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# THE POST-HUMAN LYRIC: DIFFRACTIVE VISION AND THE ETHICS OF MATTERING IN ADAM DICKINSON'S ANATOMIC

#### PAULINA AMBROŻY<sup>1</sup>

#### ABSTRACT

The aim of my inquiry is to discuss Adam Dickinson's revisionist approach to the lyric autobiography as shown in his most recent volume *Anatomic* (2018a). Informed by an eco-critical sensibility, the biotechnological gaze, and post-humanist notions of subjectivity, this highly experimental conceptual project reveals porous boundaries of the autobiographical self caught up in the entanglement of the mind and matter. Based on burden tests of the poet's own bodily fluids, *Anatomic* offers a philosophical speculation on the nature of the human, asking us to go beyond anthropocentric positioning of the subject and to consider ethical alongside onto-epistemological implications of this new direction. The methodology employed in my analyses of Dickinson's poems derives from the influential notions of agential realism, diffractive vision, and intra-action formulated by Karan Barad – a trained quantum physicist and feminist philosopher working in the field of science and technology. Barad's theories fuel New Materialist paradigms of thought as they propose the inherent indeterminacy of matter as well as question the established views of identity and the social. The particular focus of my interrogations will be the relationship between diffractive perception and the medical gaze used by the Canadian conceptualist to see himself non-anthropologically and thus to destabilize the perimeters of the autobiographical self.

Keywords: Adam Dickinson; Canadian conceptual poetry; the post-human lyric; New Materialism; Karen Barad; diffractive vision.

Contemporary avant-garde poetry has ventured into the field of science, eagerly embracing new developments, discourses, and paradigms offered by quantum physics, Heisenberg's uncertainty principle, computational systems, environmental studies, biology, and medical sciences. This fruitful interchange has intensified particularly in recent years, as the language and methodologies of science have found their ways into radically experimental conceptual projects intended to forge

Faculty of English, Adam Mickiewicz University, Poznań, Collegium Heliodori Święcicki, Grunwaldzka 6, 60–780. apaulina@amu.edu.pl

alternative forms of epistemic inquiry, lyric expression, and representation. This trend is fuelling the work of North-American avant-garde poets dissatisfied with the limitations of the lyric form and its humanist ideologies. As proposed by the Canadian conceptual artist and poet, Christian Bök,

[t]he future of poetry may no longer reside in the standard lyricism of emotional anecdotes, but in other exploratory procedures, some of which may seem entirely unpoetic, because they work, not by expressing subjective thoughts, but by exploiting unthinking machines, by colonizing unfamiliar lexicons, or by simulating unliterary art forms. (Voyce 2007: e8)

To free poetic diction from the constraints of expressive lyricism and turn art into a form of epistemological activity, Bök and other poets, such as Juliana Spahr, Craig Dworkin, Evelyn Reilly, or Lisa Robertson, employ 'pataphysical' procedures – scientific methods and experimental restrictions which, in Bök's view, "generate both artful liberty and poetic license" (Voyce 2007: e21). A good example of this practice would be Bök's early book *Crystallography* (1994, revised in 2003), in which the Canadian conceptualist "uses the language of geological science to misread the poetics of rhetorical language", or his more recent project – *The Xenotext* (2015) – which "explores the intersection between poetry and biotechnology" (Voyce 2007: e2).

Informed by a similar pataphysical method, namely microbiological and chemical burden tests on the author's own body, Adam Dickinson's Anatomic revisits the genre of lyric autobiography and the underlying concept of the uniform self, opening them up to new levels of interiority, intimacy, and relationality. By graphing the self through "the stories of chemicals, metals, and organisms that compose [the poet's body]" (Dickinson 2018a: 9) Anatomic insistently takes us outside the familiar and bound territories of the expressive lyric into the potentialities and intensities of "the transversal" self, heavily and inseparably entailed in the shifting and pliable matter. The intention of this article is to explore Dickinson's use of the medical gaze and technological apparatus to problematize the entanglement of the mind and matter and to unsettle the boundaries of the human self. My focus on the Canadian poet stems from the topicality of his work, especially when it comes to the "environmentally inflected" (Smith 2013: 16) existential as well as ethical questions it poses. However, the article has been also inspired by a relatively small number of critical studies devoted to Dickinson's experimental projects (here I mean especially his two last conceptual volumes – *Polymers* and *Anatomic*) which in my view require

I am using the term "transversal self" after another posthumanist philosopher, Rosi Braidotti, who defines subjectivity as "a transversal entity, fully immersed in and immanent to a network of non-human (animal, vegetable, viral) relations" (2013: 193).

a more sustained and theoretically conscious inquiry. Dickinson's poetry, informed by a wide range of aesthetic, theoretical, and philosophical concerns, has so far attracted limited critical attention and many significant aspects as well as contexts underlying his writing remain understudied. Among the inquiries which have fuelled my own, I would like to mention Lynn Keller's most recent monograph *Recomposing ecopoetics: North American poetry of the self-conscious Anthropocene* (2017), in which the critic discusses Dickinson's *Polymers* and Evelyn Reilly's *Styrofoam* in the broader context of ecopoetics, problematizing their use of scientific methods within the New Materialist framework. *Polymers* are also evoked by Mark Smith in the edited collection *Time in time: Short poems, and the rhetoric of North American avant-gardism* (2013), where the critic addresses Dickinson's ecocritical sensibility within pre-Romantic notions of natural order which envision the universe as a complex "multitudinously and harmoniously interconnected system" (Smith 2013: 16).

Apart from Keller's more substantial, richly contextualized chapter-long analysis of *Polymers* and the few critical reviews of Dickinson's works (e.g., Lori Cayer's "Poetry meets plastic" from The Winnipeg Review (2013) which pays attention to scientific discourses permeating his aesthetic practices in *Polymers*; and Scott Slovic's online essay "Too small, too slow: Making toxicity poignant through poetry" (*The Art of Compassion* 2019) which focuses on the themes and forms of toxicity in Dickinson's Anatomic and Ryan Walsh's Reckonings), the studies rarely go beyond a general survey of the poet's main aesthetic and philosophical concerns. Hence, what I propose to contribute to those discussions is a closer and more systematic look at the interdisciplinary aspect of Dickinson's work, in particular the relationship between science, literature, and philosophy, with a special emphasis placed on selected intermedial and paratextual elements employed by the poet. The rich multimodal character of Anatomic,<sup>3</sup> though evoked in most of the cited reviews, has not been sufficiently theorized and contextualized – my intention thus is to fill that gap and offer a more in-depth look at this significant feature of the volume.

The methodological framework of the following inquiry has been inspired by New Materialist redefinitions of subjectivity, in particular Karen Barad's notions of agential realism, diffractive vision, and intra-action. Elsewhere,<sup>4</sup> I have

Lynn Keller explores hybrid discourses and multi-generic aspects of Dickinson's previous volume *Polymers*, seeing them as "ecopoetically focused conceptualism" whose aim is to "demonstrate an alternative to conventional realism and its deference to mimetic scientific renderings of ecological processes (2017: 76).

Here I mean my unpublished article titled "The limits of my enzymes / mean the limits of my world": Ecologies of the transversal self in Adam Dickinson's *Anatomic*". I rely there on Deleuze's and Guattari's concept of molar and molecular aspects of material reality to problematize the tension between material and cultural territories of the self.

discussed Dickinson's project in relation to Deleuze's concepts of matter and body, referencing briefly some of Barad's writings, but, as indicated above, the volume's complexity calls for further, more detailed exploration of the subject and deeper engagement with the posthumanist thought. Thus, this article is an attempt to expand the field of the previous inquiries, zooming in on its hitherto understudied aspects related to Dickinson's use of the visual media. Building on the preliminary discoveries based on the New Materialist thought, I would like to narrow down the focus to the relationship between diffractive perception, as conceptualized by Barad primarily in her monograph Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning (2007), and the medical gaze used by the Canadian poet as a part of his pataphysical experiment. As will be argued, Barad's distinction between diffraction and reflection corresponds to the shifting perspectives in Dickinson's work and allows for a better understanding of the poet's transdisciplinary, ontoepistemological project aimed at a reconfiguration of the lyric subject as an event, a site of ongoing intra-agential activities.

The impulse behind the Canadian poet's experiment stems also from his engagement with ecocritical discourses which, in Scigaj's apt words, conceive of nature "as a dynamic, interrelated series of cyclic feedback systems" (1996: 5) and heighten our awareness of ecological interconnectedness of all species. Given the above, the goal of the following analyses is to explore the ethical implications of the technologically enhanced insights enabled by the poet's pataphysical engagement with the "volatile chemical traffic" and the "horrifying crowds" (Dickinson 2018a: 9) inhabiting his own body. My contention is that Dickinson employs microscopic images and microbial screening to reveal diverse "agential cuts" (Barad 2012a: 46) that simultaneously stabilize and challenge the autobiographical boundaries of the lyrical subject, along with the concomitant notion of the knowability of individual histories, experiences, and memories. What is more, Dickinson reconceptualizes lyric discourse to respond to the cultural, intellectual, and environmental concerns of our times which increasingly question the centrality of the human self in the multispecies landscape of the Anthropocene.

## 1. The method: Agential realism, diffractive vision, and the ethics of mattering

Karen Barad's studies of the relation between quantum physics and social reality have many interesting implications, but in the following analyses of Dickinson's *Anatomic* the focus will be placed on her notion of "agential realism" and the related optical metaphors which problematize the inseparability of the observed and the agencies of observation. Influenced by Niels Bohr's epistemological insight that "we are a part of that nature that we seek to understand" (2007: 26), the philosopher sees knowing as an integral part of being, pointing also to the

ethical consequences inscribed in our frameworks of understanding. In her seminal book *Meeting the universe halfway*, Barad asks us to rethink the notion of reality and our relation to it as she formulates the concept of "agential realism". The major tenet of her concept is that "matter plays an agentive role in its iterative materialization" (Barad 2007: 177). In her earlier study, the philosopher defines agential realism as "a thoroughgoing critical naturalism, an approach that understands humans as part of nature and practices of knowing as natural processes of engagement with and as a part of the world" (Barad 2003: 288). According to the American philosopher, matter is not a mere object of study but remains forever entangled in "agencies of observation", playing an active role in the differentiation of phenomena (Barad 2007: 72). With a goal of "calling into question an entire tradition in the history of Western metaphysics" (2007: 19), Barad rejects the concept of an individual being with clear and fixed boundaries, and proposes to see all phenomena as "mutually entangled" material-discursive practices (2007: 33).

Revising Bohr's position, which clings to the anthropocentric notions of control as it assumes the possibility of disentangling the object and the subject of study with the right measurement tools, Barad proposes to go beyond the concept of "interaction", which envisions independent entities before an action begins, and to replace it with the concept of "intra-action" whereby "agencies are only distinct in relation to their mutual entanglement" (2007: 33). The latter notion reconfigures material reality, whether human or non-human, as inherently "agential", where agency is understood as "a matter of intra-acting ... an enactment, not something that someone or something has" (Barad 2007: 214). Rather, it is "a space of possibility opened up by the indeterminacies entailed in exclusions" (Barad 2007: 182). In other words, all phenomena are not so much inter-active as "intra-active" and implicated in the ontology of the atomic world. At once a part of the inherent indeterminacy of matter and agents of its ontic determination, they cannot be treated as isolated entities observable and quantifiable from the outside. Instead, there is no constitutive outside, no absolute exteriority, as matter ceaselessly acts in and on us, being always already entangled with our ways of understanding. In Barad's own words,

Matter is substance in its intra-active becoming – not a thing, but a doing, a congealing of agency. Matter is a stabilizing and destabilizing process of iterative intra-activity. Phenomena come to matter through this process of ongoing intra-activity. That is, matter refers to the materiality and materialization of phenomena, not to an assumed, inherent, fixed property of abstract, independently existing objects. (Barad 2007: 210; italics in original)

This conception of material reality has significant implications for the habitually anthropocentric paradigms of knowledge and self-knowledge, since it not only questions the nature/culture divide but also reveals an inseparable conflation of the human and the non-human, restoring epistemic "salience of matter" (Calvert-Minor 2014: 124) and displacing the humanist subject from its central position in the semiosphere. In Barad's post-humanist scheme, "[a]gency is cut loose from its traditional humanist orbit. Agency is not aligned with human intentionality or subjectivity ... [And objectivity] has the added benefit of not depending on a human observer" (2007: 174, 235). Agency is thus an ongoing activity of matter realized in movements, relations, repetitions, structures, feelings, words, and things. What stabilizes, albeit provisionally, this continuous performativity of phenomena, are "agential cuts" (Barad 2012a: 46) which can be defined as doings which "cut together/apart" the agentic qualities of matter, diffracting and making visible diverse types of agencies. In Barad's own words, "agential cuts do not mark some absolute separation but a cutting together/apart – 'holding together' of the disparate itself' (2012a: 46).

To further clarify her methodology, Barad distinguishes between "reflection" and "diffraction" – optical metaphors referring to opposite ways of studying nature. The first mode, dominated by scopic regimes of Western anthropocentrism, sees phenomena as discrete units with clearly definable boundaries. This mode, rooted in Newtonian physics, fuels mimetic paradigms of representation informed by a humanist desire to delimit, comprehend, and control the perimeters of our being. The reflective approach leads to binary, oppositional categorizations of reality, creating unbridgeable ontological gaps between the subject and the object, the human and the non-human, the exterior and the interior. Barad explains the limitations of reflection in the following passage:

Reflexivity, like reflection, still holds the world at a distance. It cannot provide a way across the social constructivist's allegedly unbridgeable epistemological gap between knower and known, for reflexivity is nothing more than iterative mimesis: even in its attempts to put the investigative subject back in the picture, reflexivity does nothing more than mirror mirroring. Representation raised to the nth power does not disrupt the geometry that holds object and subject at a distance as the very condition for knowledge's possibility. Mirrors upon mirrors, reflexivity entails the same old geometrical optics of reflections. (2007: 87–88)

Reflection is thus limiting because it focuses on sameness and discreetness of the material phenomena. The concept of diffraction, introduced by the philosopher as an alternative derived from the discoveries of quantum physics, challenges this reflective bias and offers a new mode of perception and analysis. "Diffraction attends to the relational nature of difference", Barad notes (2007: 72) and thus seems better fitted for the study matter as an indeterminate potentiality, "an intraactive becoming" and "a congealing of agency". The philosopher builds her

theoretical paradigm on Donna Haraway's definition of diffraction introduced in the latter's essay "Situated knowledges" (1991). The author of *Cyborg: A manifesto* uses the concept of diffraction to describe a method of apprehending an inherently indeterminate world and its unstable, ever-shifting patterns:

Diffraction patterns record the history of interaction, interference, reinforcement, difference. Diffraction is about heterogeneous history, not about originals ... Unlike reflections, diffractions do not displace the same elsewhere, in more or less distorted form, thereby giving rise to industries of metaphysics ... Diffraction is a narrative, graphic, psychological, spiritual, and political technology for making consequential meanings. (Haraway 1997: 273)

The quantum physical phenomenon of diffraction from which both those concepts derive refers to the behavior of particles and waves when confronted with other particles and waves within the same space and time. Upon encounter, particles bounce off in different direction, retaining their distinctive properties, whereas waves can occupy the same space and time as they come together, break up, combine and overlap, forming new patterns (Barad 2007: 76). The latter process is called "diffraction" and the patterns resulting from it are referred to as "diffraction patterns". The philosopher uses the example of wave ripples triggered by a stone thrown into a pool of stagnant water (Barad 2007: 83). As noted by Barad, unlike "an optics of reflection" (2007: 135) orientated towards sameness, diffractive insights "attend to and respond to the details and specificities of relations of difference and how they matter" (Barad 2007: 71). "Diffraction effects limit the ability of a lens (or system of lenses) to resolve the image. The greater the diffraction effects, the less determinate the boundaries of an image are" (Barad 2007: 377).

Although Barad's clear-cut distinction between reflection and diffraction is not unproblematic, her focus on emergence of difference and co-entanglement of matter and our ways of looking at it offers a useful conceptual trajectory for the following analysis of Dickinson's experimental volume and his attempts to revise the lyric tropes of interiority. What is crucial for my argument, Barad's "ethico-onto-epistemological" framework (2007: 25–26) allows for a reconceptualization of the human liberal subject outside the predominantly reflexive/representational space of the lyric. For Barad, diffraction is both an effective trope for describing epistemic relevance of matter and a transdisciplinary methodology which, as pointed out by Chris Calvert-Minor, allows her "to problematize and dissolve assumptive dichotomies" and position herself "against apriorism—the imputation of preconceived functions of epistemic agency, criteria for good/bad norms of rationality, disembodied views of objectivity, and abstract conceptions of truth into the already existing field of epistemic practices" (2014: 126). What is valid for this inquiry, a diffractive approach helps to uncover fluid entanglements as

well as intra-actions between poetry and science, reworking their boundaries and actualizing their new possibilities as well as ecosophical concerns.

Thus, the optical trope of diffraction and Barad's "diffractive" paradigm, which posits mutual entanglement of things, knowers, and instruments of knowledge, will be used to discuss Adam Dickinson's engagement with the material-discursive relationality of the autobiographical self. The choice of the method is further legitimatized by the fact that the Canadian poet has acknowledged his interest in posthumanist and New Materialist philosophies both in his essays and previous poetry books, e.g., evoking Catharine Malabou's studies of brain neuroplasticity in his volume *Polymers* (2013), and referencing Deleuze's concept of matter alongside Rosi Braidotti's notions of transversal self in his essay on pataphysics (2014). More importantly, however, the poet himself employs Barad's terms "diffraction" and "intra-action" in his recent essay "Prickly new cells': Diffractive reading and writing in Juliana Spahr's *The Transformation*" (2019). Defining "metabolic poetics", Dickinson references Barad's definition of a diffractive methodology as well as her quantum physics-based paradigms of philosophical inquiry.

Barad's method seems valid for the study of Dickinson's ecosophical purview also because of the ethical implications of her endeavor. "[E]thics", the author of *Meeting the universe halfway* observes,

is not simply about the subsequent consequences of our ways of interacting with the world, as if effect followed cause in a linear chain of events. Ethics is about mattering, about taking account of the entangled materializations of which we are part, including new configurations, new subjectivities, new possibilities – even the smallest cuts matter. (Barad 2007: 384)

By equating ethics, ontology, and epistemology, Barad proposes that we see our responsibility as intra-agential, and thus not as an ultimately condescending concern of the individual human self for the abstract and foreign Other, but rather as "the response-ability with others that transforms the ethical problem itself" (Thiele 2018: 2015). Since Dickinson's autobiographical project is profoundly ecosophical,<sup>5</sup> thus ethically oriented, this interesting reconceptualization of ethical commitment, which renounces anthropocentric ideologies of human "disturbance" (Barad 2007: 396) in the universe, has also proven helpful in my explorations of *Anatomic*'s relational ethics.

<sup>&</sup>lt;sup>5</sup> "Ecosophy", as explained by Bernd Herzogenrath, is a term used in environmental discourse to describe "an ecological philosophy with a clear ethical orientation" (2009: 10).

2. Seeing it diffractively: The self under the medical techno-gaze in Adam Dickinson's *Anatomic* 

As mentioned above, *Anatomic* is a pataphysical experiment. Dickinson explains his own understanding of the term in his essay "Pataphysics and postmodern ecocriticism," acknowledging its artistic roots to constraint-based Oulipo projects and Alfred Jarry's artistic practices which emerged from the College of Pataphysics in 1948 (Dickinson 2014: 133). "Pataphysical poetics," as viewed by the Canadian poet, "engage[s] the environment as a complex set of semiotic and symbolic relationships where diverse forms of signification and alternative realities and materialities interact" (2014: 137). In an interview in *Maple Tree Literary Supplement* (2018c), he expands this definition:

Pataphysics is defined variously as the science of imaginary solutions, the science of the particular, and the science of exceptions. It has its conceptual origins in the writings of the French proto-avant-gardist, Alfred Jarry. Historically, it has been a site of playful interaction between art and science, conscious of critiquing systematic, technocratic thinking by satirizing it and by employing its conceptual constraints. I see it as a potential creative-critical practice that stages collisions between disciplines in order to expose marginalized, exceptional perspectives that critique the effacing power of prevailing social and disciplinary attitudes. I see it as serious play. (Dickinson 2018c)

Fusing poetry and science, pataphysics involves "a variety of research-based, performance-oriented, and investigation-driven writing practices that embrace scientific experimentation, curatorial methods, speculative modes, multispecies, and polymedia approaches to these and other questions concerning human, nonhuman, and global metabolisms" (Dickinson 2019).

Thus, pataphysics equates art and science as meaning-making forms of expression and epistemological inquiry. Moreover, as observed by Keller (2017: 23), pataphysical procedures "broaden the linguistic and visual resources of [poetic] art", demonstrating "how art may illuminate science for a broader public, how art may be complicit with science's failures, and how art may offer valuably different ways of knowing the world that can complement those of science or counter science's limitations". Dickinson's own project is based on medical burden tests of his bodily fluids, chemicals, bacteria, and fungi that were conducted over a period of time. In the first introductory section of *Anatomic*, the poet describes the procedure in detail:

I wear multinational companies in my flesh. But I also wear symbiotic and parasitic relationships with countless nonhumans who insist for their own reasons on making me human. I want to know the stories of these chemicals, metals, and organisms that compose me. I am an event, a site within which the industrial powers and evolutionary

pressures of my time come to write. I am a spectacular and horrifying crowd. How can I read me? How can I write me? I collect my blood, urine, sweat, and feces. I send them to laboratories to determine the levels and types of chemicals and microbes I find. I get tested for hundreds of substances that fall under the following groups: Phthalates, Dioxin-like chemicals, PCBS, PFCS, OCPS, PAHS, PBDES, HBDS, Parables, BPA, Triclosan, additional pesticides, and twenty-eight heavy metals. I also tune in to the signal of my microbiome by swabbing various areas of my body for bacteria — hand, genitals, ear, nose, and mouth. I obtain a deep metagenome and virome characterization of a stool sample, plus additional marker gene sequencing (16 rRNA, 18s rRNA and ITS) to characterize not just the bacteria but also the viruses, microbial eukaryotes, and fungi in my gut (Dickinson 2018a: 9).

The central questions — "How can I read me? How can I write me?" — indicate at once the poet's anxiety about the possibility of self-knowledge and a reflexive desire to delimit and stabilize the autobiographical self vis-à-vis the indeterminate "spectacular and horrifying crowd" co-habiting his body. The medical procedure reveals levels of interiority inaccessible to the human eye, blurring distinctions between the human and the non-human and emphasizing the inherently entangled, transformative composition of the poet's subjecthood. Using hormone and its metabolic pathways as the structuring device for his bio-narrative, Dickinson opens his life story up to the often illegible writings and rewritings of its non-human organic and inorganic co-scriptors.

This section interrogates thus the poet's search for the answers to the questions about the legibility and the possible articulations of the self continuously diffracted by multi-species entanglement, co-scripting, and intraactive encounters. In *Reading autobiography*, Sidonie Smith and Julia Watson point out that, in the autobiographical act of writing, the roles of the observer and the observed collapse, fusing the subject and object of "investigation, remembrance, and contemplation" (2002: 1). This self-referential aspect of life narrative lends itself to a New Materialist interrogation, since it exemplifies the tension between epistemic and ontological aspects of material reality. Ways of knowing and being intersect in autobiographical genres, as aptly noted by Paul de Man in his essay "Autobiography as de-facement":

We assume that life produces the autobiography as an act produces its consequences, but can we not suggest, with equal justice, that the autobiographical project may itself produce and determine the life and that whatever the writer does is in fact governed by the technical demands of self portraiture and thus determined, in all its aspects, by the resources of his medium? (1984: 920)

In *Anatomic* Dickinson searches for the best form that would give shape to the intra-agential dimension of those intersections. "I had a lyric subject – in all its permeability – too deeply, metabolically interrogate. I finally settled on the prose poem and its emphasis on the sentence as one of the key formal modes of the

book", the poet explains in an interview (Dickinson 2018b). However, his search had not stopped there, for the poet interspersed prose poems with shorter, more abstract pieces mimicking the dispersal as well as condensations of microbes and chemicals in his body, adding also micro-fictions, laboratory notebook entries, and, what is especially relevant for my inquiry, images derived from his medical tests.

Dickinson's use of medical imaging invites an inquiry into the function of intermediality in contemporary avant-garde poetry. The particularly innovative aspect of the poet's approach is his employment of the microscopic gaze which decenters the human, breaks up the reflexive integrity of the self, producing "agential cuts" in human and non-human ontologies. The medical techno-gaze creates new modes of subjectivity which put to question "the matter narrative of the sovereign self" (Smith & Watson 2002: 3), since it instantiates the subject as a transversal, trans-corporeal<sup>6</sup> site, elucidating the ethical significance of agential realism along with a need to recognize the onto-epistemological implications of our boundary-making practices.

The technological gaze, Norah Campbell proposes, "uses specific methods to put its meaning together - impossible subject-positioning, the codification of flesh, a visualisation of scientific narratives and the aestheticisation of information" (2007: 3). Citing the seminal work of Laura Mulvey, Campbell defines the gaze as "the way in which the camera acts as the eyes and ears of the spectator, presenting a particular way of framing the world" (Mulvey 1992 [1975]: 748, qtd. in Campbell 2007: 3). This technologically enhanced framing is never neutral, for it assumes "a certain understanding of the world" (Campbell 2007: 3). As observed by Marco Annoni et al., the particular vision brought up by the molecular bio-technological gaze has uncovered "new ways of seeing old phenomena", providing also "means of creating new epistemic and meaningful objects of observation" (2012: 2). "The 'eyes' made available in modern technological sciences", Donna Haraway similarly argues, "shatter any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems, building in translations and specific ways of seeing, that is, ways of life" (1991: 190, emphasis mine). Dickinson is clearly tapping into the highly specific possibilities of medical imaging, hoping to go beyond the limits of the human eye and explore alternative, diffractive modes of truth about the material entanglements of his relational self.

The "impossible" biotechnological positioning of the self begins already on the level of *Anatomic*'s paratexts. The very title implies a dissection of the body

<sup>&</sup>lt;sup>6</sup> "Trans-corporeal" is a term coined by another New Materialist critic, Stacy Alaimo, who explains it in *Bodily Natures* as "interconnections, interchanges, transits between human bodies and non-human natures" (2010: 2).

rather than its integration and composition through a coherent narrative. Anatomy is a result of an incision meant to attack the body's integrity, go past the barriers of the self, and push against the limits of representation. The book's front cover, designed by Alana Wilcox, features Adolf Giltsch's lithograph of *Ascomycetes*, a type of mushrooms, here represented in microscopic close-up, as weirdly alluring non-anthropomorphic cell-like shapes against a dark background (fig. 1). The image pulls the reader into a mysterious and ephemeral biomorphic inscape whose origin and abstract codings are not immediately transparent. Trying to redefine the interconnections between the body and its eco-system, Dickinson teases us with a promise of an objective, scientific paradigm as the establishing principle of truth, but he also destabilizes this paradigm through aesthetic filters which, in a pataphysical spirit, work to transform scientific discourses.

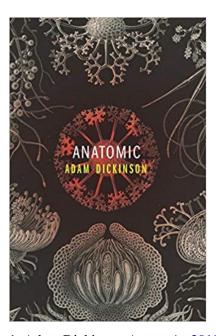


Fig 1. Adam Dickinson *Anatomic*. 2018a.
Front Cover. Designed by Alana Wilcox.

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And indeed, the promise of objectivity is quickly undermined by the next paratextual signal which serves to indicate a shift from reflexive to diffractive mode of perception. The frontispiece, for this is the paratext in question, is often reserved for the writer's portrait – an authenticating image belonging to the specular regime of representation and self-knowledge. In *Anatomic* it is replaced with the list of all chemical substances and microbiological organisms found on

and in the poet's body. This is a significant, decentralizing gesture in Dickinson's peculiar "song of myself", which pierces the uniform image of the sovereign ego and problematizes the lyric authority, revealing diverse intra-agentic forces and "their changing relationality" (Barad 2007: 92–93) that fuel the ongoing becoming of the subject. The non-hierarchical, anti-specular, and non-teleological catalogue, which next serves as epigrams for the prose poems, can be conceptualized as one of Baradian "agential cuts" which simultaneously delimits the agential forces informing the poet's corporeality and shows that the biochemical self cannot be contained or disciplined by any modes of technological surveillance or habitual aesthetic framing. Our voyeuristic desire to know, to penetrate the outer and inner boundaries of our being is frustrated at the start, as the ideal of the transparent body turns into a reflexive fantasy when we realize the complex processes and microforces of deterritorialization shaping our embodied lives as well as identities.

"I wear multinational companies in my flesh", the poet confesses at the beginning of his auto-dissection, echoing the opening lines of Whitman's Song of myself, in which the Romantic poet celebrates atomic interconnectedness of all beings, enjoys the "smoke of his own breath" and exposes his "hankering, gross, mystical, and nude" flesh to the transcendental powers of Nature (Whitman 2007 [1881]: 31, 34). And yet, Whitman's "uniform hieroglyphic" (2007 [1881]: 43), which integrates the body, the spirit and the song, breaks downs in Dickinson's ecosophical revision of the form. The Canadian poet's molecular and metabolic responses, which influence not only his physical condition but also affective reactions, are being shaped by infinite intra-agential activities: "energy technologies of [his] historical moment" (Dickinson 2018a: 9), illegible residues of environmental pollution, signatures of global political and climatic changes, as well as diverse effects of Western consumerist lifestyle. The focus on the permeability of the body and its entanglement in the scripts, mappings, and metabolisms of material reality leads into an unsealing of the sovereign self and an externalization of the internal beyond the individual agency: "The keys touch me when I type. My breath smells because other creatures live out their ends in my mouth. (...) My throat is sore because of a miniature life form that, when magnified, looks like a string of pearls (....) My fat collects signatures from one of the most profitable companies in the world" (Dickinson 2018a: 9). This is the post-humanist version of Whitman's poet-as-cosmos – the new membranous Body Electric co-scripted by endless decentralizing activity of transcorporeal "eco-others" (Braidotti 2013: 196). The human self-as-center and measure of all things is an illusion, an unsustainable fantasy, yielding under the pressure of nonhuman actors and their indeterminate scripts.

Significantly, the dominant trope that carries the poet's diffracted vision is that of hormone – involved in potentially explosive centrifugal energies which

work to mark and destabilize the boundaries of the individual self. The tension between clear demarcation and diffractive diffusion is embodied in hormonal "conjugations" of the subject:

A hormone conjugates its subject. First stimulus. It could be glucose in the blood, it could be the pervasive, uncontrollable fear of being poisoned. A sequence of events is set in motion. Insulin is produced to handle sugar. Sugar is made available to the blood. Either way, I am taking a deep dive into my own bodily fluids to try and read them. But the pool is an empty helmet. My magnified blood cells. My dark mirror stage. (Dickinson 2018a: 50)

The trope of deep diving contravenes the solipsistic and scopophilic surface glance – what the poet is after is not necessarily the integrity of reflection but a potentially self-obliterating unsealing of the self's contour to escape the anthropocentric constraints of identity and test its membraneous thresholds. "My gut is a tropical forest of microbes", the poet discovers as he continues his "plunge" past the barriers accessible to the naked eye. "Their cells, which cover my entire body, are at least as numerous as my own. These microbiota live on and within me as a giant nonhuman organ, controlling the expression of genes and the imagined sense of self maintained by my immune system" (Dickinson 2018a: 42). The "dark mirror stage", evoking Lacan's specular tropes used to describe the birth of the subject, further undercuts epistemological and representational desires – the darkness blocks perception and the metaphor of the empty helmet, like an empty signifier, produces a discomforting uncertainty where one might expect a specular access to the poet's 'interior'.

"The unconscious / is structured / like a hormone" (Dickinson 2018a: 49), the poet argues, again revising the famous Lacanian dictum about the relationship between the unconscious and language. Hormones, as noted by the poet himself in the prose poem "Outside inside", "have their own poetics" and "write to distant organs in response to chemical signals" (Dickinson 2018a: 76). In one of his interviews, the poet adds: "Hormones are dramatic phenomena; they respond to stimuli and produce effects. They are sequential sentences in cascading anatomical stories" (Dickinson 2018b). The "rhythms" of this endocrinal "prosody", the poet explains in one of the book's sections, "fuel digestion, reproduction, growth, and the general health of the body" (Dickinson 2018a: 76). The language of hormones is action – performative intra-activity which brings about a transformation of the body's 'contents'. The continuous transformations at the interface between outside and inside fracture the human body's agency. For example, hormones and bacteria affect mood and personality. "Is it possible to say that in fucking me up, the chemicals exalt me? Vanadium. Manganese. What the hell?" (Dickinson 2018a: 64), the speaker asks at some point of his inquiry, increasingly anxious about the relationship between his affective responses and his bodily chemistry. But hormones influence also social norms, as shown in the sequence "Disruptors" (Dickinson 2018a: 77–88), in which eponymous endocrine "disruptors", such as phthalates, impact human behavior, shaping normative notions of masculinity. In a playful, satirical piece from this section, which is dedicated to *Mono-n-butyl phthalate* found in the poet's urine, this interrelatedness between performances of masculinity and metabolic pathways becomes particularly evident:

The young men are laughing as they enjoy having the bodies of men. At the hotel pool bar they pollinate each other with urine containing microscopic pieces of their own skeletons. Free testosterone circulates within them like motor oil making rainbows in the heads of parking spaces. They are not women. Say otherwise and they will fight you. They will fight you wearing aftershave and cologne. They will come at you through mousses and gearshifts, steering wheels and air fresheners, through fragrances, hair gels, and blood bags. They will advance on you through stabilized rubbers and resins, including nitrocellulose and polyvinyl acetates, soft gloves, jelly vibrators, and PCV pants. They will take you through slow dermal exposure, through their excrete metabolites in their piss. They will kick your ass through androgen receptors and blocked endogenous hormones causing urogenital malformations. (Dickinson 2018a: 79).

Dickinson's metabolic questing for an essence of manliness reveals the fragility of the strong autonomous manhood and its external articulations. The theatrical display of aggressive male prowess that exaggerates gender difference testifies both to the will to discipline, shape, and empower the male body and to the anxieties surrounding normative stability of manhood. As shown throughout the book, masculinity is troubled and continuously redefined not only through social discourses but also through hormonal disruptors and their ontological performative practices that threaten to puncture the borders of the subject through their "unmanned messianism" (Dickinson 2018a: 40). Phthalates present in most of our consumer products, such as personal-care products, food packaging, cosmetics, toys, "alter the body's hormonal chemistry" (Dickinson 2018a: 76) and are capable of "adversely affecting the development of the reproductive system in mammals" (Dickinson 2018a: 76). Mimicking keys to cellular locks, they open the integrity of human bodies to messy contingency, potentiality, and endless transformation with indeterminate, often toxic, outcome. Prolific in our immediate environment, they are "linked to infertility, lowered sperm counts, various reproductive tract malformations, asthma, obesity, and cancer", as reported by Dickinson (2018a: 76). The recognition of their intra-agential activity beyond the human control helps to soften "the hard edges" of the hyper-masculine ideal, pointing to the need to redefine the self as a becoming, as an ongoing relationship between bodies, discourses, and environments.

As mentioned above, this redefining in *Anatomic* follows Baradian diffractive procedure by adding another level of complication in the form of medical imaging that challenges the referential claims of life writing. If one follows Barad's assumption that "apparatuses are not mere observing instruments but boundary-drawing practices – specific material (re)configurations of the world" (2007: 140), Dickinson's shifts between words and images should be also treated not so much as mere acts of representation or documentary authentication of his procedure but as performative interventions into the poet's experience that work to transform that very experience.

As noted by Smith and Watson, "[b]ecause photos individually or in family albums seem literally to memorialize identity, they often accompany written life narratives" (2002: 76). Similarly, in her study of autobiography and photography, Linda Haverty Rugg observes that "as physical evidence [photographs] re-anchor the subject in the physical world, insist on the verifiable presence of an embodied and solid individual" (1997: 2). Often those photographs include self-portraits that "expose the autobiographical subject to view" (Smith & Watson 2002: 76). Notably, the first photograph featuring in Dickinson's volume is a black-and-white image of a gloved hand holding a vial filled with a blood sample (fig. 2).



Figure 2. Adam Dickinson *Anatomic*. 2018a. 14. 
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The inscription under the photograph offers an explication of the experimental procedure:

Adam, in order to test your body for the range of chemicals you have requested, you will need to send inapproximately 62 mL of serum, equivalent to about 150 mL of whole blood, and approximately 6 mL of urine. Both the urine and serum should be sent in amber glass jars and cooled to below 4°C. Using the morning void would be best (Dickinson 2018a: 14).

The direct invocation of the poet's name by the lab assistant, the hand of the analyst standing for the protocols and apparatuses of science, and the quantitative details of the tested samples frame this quest for self-knowledge, implying that the scientific gaze can indeed provide the objective, detached, and rigorously empirical insight into the poet's interiority. In the classical anthropocentric empiricism, as noted by Barad, "man's finitude is implicated in the very conditions of possibility of measurability and determinability (2007: 143). The truth, as the image and the analyst's recommendations seem to suggest, is deposited in the vial, with the authority of the medical gaze serving the poet to penetrate and delimit his elusive being. And yet, the promise of bringing the alien material molecular reality to light cannot hold, as the method reveals, diffractive entanglements of the self and matter, and shows how much of the miniscule organisms and microforces that underlie and shape our selfhood remains hidden from our view.

Apart from the procedure-related black and white photos interspersed throughout the entire volume, the last several pages are taken up by highresolution color images, some of which were produced by electron microscope (EM). As explained by José Van Dijck, this kind of imaging "gives visual access to the tiniest organic units, such as molecules, which can be magnified up to half a million times" (2005: 6). The images resulting from the mechanical-clinical gaze and biomonitoring protocols detach a body from a person, preventing a unifying perception of the embodied self. The abstracting nature of those representations seems useful for Dickinson's pataphysical interventions into the lyric autobiography, enhancing the centrifugal thrust of his "metabolic poetics" (2018a: 129). Among the images, there are electronically magnified representations of the poet's blood cells, hair, urine, or sweat, interspersed with diagrams, pie charts, and graphs showcasing, for example, different functional genes in the poet's gut, the concentration of chemicals in his organism, or "the relative abundance of bacterial genera found on different parts of [the poet's] body" (Dickinson 2018a: 132) (fig. 3).



Fig. 3. "Pie charts representing the relative abundance of bacteria genera found on different parts of my body." Adam Dickinson *Anatomic*. 2018a. 134.

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The abstract nature of microscopic images is another agential cut, another instance of perception-as-intervention that serves to defy the immediate legibility of the interior body. As noted by Rosalind Krauss, abstract forms "announce, among other things, modern art's will to silence, its hostility to literature, to narrative, to discourse" (1986 [1978]: 9), and yet they intensify our desire to decode their meanings, offering a plentitude of potential framings and interpretations. The medical techno-gaze, as used by Dickinson, has a similar function: it places the perceiver in an impossible viewing position, unanchoring the subject from the conventional grounds of the lyric address (that of the unified speaker recollecting a lived experience, usually from a spatiotemporal distance)<sup>7</sup> and thus expanding their modes of perception and inquiry. This sense of displacement and self-alienation is captured in the following remark: "Here is my body and everything in it. Let the aliens take me to their mothership piece by

Sam Ladkin describes the lyric mode as based on "apostrophic turns toward personal incident and private knowledge, and scenes recuperable by the poet's memory" (2007: 277).

piece" (Dickinson 2018a: 125). To scrutinize the microscopic images is to experience a contradictory pull and push, as the insights afforded by them gesture at once towards something tangible and measurable – a material/phenomenal presence – and towards the sublime unknown pushing against the familiar bounds of the embodied self. Stilling, obscuring and refracting the continuous movement of matter, those gripping and eerily beautiful images radiate a poietic power of their own.

A good example of the diffractive potential of such imaging could be the microscopic view of the poet's crystallized sweat (fig. 4) or that of his urine (fig. 5) which transforms bodily fluids into strangely abstract, boundless 'landscapes' evocative of volcanic terrains or extraterrestrial surfaces surpassing empirical experience. The fiery crystals opening onto abysmal darkness in the first photograph and the illegible pattern of chasms and cracks in the second one belong to the order of diffraction in which the expansion of knowledge often involves a necessary recession of the knowable, forming an antithesis to the holistic reflexive view of the phenomenal world. Beholding those spaces is like looking into a dark mirror that refuses to yield Apollinian truths – instead, we are confronted with tantalizing ghostly spaces, "a veritable mise-en-abyme of surfaces within surfaces", to borrow from the poet himself (Dickinson 2013: 139). Those spaces are pregnant with significance, but, at the same time, they threaten the integrity of the poet's quest as they imply a relentless semiotic activity ultimately resisting formal containment and apprehension.

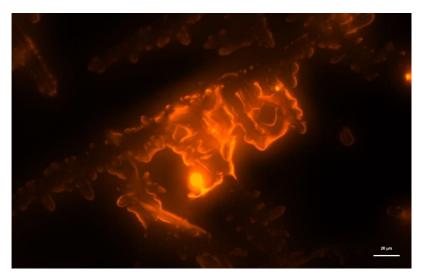


Figure 4. "My crystallized sweat in full sun".

Adam Dickinson. *Anatomic*. 2018a. 134.

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The photographs echo the poet's fears from the piece titled "Circulation" in which the speaker contemplates the threat of annihilation as a possible turn of his microbiome's intra-activities: "If they worked together, the microbes could eat us in a few days. Our bodies would blacken, liquefy and run into the streets" (Dickinson 2018a: 54). This threat of liquefaction finds its way also into the more abstract verbal compositions in the volume, such as the minimalist piece devoted to the monoethyl phthalate in which sentences disappear, replaced by cascades of atomized words:

```
cense
cents
scents
sense
        cite
        cyte
        sight
        site
medal
meddle
metal
mettle
        rhos
        roes
        rose
        rows
right
rite
wright
write
                (Dickinson 2018a: 78)
```

Dickinson treats words as enzymes whose organic cadences can connect, sustain, reify, or dissolve the *élan vital* that runs through this body/narrative. The sequences of homophones where "cense" easily slips into "sense" and "cite" cascades into "cyte" stress the diffractive instability of material-discursive boundaries, revealing interrelatedness between biological and cultural metabolisms of our bodies. The abstract representations, which attenuate the 'pulse' of discourse in wait for the new 'fabulas' of 'natureculture' writing,

corroborate the poet's anxiety concerning the Death of the Sovereign Subject. Not only do they hint at the indeterminacy and polymorphous wildness in matter but they speak also of the indeterminacy of subjectivity and embodiment. The radical anti-narrative aesthetics of microscopic images and verbal "cascades" problematize the notions of individual experience, for the mechanisms of autoconstitution can no longer be ascertained, controlled, or predicted. Although the cascades address words as autonomous, material objects ready to constitute themselves into expressive sequences, they also show them as strange pliable substances that undermine the transparency of the world they create.



Figure 5. "This is my urine. Its metabolites are messages".

Adam Dickinson. *Anatomic*. 2018a. 136.

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"I don't have the same body that I used to have. I don't have a body in the way that I understood a body", the poet anxiously notes in one of the inscriptions (Dickinson 2018a: 134) as he realizes that there is no natural dividing line between his interiority and exteriority and that the language of reflexivity will not suffice to tackle this complex relation. There is, of course, an existential cost to a diffractive peering into the metabolic self: no longer positioned as "either pure cause or pure effect", the post-human subject is "unmoored" from the "safe harbor of Man" (Barad 2007: 136) founded in the idea of spatial, ontological, agential as well as epistemological separatedness of humans. "When the results started to arrive, I felt tense", the poet observed, realizing that "[a] door was about

to open into a mailroom filled with incommunicable antibodies strung from a bare wire" (Dickinson 2018a: 30). The earlier trope of "aliens" that are to disassemble the poet's body "piece by piece" and take it to their "mothership" further conveys this unmooring, along with the concomitant fear of mortality, for the unsealed self proves more vulnerable and open to the threat of the ultimate dissolution. The trope of the alien spaceship recurs in this "hormonal" narrative, appearing also in the pieces thematizing Dickinson's gut flora:

These microbiota live on and within me as a giant nonhuman organ, controlling the expression of genes and the imagined sense of self maintained by my immune system's sensitivity to inside and outside. ... My body is a spaceship designed to optimize the proliferation and growth of its microbial cosmonauts (2018a: 42).

The closing poem of the volume, and the last section of the long poem "Hormone" that runs throughout the entire text, reflects this troubling realization. It also leads to an interesting shift from the earlier sense of alienation and anxiety to an absorption of the idea that the self is inescapably folded into the biosphere's intraactive feedback flows:

You've been a difficult crowd. But you've been my crowd.

And when you leave, my blood cooling like a ruled-out thought, the elaborate fiction of my immune system

convincing no one, broken camps leaching

nitrogen and potassium, fungicides and uranium from my last dressed shadow, you won't look back. The nucleus

of terms has split all messages are homeless

before they're received even the ones we leave for ourselves. (Dickinson 2018a: 127)

"The difficult crowd" of the poet's biochemical self is recognized here as inescapably "his own", for the solipsistic self is a fiction that can be sustained and undone both by culture and the body's immune system. The multiple microbial links between the individual and the rest of the semiosphere/biosphere will outlast the life of individual cellular structures – the "cooling of blood" does not end the flow of this multi-centered vital energy, nor does it cut short nature's relentless poiesis. "Matter is not immutable or passive. It does not require the mark of an external force like culture or history to complete it. Matter is always already an ongoing historicity" (Barad 2003: 821). The poet's life, including the substance of his art, partakes of that historicity, entering "the bloodstream" of the world's memory – "the pattern of sedimented enfoldings of iterative intra-activity" – "written into the fabric of the world" (Barad 2010: 261).

In the Baradian scheme, seeing is always a form of entanglement, a form of intervention:

Practices of knowing and being are not isolable; they are mutually implicated. We don't obtain knowledge by standing outside the world; we know because we are of the world. We are part of the world in its differential becoming. The separation of epistemology from ontology is a reverberation of a metaphysics that assumes an inherent difference between human and nonhuman, subject and object, mind and body, matter and discourse. (Barad 2007: 185)

This realization is also a part of the poet's experience: "Looking inside my body has done something to my body" (Dickinson 2018a: 124). "I certainly changed while working on this book. The intense self-scrutiny caused me to experience serious anxiety and obsessive behaviours. I lost a lot of weight. I stressed over the results of my testing", Dickinson admits in an interview (2018b). In *Anatomic* 

this anxiety resurfaces in numerous ways, for example in the form of compulsive hand washing and walking. "Anxiety is a form of autoimmunity", the speaker argues, "[y]ou can't be trusted with your own intentions. I wash my hands and then I think to wash my hands. This is an attempt at silence" (Dickinson 2018a: 54). Further on in his narrative, he adds: "Walking was becoming its own form of dependence. I would pretend I wasn't going even when I was. I didn't consent to carrying these chemicals inside me (...). I walked until I couldn't see stars" (Dickinson 2018a: 75). Those attempts are meant to keep the microorganisms at bay, to silence or "starve" them, and thus escape their constant metamorphosing and signifying. At the same time, however, they make the poet poignantly aware of the relational nature of matter's agential performances, with each intra-activity making and remaking the self.

## 3. Conclusion

As argued by Peter Nicholls, "the insufficiency of lyric (...) lies, we might say, precisely in traditional assumptions of its self-sufficiency, of its capacity to constitute an autonomous, seductively suspended world" (2013: 177). Dickinson's metabolic poetics, based on lab burden tests and medical imaging of his body, questions this self-sufficiency, showing that poetry is an integral part of the world's onto-epistemological activity. Hospitable to a variety of discourses and ceaseless performativity of phenomena, the post-human lyric enters the pulse of matter, reshaping the subject as an interplay of diverse intra-active forces. Taking his cue from New Materialist philosophies, Dickinson repositions the lyrical self and hybridizes the form of his life narrative, acknowledging that "existence is not an individual affair," but "the enfolded articulations of the universe in its mattering", "iteratively reconfigured through each intra-action" (Barad 2007: ix). As shown throughout *Anatomic*, the diffractive confrontation with one's own entanglements and the restless embrace of the microbiological Other inevitably devalue the habitual markers of identity – "the nucleus of terms" such as space, time, origin, body, memory, agency, authority, intentionality, and experience – which need to be reconfigured in relation to the non-human intraagents and their power in determining our ontologies. Under the medical gaze employed by the poet in Anatomic, "the nucleus of terms/ has split" and the "broken camp" of the body has been open to the volatile chemical and microbiological messaging that does not cease even when what remains of the fragile human identity is "the last dressed shadow" (Dickinson 2018a: 127) unable to receive the message.

This 'unsealing' of the human self as the center of poietic activity entails a greater *response-ability with* other entities, whether human or nonhuman: "We have to meet the universe half-way", Barad contends, "to move toward what may

come to be in ways that are accountable for our part in the world's differential becoming. All real living is meeting. And each meeting matters" (2007: 352). Dickinson's verbal-visual voyage past the membranes of his embodied self forces us to confront this truth and reconceptualize our boundaries vis-à-vis the ongoing open-ended communications of our semiosphere. The pataphysical engagement with "the manifold" of our bodies alongside its unpredictable biochemical dynamics clearly diffracts the Sovereign Self, with a view to unveiling its "differential accountability to and for that of which it is a part" (Barad 2007: 39).

"A humanist ethics won't suffice when the 'face' of the other that is 'looking' back at me is all eyes, or has no eyes, or is otherwise unrecognizable in human terms. What is needed is a posthumanist ethics, an ethics of worlding" (Barad 2007: 392). If, following Dickinson's speaker, we accept the biochemical intraagents as our own "crowd" that co-constitutes and reconfigures our beings and societies, we need to be held accountable for the agential cuts and entanglements we help to enact, including our own desires, diffractive apparatuses, technoscientific practices, and environmental interventions. In Emmanuel Levinas' apt words, cited also by Barad, "[p]roximity, difference which is non-difference, is responsibility" (1981: 139). As shown by Dickinson's pataphysical practice, through its extraordinary ability to respond to the proximity of the other, poetry becomes a vital discourse and diffractive lens of a posthumanist ethics.

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