances the impression that something of the tree’s voice is heard, making this poem sound like a human/nonhuman coproduction. Thus, whether it be a parasitic symbiosis as in “Crocodile God,” or a mutualistic one as in “Great Bole,” the paradigm of a symbiosis between human and nonhuman voice or form turns out to be very relevant to describe the authorial power as it appears in those poems: it conveys the reader’s impression of a horizontal relationship, with contamination, loss and gain of agency in each of the instances.

II. Microscopic vs animal authorial agencies: Aaron Moe, Christian Bök

In the second part of this study, I would like to take a closer look at more explicit attempts to transfer authorial power to animals, on the side of perceptible nonhuman beings, and to a bacterium, on the side of microscopic ones. The American critic Aaron Moe punctuates his study on poetry, *Zoopoetics* (2013), with poetic and argumentative

interludes, where he focuses on examples of what he names an animal *poiesis*. The gestures of beluga whales, owls, horses and elephants are closely examined and evoked in an elegiac mode when they express meanings or feelings. Yet Moe faces a problem of definition: what corresponds, for nonhuman animals, to the writing of a poem for humans? Moe sees *poiesis* in the mourning gestures of elephant and owls, the race horse's bodily communication to its jockey, the mimic octopi and beluga whales' imitations of other species, and the unexpected flourish of a cat. While there is an underlying unifying principle of non-utilitarian communicative gestures, it is not spelt out as such, possibly because of the poetic status of those texts. Reading those gestures as poetic gestures demands a great deal of imagination, or as Moe puts it himself, speculation. He admits twice that he is speculating (91, 145) and feels the need, when reading into the gesture of an elephant mourning her mother, to deny anthropomorphism: "she gestures along the teeth of the dead matriarch's skull, and it suggests (and I do not think this is anthropomorphizing) a sense of loss, a desire to say hello, and an existential grappling with the absence of Emily through grappling with the presence of her remains" (118). Indeed, Moe introduces his work by the following statement: "*Zoopoetics* assumes animal agency. I recognize, though, that many humans still regard animal agency with circumspection, and so in what follows, I take time to defend it." (9) I do adhere to Moe's point of view, and I find his "interludes" powerful, but their argumentative difficulties come from the fact that we do not have the theoretical tools to establish the possibility of a nonhuman *poiesis*. It may be why Moe chose this semi-poetic, and semi-argumentative status: in any case, through patient observations and powerful invocations (such as the beautiful account of the mourning of elephants), Moe patiently tries to establish it, and inevitably faces difficulties in doing so.

Interestingly, a parasitic mode of agency appears several times in these attempts. When the race horse speaks to its jockey through a form of body language, Moe comments: "the symbiosis emerges as horse and jockey read the bodily text that emerges between them," (3) and insists on the image of symbiosis. Mimic octopi and beluga whales are said to reach a form of *poiesis* by the attentive imitation of other species which extends their repertoires of gestures and signs: the mimic octopi imitate other marine creatures, "eight buoyant arms ready to flare into new forms, including venomous sea snakes, toxic flatfish, flounders, and more." (33) Beluga whales imitate the sounds of their human tamers to the point of deceiving them: "like the poet who discovers new forms of poetry through an attentiveness toward other animals, the beluga whale discovered a new way to manipulate his vestibular sacs. [...] if they were humans, they could write sonnets, haikus, and free verse with the same ease as composing graphic novels and an obituary." (91) Though Moe does not make the link himself, these accounts of animal mimesis are reminiscent of certain parasites mimicking other organisms or food to be eaten by other hosts in which they can pursue their life cycles, and extend the range of their influences, though in that case the gesture is more utilitarian than poetic. Such associations may occur to the reader, and surely do in the case of the mention of symbiosis : speaking of processes which recall parasitic and microscopic agency may thus help support the possibility of an animal *poiesis*.

In the *Xenotext* project, the Canadian poet Christian Bök entertains the idea of a literal transfer of authorial power to a bacterium. As with poems *about* microscopic beings,

negotiations around the authorial power at play in the process are more contrasted than those of Moe's zoopoetics. A few years ago, Bök set out to insert a sonnet he named "Orpheus" into a bacterium's genome. Then, the bacterium emitted a protein encoding a response to this poem and forming another poem, which he named "Eurydice." The genome and the protein can be decoded following the same alphabet, devised by Bök and named the "xenocode." The first sentence reads: "any style of life / is prim." The bacterium's response to it reads: "the faery is rosy / of glow^[1]".

Beyond the enchantment of reading lines presented as generated by a bacterium, what is of interest to this study is that the rhetorics around the project (a book, an article in an academic journal, interviews, etc.), is oxymoronic when it comes to defining the authorial source of the poem. The following claim encapsulates this oxymoron: "I hope that my poem might urge readers to reconsider the aesthetic potential of science, causing them to recognize that, buried within the building blocks of life, there really does exist an innate beauty, if not a hidden poetry – a literal message that we might read, if only we deign to look for it" (Bök, "The Xenotext Experiment," 231). In the tradition of positivism, nature is "out there": passive, waiting for an almighty scientist to decipher it and become the "author" of the discovery. However, the idea of "a literal message" also constructs life as an author itself, all the more as no mention is made of a supernatural instance lying behind those messages. More explicitly, Bök endorses both claims when he speaks or writes about his project. In the article presenting his experiment, the bacterium is construed as passive, only providing grounds for humans to widen their aesthetic experiences:

The genome can now become a vector for modes of artistic innovation and cultural expression. In the future, genetics might lend a possible, literary dimension to biology, granting every geneticist the power to become a poet in the medium of life. In this spirit, the Xenotext Experiment is a literary exercise that explores the aesthetic potential of genetics in the modern milieu, doing so in order to make literal the renowned aphorism that "the word is now a virus" (Bök, "the Xenotext Experiment," 227).

He also mentions the bacterium as an instrument, "a useable machine to write a poem" (Bök, "the Xenotext Experiment," 229). In this frame, the bacterium is held as such a passive element that it may be affected by the poet's manipulations, a consequence Bök is trying to avoid, "so that the encoded, genetic text can easily fit into the genome without compromising the function of the organism itself" (229). Unsurprisingly, these constructions of a passive bacterium go along with a recognition of the poet's extensive agency in the process. The quality of the targeted bacterium (while the poem has so far only been successfully inserted into *E. coli*, Bök is working towards inserting it into *D. radiodurans*), extremely resistant to hostile environments and predicted to outlive humanity, only accentuates the immense hubris of the poet, whose *oeuvre* would live on for millennia. Bök indeed recognizes "the ominous conceit of the poet" (231), and quotes a range of scientists who see DNA as a possibility to preserve human culture against planetary disasters (228).

However, Bök also insists on the bacterium's authorial power. The bacterium

“interprets” the poem inserted into its genome and “builds” another one (Bök, *The Xenotext: Book 1*, 150). He often underlines the heavy constraint imposed onto the project by the bacterium’s expression of the genome: it has taken him four years to find, among millions of possibilities, a combination of texts working on both sides of the process (an intelligible text yielding, according to the same code, another intelligible text)[2]. In that sense, he acknowledges the agency the bacterium has exerted over the creative process leading to the poems. Finally, Bök claims that nowadays, more than a proper creator, the poet is “a host to the germ of culture,” which is exactly the role he has been ascribing to the bacterium all along his project:

My project merely highlights the degree to which the modern, social milieu has now taken for granted that the discursive structures of epidemiology (as seen, for example, in such notions as “viral marketing” or “viral computing”) might apply to the transmission of ideas throughout our culture. If the poet plays “host” to the “germ” of the word, then the poet may have to invent a more innovative vocabulary to describe this “epidemic” called language. (Bök, “The Xenotext Experiment, 231)

Even here, the handling of authorial agency is ambivalent: Bök compares the bacterium and the poet, both “host” to the germ of language, but the bacterium’s authorial status is comparable to the poet’s only in so far as they are passive receivers of an external input standing as the primary holder of authorial power. Linking that statement with the *Xenotext* experiment shows that while the claim implies that the experiment has literalized the metaphor of culture as germ implanted into authors/poets, Bök’s practice has reversed the process: the germ is the host which the poet parasitizes by implanting genes into it, thus acting as the ultimate holder of authorial power.

A few years earlier, Eduardo Kac’s *Genesis* project had already investigated bacterial authorial agency by inserting a sentence from the Bible about man’s mastery over nature, through various codings, into the genome of the same bacteria. Participants were then able to direct UV light onto the exposed bacteria, causing it to mutate. The mutated bacteria then displayed a different gene from the one originally inserted by Kac, and when de-coded, showed alterations to the original sentence. While it is arguably more successful in lending authorial agency to the bacteria as the result is not entirely predicted by the artist, the mention of the gene inserted as the “artist’s gene” and the fact that the bacteria do not only respond to that gene but to UV light projected onto them and entirely controlled by yet another human agency, that of web participants, makes an assessment of the agency at work in this experiment even more contrasted: bacteria appear both more agentive and more subjected to the human agency. This assessment will not be taken further for want of space, but it so far confirms the tendency to contrast at work in poetic attempts to lend authorial power to microscopic beings.

Even though they come from various backgrounds, those poems and poetic reflections display a common behaviour when it comes to their attribution of agency to the nonhuman world: they grant either none or very markedly contrasted agency to microscopic beings, but strive to ascribe a form of agency, necessarily nuanced, to other nonhuman creatures. Besides, the agency of microscopic beings (viral/parasitic) is drawn

upon in attempts to establish the agency of other nonhuman beings, as if the reality of microscopic agency was necessary to assert the reality of other agencies. These patterns may be explained by a dichotomy which I believe to be prevalent in our culture. On December 22, 2015, *The Guardian* titled: “‘Almost too late’: fears of global superbug crisis in wake of antibiotic misuse.” A few days later, a column entitled “Whatever happened to animal rights?” deplored the 300 hunts held in the UK for Boxing Day and concluded: “But hunts are still battlefields, if you’re the fox or the hound. Abattoirs likewise – albeit with the odds very much in one party’s favour.” While the first article underlines the momentous fear that microscopic agency triggers in our societies, the second one makes a point in establishing the agency, however feeble, of the nonhuman beings involved in hunts or slaughterhouses – their being a “party” in those unequal fights. The agency of microscopic beings such as viruses and parasites is acknowledged, and largely feared by humans, while the agency of perceptible non-human beings (such as trees, plants, or animals) is often seen as hampered by human power and a society which has long been negating their ability to act. This dichotomy, between uncontested agency for microscopic beings, and fragile agency for many perceptible nonhuman creatures, undoubtedly needs further theorization, but it may explain our poems’ stance: they would then be playing a corrective part, granting either none or very markedly contrasted agency to microscopic beings, but striving to ascribe a form of agency, necessarily nuanced, to other nonhuman creatures. Finally, for the critic or poet setting out to describe attempts to transfer authorial power to nonhuman beings, viral/parasitic agency proves an especially fruitful metaphor, for various possible reasons: it may be, here as well, because it is often uncontested, and therefore grants a degree of reality to that transfer whose assertion is otherwise fragile; the marked contrast of a viral agency (the subject does nothing visible yet provokes drastic consequences), may be akin to the agency of information (which provokes innumerable other events by its mere presence); the idea of a viral agency may fit very well our post-death-of-the-author era, as Bök tries to articulate in the last statement quoted above; and finally, resorting to microscopic agency when establishing other nonhuman beings’ agency appears more as a metonymic move than a metaphoric break, as it only consists in applying one part of the living world’s agency to another part of it. These suggestions remain to be explored.

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[1] For a technical but accessible explanation of the process please see:

<http://www.americanscientist.org/blog/pub/xenotext>

[2] " 'The constraint is so onerous that there's not a lot of freedom to move around,' he says. 'I didn't get to say whatever I want.' " (Tamburri)