

Energy Humanities and Metabolic Poetics

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Energy Humanities is an emerging field of research that examines the way energy systems have shaped cultural, political, and economic formations through history. One of its defining characteristics, according to Dominic Boyer and Imre Szeman, is that Energy Humanities emphasizes the necessary contribution of the arts in re-imagining areas of study traditionally thought to be under the purview of the sciences (40). The speculative nature of this overlap between art and science invites, I would propose, a consideration of pataphysical approaches when it comes to thinking potential forms of renovated inquiry. Often dismissed as playful pseudo-science, pataphysics is defined by Alfred Jarry as “the science of imaginary solutions” (22). I see it as a creative/critical practice that transposes the methods of science, its procedural fidelities and focused analytical techniques, into alternative means and mediums in order to perform experiments on the limits of linguistic and cultural signification. By employing unconventional methods, involving ambient environmental influences and procedures, pataphysics deserves attention not only as an object, but also as a potential *form* of Energy Humanities inquiry conducting research at the complex and controversial nature-culture thresholds. After all, through the proliferation of toxic chemicals, the industrialized world is carrying out a kind of fantastic, imaginary science project of its own on the bodies of its citizens without consent. Petrochemical pollution is an example of what Timothy Morton calls a *hyperobject*, a substance so massively distributed in time and space that it requires us to re-imagine the nature of objects. Common among pataphysical works is a focus on changing scales of observation and frames of perception—whether it’s Jarry’s Dr. Faustroll shrinking down to the size of a mite to investigate a water droplet (25), or Kenneth Goldsmith’s various experiments in controlling variables of signification in “uncreative writing.”

A pataphysical approach to oil, for example, invites us to take seriously the important ways in which petrochemicals, when looked at from a different scale, constitute actual forms of writing. Synthetic chemicals have become part of the hormonal conversation of what it means to be human, rewriting the metabolic processes of our bodies (our own internal energy systems). It is safe to say that all of us have at least trace amounts of Monsanto in our blood and fat in the form of PCBs. Rick Smith and Bruce Lourie argue that “The damaging effects of hormone-disrupting chemicals on

fertility, the brain and behaviour quite possibly make them a more imminent threat to humankind than climate change” (ix).

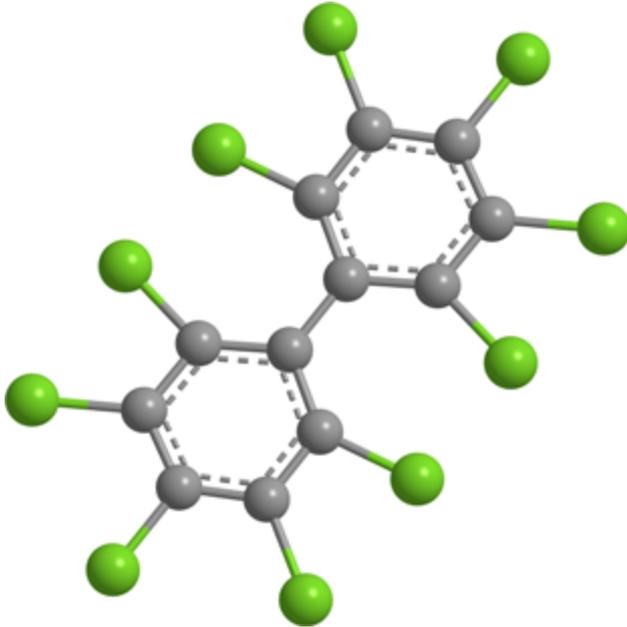


IMAGE PCBs

By rewriting the biochemical messages in our bodies, endocrine disruptors underscore the importance of semiotic processes in biological systems. Synthesizing aspects of linguistics and biology, the emerging discipline of biosemiotics emphasizes that all living things exist within worlds of signification, within a *semiosphere* where the production and interpretation of signs are fundamental to life. Communicative dynamics are central to the interaction of organisms within their environments and also essential to internal endocrinological and immunological environments, where plentiful membranous surfaces interpret and respond to hormonal messages. According to Jesper Hoffmeyer, language must be seen as an extension, not a distinct break, from the biosemiotic activity of a female dove, for example, who coos not only at the male but also at her own ovaries in order to stimulate the release of eggs (118). If biosemiotics encourages us to think more broadly about communication, Jane Bennett provokes us to think about our material environment in similarly affective terms, “such as the way omega-3 fatty acids can alter human moods or the way our trash is not ‘away’ in landfills but generating lively streams of chemicals and volatile winds of

methane as we speak” (vii).

Given the implications for thinking communication and writing more broadly, how might contemporary literary artists respond to the predicament of chemical pollution and its potentially toxic effects on human metabolism? How do endocrine disrupting chemicals, as forms of biosemiotic writing, put pressure on literary forms and genres? There are examples of contemporary writing concerned with what I will call “metabolic poetics,” which might serve as a starting point for thinking pataphysical responses to the hyperobject of chemical pollution. I think of metabolic poetics as acts of reading and writing, derived from or responding to the expression of energy and energy politics in biological mediums, especially in the context of homeostatic states and homeorhetic trajectories. Juliana Spahr’s *The Transformation*, for example, is in part an ethnobotanical exploration of cultural infection precipitated by immersion in the complex politics of Hawai’i and 9/11. The book chronicles the effects of “prickly new cells” that have entered the blood, changing how the speaker and her partners think of analogy, grammar, and government (39). Other examples include Evelyn Reilly’s *Styrofoam* (plastic pollution as hyperobject),¹ Jenny Sampirisi’s *Croak*, a frog-and-girl opera that explores an inverse human-frog relationship where the language of chemical pollution has rewritten and deformed the bodies of frogs, and Craig Dworkin’s conceptual poem “Fact,” which presents an exhaustive list of the chemical ingredients that make up the sheet of paper the poem is printed on.

My own current method of pataphysical inquiry deals quite extensively with the metabolic poetics of oil-derived and oil-related chemicals. I am conducting biomonitoring and microbiome testing on my body to look at the way the outside writes the inside in both necessary ways (certain kinds of bacteria) and harmful ways (chemical pollution). I want to make a biosemiotic map of the toxicological and symbiotic circumstances of my body and turn it into a species of writing (a chemical/microbial autobiography) that explores the subject as an assemblage of objects, as an intimate, “trans-corporeal” expression (Stacy Alaimo)² of the hyperobject of chemical pollution. As part of mapping this “exposome” (Wild 1848),³ I am in the midst of testing

¹ For another poetic response to the hyperobject of plastic pollution, see my book *The Polymers*, which is an imaginary science project that combines the discourses, theories, and experimental methods of the science of plastic materials with the language and culture of plastic behaviour.

² “Trans-corporeality,” for Stacy Alaimo, “opens up a mobile space that acknowledges the often unpredictable and unwanted actions of human bodies, nonhuman creatures, ecological systems, chemical agents, and other actors” (2).

³ Wild argues that we need to bring the same precision to mapping an individual’s environmental exposure that we already bring to mapping an individual’s genome.

my blood and urine for the following chemicals, which I decided upon based on the biomonitoring protocols used by the Centers for Disease Control and Prevention (USA), Health Canada, and Environmental Defence (Canada):

Phthalates,

PCBs (polychlorinated biphenyls),

PFCs (perfluorinated chemicals),

OCPs (organochlorine pesticides),

OPIMs (organophosphate insecticide metabolites),

PAHs (polycyclic aromatic hydrocarbons),

HBCDs/PBDEs (flame retardants),

Triclosan (antibacterial additive),

Parabens,

BPA (bisphenol A), and

31 heavy metals.

I am also getting my microbiome synthesized in order to discover some of the viruses, microbial eukaryotes, and fungi that inhabit my body. I plan to develop poetic compositional methods that extend out of the biological predicament of my particular body and reflect the constraints and procedures that I experience as a being composed of other beings and “volatile” materials (Jane Bennett). Preliminary tests are just starting to come in. So far it is amazing to consider how my body wears industrial, agricultural, and military history whether I like it or not (PCBs, Organochlorine insecticides, uranium). I want to see my own body, the chemicals in my blood, as forms of media expressing the biology of petroculture, expressing my own strange intimacy with the energy sources of my historical moment.

He argues that “At its most complete, the exposome encompasses life-course environmental exposures (including lifestyle factors), from the prenatal period onwards” (1848).

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