GREEN MEN, PLANT BRAINS AND NERVETREES:
RONALD JOHNSON'S OBJECT-ORIENTED POETICS OF EMBODIED MIND

by

SONNET LYNN L'ABBÉ

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE AND

POSTDOCTORAL STUDIES

(English)

THE UNIVERSITY OF BRITISH COLUMBIA
(Vancouver)

August 2013

© Sonnet Lynn L'Abbé, 2013

ABSTRACT

This dissertation is an ecocritical single-author study of the work of the American modernist poet Ronald Johnson (1935-1998), who sustained in his work a career-long inquiry into the relationship of poetry and Nature, and into the limits of representing subjective perception in language. Johnson understood poetry as a process by which "nature looks at itself" that took, as its starting point, the biological embeddedness of the human subject in his or her own environment. The human mind, for Johnson, was the telos of Nature's evolutionary change and the chief instrument of this looking. When Johnson's Nature, not dualistically differentiated from human subjectivity, "looks at itself" through his poetry, the boundaries of epistemological and identity categories of subject and object become indistinct, a representational challenge that Johnson — who was not at all interested in disrupting, but only discovering his own model for, "the" Natural order — often negotiates through the use of plant tropes and metaphors. The figure of the plant shows up in Johnson's work where the poet, acting as an idealized Western human self, reaches to identify beyond the boundary of species identity, to greenly and leafily represent a kind of alterity that is un-othered by its observer. This dissertation proposes that Johnson's formally innovative poetry, which plays within the genre tradition of nature writing, poses figuratively what philosopher and critical plant studies pioneer Michael Marder argues: that the figure of the plant, which grows "in-between classical metaphysical categories of the thing, the animal, and the human" stands as the potential "prototype of a post-metaphysical being" ("Vegetal" 487) More importantly, Johnson's work suggests that the mindbody, particularly the human nervous system, as an object-that-knows, confounds Western metaphysics in the same way. Johnson's "nervetree" figure, I argue, moves us closer to visualizing where the human object, as embodied, ecologically-embedded subjecthood, fits in a post-metaphysical, object-oriented ecological thought.

PREFACE

This dissertation is original, unpublished, independent work by the author, Sonnet L'Abbé.

TABLE OF CONTENTS

ABSTRACT ii

PREFACE iii

TABLE OF CONTENTS iv

LIST OF TABLES v

LIST OF FIGURES vi

ACKNOWLEDGEMENTS vii

INTRODUCTION: The Subject of Ecological Thought 1

CHAPTER ONE: The Green Man as Object of Orphic Seeing 50

CHAPTER TWO: Johnson's Flowers of Concrete Thinking 100

CHAPTER THREE: *ARK*: A Gardening of the Brain 183

CHAPTER FOUR: The Fall As Human Neuropruning 273

WORKS CITED 320

LIST OF TABLES

Table 1. Formal Elements of *The Book of the Green Man* 64
Table 2. Orphic re-visions of modern ways of seeing in *The Book of the Green Man* 73

LIST OF FIGURES

Figure 2.1 From *Io and The Ox-Eye Daisy, POTH 19,* c1964. By Ronald Johnson 166
Figure 2.2 From *Io and The Ox-Eye Daisy, POTH 19,* c1964. By Ronald Johnson 166
Figure 2.3 From *Io and The Ox-Eye Daisy, POTH 19,* c1964. By Ronald Johnson 166
Figure 2.4 "A Bit of Cheeky, Déclassé West Riding Gardenage" (1960). By Jonathan Williams . . 167
Figure 2.5 "Two Typiary Chops" (1960). By Jonathan Williams. 168
Figure 2.6 From *Gorse, Goose, Rose* (1966). By Ronald Johnson. 169
Figure 2.7 From *Gorse, Goose, Rose* (1966). By Ronald Johnson.. 170
Figure 2.8 From *Gorse, Goose, Rose* (1966). By Ronald Johnson.. 171
Figure 2.9 "die blume" (1966). By Gerhard Rühm. 172
Figure 2.10 "Wild Cantabile" (1963). By Mary Ellen Solt. 173
Figure 2.11 "Lobelia" (1964). By Mary Ellen Solt. 174
Figure 2.12 "a rose is everywhere" (1964). By b.p. nichol. 175
Figure 2.13 *Sun Flowers* (1966). By Ronald Johnson. 176
Figure 2.14 *Sun Flowers* (1966). By Ronald Johnson. 177
Figure 2.15 *Sun Flowers* (1966). By Ronald Johnson. 178
Figure 2.16 *Reading 1* (1966). By Ronald Johnson. 179
Figure 2.17 *Reading 2* (1966). By Ronald Johnson. 180
Figure 2.18 "arrows like S's" (1968). By Ronald Johnson. 181
Figure 2.19 "GsAeRcDrEeNtS" (1968). By Ronald Johnson. 182

Figure 4.1 The Flammarion Engraving 303

ACKNOWLEDGEMENTS

I am deeply grateful for the mentoring, generosity and friendship offered to me by the members of my dissertation committee, who have worked closely with me to make this dissertation possible, and whose example it has been my privilege to follow. I would like to thank Margery Fee for acting as an exceptional supervisor: she is that rare animal who can read drafts both carefully and quickly, a tireless cheerleader, and a savvy advisor around professionalization. Thanks also to Larissa Lai for her rigorous questions, intellectual fellowship, and shared enthusiasms and skepticisms. And thanks to Stephen Collis for introducing me to the community of poet-scholars who share my interest in Ronald Johnson and for the generosity with which he shares his expertise on Zuk, Olson and Duncan.

I'd like to thank Laurie Ricou, pro-tem supervisor extraordinaire, for his early support of a plant-person project, for everything that Salal and his Habitats course taught me, and for his impeccable graciousness. Thanks also to Vin Nardizzi and Alex Dick for two years of encouragement, reading and mentorship while on my pro-tem committee; and to Nick Hudson, thanks for introducing me to so many of the texts that would become foundational to my thinking. Thanks to Siân Echard and Miranda Burgess for congenially navigating a twist in the road with me.

Particular thanks to Peter O'Leary for his enthusiasm for my work and for permission to access Johnson's archive, and to James Jaffe who put me up in style, drove me for miles and let me use his amazing scanner. More thanks go Margaret Konkol, James Maynard, Michael Basinski, Joe Harrington, Robert Webb, Elspeth Healey and the Kansas University Ronald Johnson reading group for their kind support and hospitality during my various research trips. Thanks to Peter and Meredith Quartermain for opening their home and library to me, cooking, and telling me Jonathan Williams stories.

Thanks must go to friends Brigitte Gemme, Yan Liu, Crystal Sikma, Tiffany Johnstone, Krista Dragomer and Kristi Kenyon for the many ways, large and small, that they made this journey more fun and more sane. Thank you to all the women of Rhizomatics for the amazing discussions and sustained support. To Courtney, Scott and Carlos, who got older with me.

Thank you also to Glenn Deer, Weldon Hunter, June Scudeler, Kiran Sunar, Mike Borkent, Gillian Jerome and Scott Inniss, with whom I worked to organize the Play Chthonics

reading series, for the camaraderie and warm community. And thanks Rick Gooding – I learned so much.

Thanks to everyone in the English Department, staff and administrators: Angela Kaija, Patricia Lackie, Niroshi Sureweere, Carol Wong, Donna Shanley, and Dominique Yupangco, for unfailingly cheerful help. And Louise Soga, the bottle of wine is in the mail. You deserve it! And thanks to my new colleagues at UBC-Okanagan, for creating an academic environment so supportive of ecocritical/creative intersections; UBC-O has been the perfect place to be while completing this dissertation.

In addition to scholarship support from the English Department, this dissertation was supported by a SSHRC Joseph Armand Bombardier Canada Graduate Scholarship and SSHRC Michael Smith research travel scholarship.

Finally, thanks and appreciation to my family: to my father Jason and brother Jordan for their steady presence and L'Abbé humour; to ma soeur, Phedra, for all the photo cataloguing and Skype chats (the broccoli made it in!). And to my mother, Janet, without whose constant, energetic work and generous support I may never have crossed this finish line. Woohoo!

INTRODUCTION

BETWEEN EYES AND OBJECTS: THE SUBJECT OF ECOLOGICAL THOUGHT

What is ecological awareness? What and how would an ecological mind think? *Ecological thought* is the kind of thinking that, in this moment of ecological crisis, poses such questions. Ecological thought "join[s] the dots and see[s] that everything is interconnected" writes Timothy Morton (*Ecological* 1). It is the kind of thinking that motivates this dissertation, too, I would say, except that the word "thought" suggests to me something already articulated, something already on the far side of having been thunk, rather than the open, searching attention and awareness that *sees* but hasn't yet found the words to conceptualize the interconnections. Is there not an awareness of my own motion, of rhythms of light and dark, of waves of fleshly jumping up and slumping over, that precedes the thinking about it? Before I have words to express it, is there not an impulse, an immanence, to articulation that is an embodied urge, located sometimes in my calves; sometimes in the restlessness of my eyes before they settle on some distant focus? Is there not an attitude, before I find the words, that animates the tip of my tongue? Words arise, Robert Grenier wrote in the 1971 essay that marked a shift in the concerns of the American poetic avant-garde away from speech to writing that documents *thinking*, "way back in the head that is the thought or feeling forming out of the 'vast' silence/noise of consciousness experiencing world *all the time*" ("On Speech" 496). But at what point does the ecological thought emerge? Is it in the shaping, through a particular ontology, or intention, of such spontaneously arising words into "thought"? Is there an ecological stance that enables ecological thought to arise spontaneously? Because this dissertation is a work of argument, let me not stop myself before I start by worrying too much about the difference between awareness, thinking and writing, distinctions that this dissertation will touch on, or the point that this exercise of

argument takes place *within* a Western philosophical tradition, before stating that I mean this dissertation to be an instance of ecological thought, in conversation with Morton's theory of the same.

The ecological thought is not so much what is thought as how it is thought, writes Morton. It can take any number of shapes and emerges out of an ecological orientation, or attitude, toward thinking interconnectedness. Morton variously states that the ecological thought "has no authority" (*Ecological Thought* 105), "is about considering others" (123), "includes negativity and irony, ugliness and horror" (17), "must transcend the language of apocalypse" (19), "must extend our sense of location to include 'anywheres'" (55) and "should not set consciousness up as yet another defining trait of superiority over non-humans" (72). I am particularly interested in taking up one of Morton's more famous and provocative calls, which is to do away with the concept of Nature altogether, because "it is getting in the way of properly ecological forms of culture, philosophy, politics and art" (*Ecology Without* 1). He reiterates this call in later work:

> One thing that modernity has damaged, along with the environment, has been thinking. To bring thinking to a point at which the damage can be assessed will require us to use the broken tools to hand. One damaged concept is 'Nature' — I capitalise it to denature it — damaged and damaging, almost useless for developing ecological culture ("Ecology as Text" 1)

Morton calls the concept of Nature a "broken tool" — one thinks immediately of Audre Lorde's "the master's tools will never dismantle the master's house" (110). Like Lorde, who must think an emancipation from paradigms and experiences of racism and sexism in a language that is itself a paradigm of racism and sexism, Morton, and those of us who would attempt to think emancipation from ontologies and epistemologies that have constructed Nature as separate from Western human society, must do so in the language that in many ways *is* the site of that illusory definition. I also think of bell hooks and others who critiqued the essentialism of the

category "woman" from within a practice of feminism — could it be that the call to eliminate the term Nature (and the term "environment," which Morton suggests is as dysfunctional), from within a practice that in its early stages aimed to "'speak a word for Nature, as Thoreau did'" (Buell *Environmental* 8), is, like feminism, still leaving that venerable category, Man, that flickering Other of "Nature" and "woman," intact?

I am interested in the possibility of deconstructing, or denaturing, the Otherness of Nature. I am particularly interested in the site that modernity (and here I understand Morton's modernity to be Bruno Latour's modernity, an idea of time dependent on the ideological segregation of the Natural, the scientific-discursive and the socio-cultural) constructs as an inside or here when Nature is "outside," or "around," or "over yonder," as Morton puts it, "as a reified thing in the distance" (*Ecological Thought* 3). That site is an idea of the Western subject, the individual mind, the rational agent. Morton gives us an example of the idea of that site when he quotes Paul Skulason, describing the human mind as that thing that "to live, to exist . . . must connect itself with some kind of order, [that needs to have faith] in a detached reality which is different and other from the mind" (6).

Decades of literary deconstruction within feminist and race theory have shown how, historically, this subject has been discursively constructed as universal, representative of the species, when in fact assumptions of gender and racialized situation underwrote this subject's normativity and representative authority. These critiques exposed the Western subject's rational-mindedness as constructed in contradistinction to irrational, bodied, *naturalized* Others — e.g. women, colonized peoples — whose flesh, constructed as difference from Western, rational Man's mastery of his own body, could be the site onto which the subject's disavowal of his own embodiment (coded as primitivity, libidinality, animality) could be projected. (And it is not

unimportant that the concept of Other, first posed by Hegel, and refracted through Edmund Husserl, Jacques Lacan and Emmanuel Lévinas, was first authorized by the rationalizing practice of continental philosophy). Twenty years ago Greta Gaard wrote that ecofeminists "believe hierarchy takes place as the result of a self/other opposition" (3) and argued that in the Western intellectual tradition, the self/other opposition has understood Nature to be on the opposite side of the "mind":

> the way in which women and nature have been conceptualized historically in the Western intellectual tradition has resulted in devaluing whatever is associated with women, emotion, animals, nature and the body, while simultaneously elevating in value those things associated with men, reason, humans, culture and the mind (5)

As postcolonialist and feminist theorists (eco- or not), following Jacques Derrida and Michel Foucault, identified and deconstructed texual sites of this kind of epistemic violence, however, the legible critical move became to critique the scientized constructions of hierarchies of identity that claimed to explicate orders of Nature. This important work included Judith Butler's crucial interrogation of the naturalization of gender and biological sex. Eventually, after years of the broad application of this critical move, affect and performance theorist Eve Kosofsky Sedgwick, referring to a work of criticism that argued that affect was socially constructed and not Natural, was moved to comment:

> The brand on that body is relentlessly legible: 'theory' has become almost simply co-extensive with the claim (you can't say it often enough) *It's not natural.* An extraordinary claim here presented as self-evident: 'The value [*the* value!] of a theory, like the value of historical analysis, resides in its ability to challenge assumptions about nature.' (43-44)

Woman was not natural, affect was not natural . . . now Nature is not natural. Would that not mean the final critical move would be to say that humans are not natural? In some ways, yes. The turn in the late 1990s and early 2000s in literary and cultural studies toward the body and toward

the material, challenged "an *automatic* anti-biologism as the unshifting central tenet of 'theory,'" in the hope of "enabling a political vision of difference that might resist both binary homogenization and infinitizing trivialization" (Sedgwick 108). Posthumanist theory soon took up, along with strands of affect and performance theory, the project of the critique of liberal capitalism not by only critiquing the naturalization, through discourse, of identities (including 'human') that could in fact be argued to be performative (still following Butler), but also by bringing the falsely naturalized body onto the side of a powerful idea of culture – the idea of the technologic and machinic. Posthumanists argued that subjecthood in late capitalism is produced in the interface or infolding of, and ultimately occurs amidst the indistinguishability of, the intelligent body and its machines. The avatar of the posthuman critique is Donna Haraway's cyborg, hybrid of "natural" woman and "cultural" machine, star of her 1991 "ironic myth" the "Cyborg Manifesto":

> The cyborg skips the step of original unity, of identification with nature in the Western sense. . . . The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence. No longer structured by the polarity of public and private, the cyborg defines a technological polls based partly on a revolution of social relations in the oikos, the household. Nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other. (9)

The destabilization of ideological binaries between Nature/culture and machine/organism enacted by critical considerations of the organism/machine interfolding also destabilized the idea of the human subject as a closed system coterminous with a body that could be said to be discrete from its surroundings. It quickly became clear that if human subjectivity can be thought to be dispersed through the channels and substance of human technology and the built environment, whether or not that technology and the built environment is understood as culture, then

subjectivity could equally be imagined as being dispersed through non-technical interfaces, i.e. the surfaces, channels and substance of the non-built environment, i.e. Nature. However, in such thinking the subject gets folded back into both culture and Nature without ever having unpacked the conceptual stuff of what was originally identifying with, and therefore separate from, "nature in the Western sense" (9). Is this stuff consciousness? Could it be the anathematic Soul? Haraway herself, borrowing from Latour, tried to address this state of conceptual affairs with her terms "companion species" and "naturecultures" – in an attempt to articulate an ethically reunderstood "ontological apparatus, in the thick complexity, the . . . being in technoculture that join cells and people in a dance of becoming" (*Species* 138). Morton, however, writes that "shoving the highly woolly words 'nature' and 'culture' together to get 'natureculture' is not an argument. It's a classic example of what I call "new and improved" Nature ideology. My book could easily have been called *Ecology without Natureculture*" ("Of Babies" n.p.)

I wonder if there is a way to speak of the environment, or of Nature, that does not reinforce an unproductive dualism between what I conceive of as my self, and what I conceive of as (my) nature. The act of considering these questions seems to return me, gendered and racialized identities and all, to the position of Man. I then wonder how my concept of self, my sense of differentiation and individuation from other beings, is in turn dependent on, and productive of, our models of ecology. Ralph Waldo Emerson wrote, in his introduction to *Nature,* that "Philosophically considered, the Universe is composed of Nature and the Soul. Strictly speaking, therefore, all which Philosophy distinguishes as NOT-ME, that is, both nature and art, all other men and my own body, must be ranked under this name, NATURE" (3-4). Emerson made a distinction between Nature as "essences unchanged by man: space, the air, the river, the leaf" and art as "the mixture of his will with the same things" that poststructuralist philosophy and our

lived experience of ecological crisis have long exploded. Whether it be termed "Soul," "subject," or "ME," I am interested, as Morton is, in how to think the "everything" in such a way that these gestures of self-reference and experiences of selfhood are understood in a relation to things more ecological than oppositional.

> Reading the work of the American poet Ronald Johnson allows me to explore some of these questions. Johnson continually engaged the question of the "interweavings of man with earth" (*Green Man* 24) not because of any desire to respond to environmental crisis but because he believed that a certain kind of attention to things, best trained by attention to Nature, was the business of the poet. Nature, to Johnson, was a sublimity of ecological transformation that a poet could train his senses to perceive and represent. Johnson was intensely interested in the "connection of the dots" that language empowers, and his poetries explore the possibilities of unravelling and reweaving the "tangled actual" of Nature, and of plotting a new chart of the "dots" of the cosmos's metamorphosing order.

"His modes were all Pastoral," Johnson wrote of himself in his autobiographical typescript "Legend," his Nature one of "rocks and trees and animals" (Bettridge and Selinger xi). Johnson's nature, which he extended by scales to include the sun and stars, and atoms and DNA, is a nature without Morton's denaturing capital N, Latour's nature of modernity, the "object" of science. (When I am using the term Nature under erasure, as Morton does, I will capitalise it; when I use the term without the capital N it is to indicate a nature conceived as distinct from culture, which I am arguing is the paradigm within which Johnson begins his poetic inquiry.) I think it's important to notice that when Johnson chooses the figures with which he will interweave "man," he does not seek reintegration with the Feminine, or with chimps or apes, and where his pursuit seems to take him into the territory of reintegrating with the Indian, we will see that he swerves away from that self-other boundary disintegration, to reinsert his Poet into a nature resolutely kept separate from culture. The figure he turns to, where boundary disintegration is sought, is the figure of the green plant. Again and again in Johnson's work, he imagines syntheses of modern

human attention with the figure of the plant, creating metaphors and personifications that combine figures of human thought with figures of green plant material. The recurring deployment of plant-human hybrid figures in Johnson's work suggests his inheritence of a philosophical dissociation of Man with his Other that occurs not at the site of feminization, or of colonization, or even animalization, of the Other but at the site of the constitution of an idea of the plant. Both Morton's philosophy and Johnson's poetry aim for a philosophical de-opposition of man and Nature; if intuitively, as a twentieth-century Western modern, Johnson hybridizes figures of human sentience and plant being in this pursuit, what story of modernity's "naturing" of plants does this move suggest?

Johnson's Object-Oriented Vision of Ecology

Morton has critiqued the assemblage and cyborg figures that ground much of the work in posthuman theory suggesting that such theories still pose "a 'sentient beings are neither human nor nonhuman' box . . . [i]f there is no true self, perhaps *there is a nonself . . .*" (*Ecological Thought* 76). Morton suggests that the idea that there is a non-Nature "domesticates" the strangeness and realms of complete unknowability of one object when faced with another. Morton asserts that "what we should think asserts neither Nature nor Non-Nature, single, solid, and 'over yonder'" but is rather an object-oriented ontology (or OOO):

> OOO belongs to recent attempts to rethink realism in the wake of the distinctly anti-realist philosophies that have held sway for some decades. In so doing it shares obvious affinities with ecocriticism and ecophilosophy as propounded by Lawrence Buell, Scott Slovic, Greg Garrard, and Jonathan Bate. ("Here Comes" 164)

Object-oriented philosophy, first articulated by Graham Harman in 1999, has been taken up by a few scholars, including Morton, as a "new flavour of continental philosophy" ("OOO

Symposium," n.p.). Now called object-oriented ontology, its proponents pose it as a way of thinking existence with "things" at the centre of that thinking. They contend that:

> nothing has special status, but that everything exists equally—plumbers, cotton, bonobos, DVD players, and sandstone, for example. In contemporary thought, things are usually taken either as the aggregation of ever smaller bits (scientific naturalism) or as constructions of human behavior and society (social relativism). OOO steers a path between the two, drawing attention to things at all scales (from atoms to alpacas, bits to blinis), and pondering their nature and relations with one another as much with ourselves. (n.p.)

Such language echoes that of Rachel Blau Duplessis, who wrote of Ronald Johnson's use of "blissful excessive sound" that it "marks and registers theories of the universe that show the linkedness of all scales and modes of the creaturely – its echological is ecological" ("Echological" 302). This echo, of Johnson's ec(h)ologic or of its critical readings, is not the only one I hear when I begin to learn about the ontology that Morton asserts as having great potential for ecological thought[1]. Morton's concept of the "strange stranger" (*Ecological Thought* 38-50, 59-97) which suggests that "life-forms recede into strangeness the more we think about them, and whenever they encounter one another—the strangeness is irreducible" ("Here Comes" 165), makes me think not just of Johnson's career-long quest to see things "most rich, most glittering, most strange," to use the Gustave Moreau quote Johnson so loved, but also of Ross Hair's reading of Johnson's *Book of The Green Man* as a quest to see England's landscape "through the eyes of a stranger" (*Modernist Concrete* 73).

Johnson's work consistently aims to see objects "as Adam did," that is, freshly and outside the discursive frames of language and history that have domesticated them to orders of

[1] Early readers have asked if Bill Brown's thing theory would not be helpful in discussing Johnson. I have opted to use Morton, as through OOO he does the work to bring "things" and Nature into the same conversation, addressing many of Brown's concerns around "thinking the thing" (16), and the ability to "imagine that thinking and thingness are distinct" to the context of ecology.

knowledge. Though his aim is not to leave the strangeness of things irreducible, but to rename them and “bring objects out of chaos into his own, or their own, order” (“I can add little”), Johnson’s drive to see with a kind of ontological purity only defamiliarizes the objects of his attention, enacting a Shkloviskian “making strange” (Shklovskij 16). Johnson approaches the objects of Nature understanding that, as Morton puts it, “to think the strange stranger [for Johnson, an object of Nature] as an (independent, solid, predictable) object in advance of an encounter is to have domesticated it (or her, or him) in advance,” (“Here Comes” 166). Johnson’s poetry demonstrates what Morton subsequently asserts: “Bizarrely, increased access (technically possible or not, hypothetical or not) does not decrease strangeness” (166).

What Morton asserts as the potential of OOO is that it "maintains no absolute distance between subject and object; it limits "subject" to no entity in particular" (*Ecological Thought* 176). For Morton, "through the heart of subjectivity rolls an object-like coexistence, none other than ecological coexistence" and he poses the challenge to what he sees as the anthropocentric limitations of ecomimetic strategies by considering the "object-like entity at the core of what is called subjectivity" (176). I argue that Ronald Johnson’s plant-human metaphors, plant-human personifications and plant-language metaphors are uncanny figurations of the human subject’s (OOO would simply say human object’s) confrontation with this "object-like entity at the core of what is called subjectivity” (176). I also suggest that Johnson’s work points to many occurrences in the literary archive of similar confrontations of the “self” with its own object-like withdrawal from contemplation, that also turn to plants – or rather, to plants as *sensual objects*, that is, how they exist for a human mind, rather than real plants, to use OOO terms – for their figuration, that are unrecognized as such. They are unrecognized as such, I argue, in part due to those mechanisms of modernity that would keep so-called cultural and scientific discourses separate,

and so would not, until recently, see metaphoric comparisons of objects as philosophical assertions; and in part due to the particular position of both the plant and the soul as objects in the Western philosophical tradition.

The Plant as Post-Metaphysical Object

Despite the numerous and varied objects that are named in Johnson's "mosaics of Cosmos," the plant appears as *the* figure that carries the representative weight of a Nature from within which Johnson means to envision the position of an ideal human subject. Johnson uses syncretic images that combine traits (or what Harman might call properties) of an idealized Man – (e.g. his body, his head, his blue eyes, his written language, his brain) with properties of vegetation. The Green Man figure of his early *Book of the Green Man* is such an object, a shape invented by hybridizing morphological features of both the human head and the leafy plant. I read the hybrids of plant and letter glyph that appear in Johnson's concrete work, and the brain-plant metaphors that evolve through his books, as textual moments that all are produced by similar negotiations of the self-in/self-as-Nature paradox as I describe above. On the one hand, these syncretions seem easy: yeah, mix a guy with a plant, he's Plant Man, he symbolizes unity with nature. But Johnson's consistent figuration of hybridized shapes suggests more complexity. Homi Bhabha wrote of the process of hybridity that it "gives rise to something different, something new and unrecognizable, a new area of negotiation of meaning and representation" (211). A human subject labelled as hybrid, who lives in the "undetermined place created by the emotional residue of an unnatural boundary . . . who inhabit[s] both realities . . . [is] forced to live in the interface between the two," writes Gloria Anzaldua (97). But Anzaldua calls such a place "a shock culture, a border culture, a third culture, a closed country" (97). What do we then make of figures that,

however imaginatively, live at what might be called a Natural boundary? Are they invented to create a kind of "shock culture"?

Why focus on the plant, though? Why do I not argue that such paradox is at work in Johnson's concretizations of man and mole, or look at mythological characters like centaurs and mermaids, or read hybridity in the figuration of language as birdsong? In part it is because I want to focus on the particular "natural boundaries" constructed through discourse that distinguish plant from the animal category in which Man, depending on the context, both has and has not included himself; and then the discursive separation that creates the distinction of animals from things. As Latour has written, the appearance of hybrids signals the managing of the separations:

> Modernity is often defined in terms of humanism, either as a way of saluting the birth of 'man' or as a way of announcing his death. But this habit itself is modern, because it remains asymmetrical. It overlooks the simultaneous birth of 'nonhumanity' – things, or objects, or beasts – and the equally strange beginning of a crossed-out God, relegated to the sidelines. Modernity arises first from the conjoined creation of those three entities, and then from the masking of the conjoined birth and the separate treatment of the three communities while, underneath, hybrids continue to multiply as an effect of this separate treatment. The double separation is what we have to reconstruct: the separation between humans and nonhumans on the one hand, and between what happens 'above' and what happens 'below' on the other. (13)

Furthermore, Johnson's strategy of creating hybrid words implicates the very conceptualizing and identity-forming power of the word in delimiting Natural orders. There exists already much critical work looking at the many ways the human/animal relation is constructed, and my interests and those of animal theorists have much in common. For example, Nik Taylor and Tania Signal write in their introduction to *Theorizing Animals* (2011): "[we] interchange the terms modernity and post-enlightenment to invoke general paradigms of thought wherein rational and scientific approaches which separate nature from culture are the paramount ways of

knowing the world (3-4). Taylor and Signal use the term "humanimal" in their book's subtitle, "Rethinking Humanimal Relations," a "composite word," that Jonathan Balcombe writes "achieves semantically what it sets out to achieve philosophically: a dissolving of the separation of us and them" (286). Taylor and Signal note that "there is a trend to coin new — yoked — phrases" to indicate that "the divisions we take for granted (social v Natural; animal v human) are no longer viable ways to see the world [and that] reality [is] a much messier terrain of interconnected 'things' (humans, animals, inanimate objects, technology and so on)" (5).

The terrain of "interconnected things" is the terrain I have used Morton to begin to theorize and to indicate the conversation in which this study participates; what I note here is that animal theorists, who are at work challenging our "conceptions of animality" and "our (modernist) intellectual heritage which has sought to establish how animals are somehow different to humans" (Taylor and Signal 4) use these "composite" or "yoked" terms to mark the boundary collapse. The verbal hybridization of human and animal terms here indeed seems an attempt to create a productive shock culture, as Anzaldua might have called it. But what "new area of negotiation of meaning and representation" is created when two identities, say human and plant, that seemingly do not border one another at all, that metaphysically have the entire "country" of animal between them, are semantically yoked? What policing of modernity's separations is indicated by the proliferation of these hybrids in Johnson's work?

For support, I turn to the work of philosopher Michael Marder, who like Morton, is a deconstructionist keenly interested in things, and who returns to phenomenology to critique Western metaphysics. For Marder, metaphysics has been obsessed with primordial unity, an obsession that scientific systems of classification have only supported "in the drive toward identity across hierarchically organized differences of species, genus, family," etc. Marder

argues that because traditional Western philosophy denies to vegetative life the core values of "autonomy, individualization, self-identity, originality, and essentiality," traditional philosophy "not only marginalizes plants but, inadvertently confers on them a crucial role in the current transvaluation of metaphysical value systems:

> From the position of absolute exteriority and heteronomy, vegetation accomplishes a living reversal of metaphysical values and points toward the collapse of hierarchical dualisms. It is—to apply the categories Althusser used in his historical analysis of capitalism—the weakest link in the metaphysical chain, where the repressed contradictions are condensed into their purest state and where worn out justifications get so thin as to put the entire system on the verge of rupture. ("Vegetal" 470)

The assertion of the plant as a limit case of Western ideas of individualization and self-identity is one that Marder arrives at through considerations of animal ethics and the nature of subjectivity, and is an idea which I began to explore by questioning the degree to which identity-focused critical approaches could understand poetry, particularly Romantic poetry, that professed bodily affect at the sight of plants. I read Ronald Johnson's poetic plants as figuring similar limits, not as a result of conscious investigation and argument on Johnson's part, but as a result of some quantum of sheer luck — first, because Johnson had a simple love of plant-related ephemera: his scrapbooks, which contain clippings and various quotes about plants, and even a handful of surprising recipes that makes flowers edible, are evidence that he had exposed himself to a tradition of literary plant representation; and second, because Johnson's work brings together various poetic traditions into a unique set of intersections, by which happenstance Romantic ideas of mind-fitted-to-world meet an avant-garde materialist inquiry into theories of natural language and poststructuralist techniques of self-deconstruction.

The two key philosophical models in Johnson's work, of an organicist, emergent form-taking of objects on the one hand, and a textual social-constructedness model of objects' identity

on the other, meet in a kind of quantum fusion, I argue, in the figure of the plant, and wordlessly pose the Western mind, irreducibly textual and irreducibly bodied, turning away from itself and recognizing itself in the same gesture. I will return to how Marder's thought informs my reading of Johnson at the end of this introduction.

Johnson's Location in Traditions

The significance of Johnson's blended mind-plant, language-plant, or human-plant figures can be gleaned only by first understanding the long Transcendentalist, modernist and postmodernist traditions in which they participate, the models of language-to-world relationship that each of these embrace, and by understanding Johnson as trying to integrate these philosophical and poetic inheritances into his own vision of the poet seeing himself in Nature.

"If a poem has ever occurred to Mr. Johnson, he has never written it. At least he has never published it," wrote Guy Davenport in an introduction to *Valley of the Many Colored Grasses* (9). Davenport is referring to Johnson having refused the conventions of the lyric poem for a modernist collage poetics. Lyric, Davenport argues, "has become for us the model of all poems," but by the mid-twentieth century, "the same Transcendentalism which flows from Emerson, Thoreau and Whitman into the best of our poetry is the tradition also whereby it is assumed by ninety-nine out of a hundred practicing poets that sensitivity is the whole apparatus for making a poem" (14). Davenport, writing in 1969, sounds a note of dissatisfaction prescient of the critique of the authenticity and self-presence associated with the lyric mode that informed the work of early avant-garde poets like Gertrude Stein and Louis Zukofsky and later informed the work of the American poets who eventually came to be known as LANGUAGE poets. This critique of the privileging of self-expressivity with which Davenport frames Johnson's collage work, was

one that Marjorie Perloff would later argue "must be understood as part of the larger poststructuralist critique of authorship and the humanist subject, a critique that became prominent in the late sixties and reached its height in the U.S. a decade or so later when the Language movement was coming into its own" ("Language" 406).

Davenport argues that Johnson shares with the best poets, from Robert Browning to Walt Whitman to Ezra Pound "a passion for objectivity" (11) in which "his every poem has been a search to find the intricate lines of force wherein man can discern the order of his relation to the natural world" (12). Yet Davenport, rather than connecting "the finely textured geometry" and "diagrammatic elegance" of Johnson's collage work with poststructuralist critique, frames it as the work of a "real Transcendentalism" that "holds that a man must do his perceiving and thinking for himself" (14). He finds this perspective also in the modular design science of Buckminster Fuller and the spatiality of compositions by the musician Charles Ives. Davenport thus, via a line of Transcendental thought, connects a number of Johnson's impulses to the modernisms of the Black Mountain School, where, along with Ives and Fuller, Charles Olson and Robert Duncan both taught. Davenport continues:

> Mr. Johnson's immediate patrimony in letters comes from Jonathan Williams . . . himself a kind of polytechnic institute and [who] at the time Ronald Johnson met him had already distilled from the confusing state of American poetry that the masters were Pound, Williams and Louis Zukofsky, and had set about writing (and showing others, Ronald Johnson included, how to write) poems as spare, functional and alive as a blade of grass. It was a poetry neither meditative nor hortatory but *projective.* (11)

This statement could seem confused, as it seems to locate Zukofsky under the banner of *projective verse*, when Olson's projectivism had set itself in contrast to what "got called objectivism" (Scroggins "Biographical" n.p.). Olson was said to be "unable to read Zukofsky" (*Poem of a Life* 264) and yet Zukofsky's sense that Olson went on to much greater fame having

"repeat[ed] positions that he himself had staked out two decades before" (264) fostered an "irremediable bitterness" ("Biographical" n.p.) on Zukofsky's part and a distancing between the two men. Also potentially confusing is Olson's opposition to the word "objectivism," which he understands as having been "used in some sort of necessary quarrel with 'subjectivism'" (n.p.), he only substituted for an "objectism." Finally, Olson's term for his poetics, "postmodern," now has for us as contemporary critics the ring of poststructuralism, and its critique of lyric subjectivity, when Olson's poetics were deeply connected, if not to individual "voice," to the breath and to speech.

"The change from Modernism to postmodernism is not a difference in metaphysic so much as a different stage in the digestion of the same metaphysic," writes Michael Bell (n.p.), and the change in Ronald Johnson's work from his early work to late partakes of this change. The modernisms of the Black Mountain school, Olson's projectivism and Zukofsky's Pound-inspired constructivism all come together in Johnson's early work, and though Johnson was not a participant in the community of Language poets, his work can be read, as Davenport reads him, as being involved in a rethinking of "sensitivity [as] the whole apparatus for making a poem" (*Valley* 17).

As Johnson moved into mid-career, embarking on early sketches for his magnum opus long poem, *ARK*, Robert Grenier (whose "way back in the head" I quoted earlier) declared, in the first issue of THIS magazine in 1971, "I HATE SPEECH" (xv). Ron Silliman identified Grenier's declaration as an inaugural moment in the formation of the school of Language poets, crystallizing a new direction for poetics by:

> rejecting a speech-based poetics and consciously raising the issue of reference, to suggest that any new direction would require poets to look (in some ways for the first time) at what a poem is actually made of – not images, not voice, not characters or plot, all of

> which appear on paper, or in one's mouth, only through the invocation of a specific medium, language itself. (*In The American Tree* xvi)

This breach with 1960s poetry meant a rejection of Olson's breath-centred poetics and a recuperation of Zukofsky's constructivist technique as part of the "critique of authorship and the humanist subject" and a rejection of "simple ego psychology in which the poetic text represents not a person, but a persona, the human as unified object" (Perloff *Differentials* 129). Charles Bernstein's illustrative work, writes Marjorie Perloff in her influential early essay championing a constructivist poetry, "unmasks Official Verse Culture, with its 'sanctification' of 'authenticity,' 'artlessness,' 'spontaneity,' and claim for self-presence, the notion, widely accepted in the poetry of the 1960s, that 'The experience is present to me'" ("Language Poetry and the Lyric Subject" 406).

One can trace in each of Johnson's successive works the diminishing of the visible influence of Olson and his increasing turn to the Soviet-derived constructivism that became accessible to American poetics through Zukofsky. Barrett Watten defines the constructivist moment as "a dual concept that refers to a generative moment in poetics in which a work of literature or art takes shape and unfolds, and the critical valorization of materiality, reflexivity, and constructedness" (xviii). One can also trace, in the change in Johnson's statements about his intentions for specific projects, a shift in articulation from a projective poetics to one more constructive and a shift in the language Johnson uses to describe the principle by which his poetry takes shape. Early in his practice Johnson says he wishes to make "some flowering thing in its cycle" of *Book of the Green Man,* to make "a line of poetry as visible as a line of trees" in his concrete works, and that his vision of the page is as "a poet's topiary" in *Valley of the Many Colored Grasses*. These statements partake of Olson's sense that the "push" or projective principle by which language takes shape, from the head or intellect through breath, is the same principle by which "from the

root out, from all over the place, the syllable comes" and that in Olson's field composition that "all parts of speech suddenly. . . are fresh for both sound and percussive use, [and] spring up like unknown, unnamed vegetables in the patch" ("Projective" 244). By the time Johnson begins *ARK*, he has come to the conclusion that his work can be "structure rather than diatribe" (the "diatribe" suggesting Pound's, or Olson's, charismatic didacticism), a poetics more constructivist and mindful of language as "material," and describes his project as "an architecture" where words were "sawn or welded in" ("Planting the Rod" 2). The shift in prevailing avant-garde aesthetic that meant a rejection of Olsonian breath-based poetics also involved a rejection of Olson's "surprising belatedness, a residual organicist romanticism" (McCaffery *Prior* 48). The specific inflection of what Steve McCaffery calls romanticist organicism that Johnson inherits from Olson, I will argue later in this dissertation, is a legacy of an eighteenth century vitalism. This vitalism connects language with a perception of Nature that Catherine Packham describes, in her gloss of vitalist thought, as:

> the theory that life is generated and sustained through some non-mechanical force or power specific to and located in living bodies, usually associated with Romantic theories of nature. It is often connected with particular perceptions of nature: as possessing independent powers of animation and self-direction, vital energies of self-generation . . . whether an unconscious muscular response in an animal, or the unfurling of leaves towards the sun in a plant . . . Coleridge's speculation in the *The Eolian Harp* that all of 'animated nature' might 'tremble into thought' [is] an iconic moment . . . a rejection of earlier mechanical models . . . this 'language' of vital nature is evident across the spectrum of eighteenth-century scientific and philosophical endeavor. (1)

Johnson's insistence on and conceiving of *ARK* as a built structure is a response to the temperature of his day. However, as I will argue, Johnson's understated but concomitant and persistent troping of *ARK* as a garden, the natural language tropes that connect his poetics back to Johann Wolfgang Von Goethe and William Blake through Ralph Waldo Emerson, and his late

exhortation to his literary executor to "prune the shrubberies" of his final manuscript suggests the persistence of a neo-vitalist model of poetic form informing Johnson's work until his death in 1998.

The coincidence in Johnson's later work of these two poetic traditions, a vitalist-inflected modernism, and a materialist, fragment-oriented, Language-school postmodernism, may well at the time have seemed due to Johnson's unwillingness or unpreparedness to abandon a "belated" organicism or to embrace the linguistic turn at play in the academy in the 1970s. However, if Johnson seemed unwilling in the moment to drop an outdated way of doing things for a new level of theoretical sophistication, and paid for it with the relative critical disinterest of his contemporaries, it was not consciously so, for Johnson only ever saw himself as moving the tradition forward. As he wrote in a letter prospecting for a publisher at the University of California:

> I turn first to U.C. because Zukofsky, Olson, Creeley and Duncan are my immediate mentors and forebears. Indeed I am the only poet of the generation after to have learned from them all, and also I am most particularly of the lineage of Zukofsky, whom I have learned most from. A few who have seen the Ramparts [of *ARK*] say I have gone beyond even Louis' *80 Flowers.* (To Mr. McClung)

Or, even more forcefully, in a letter to the Pulitzer prize-granting committee, he asserts:

> In purely terms of critics and universities, I have an identifiable heritage from major writers of the century and am ripe to be discovered. . . . Few saw the Jargon Press edition of *Eyes & Objects* – short poems, but one of my most important books. Nor did anyone much see *Songs of the Earth*, surely one of the signal texts of the Concrete Poetry movement. . . . It should be easy to show I anticipated (and outshone) the current Language Poets every step of the way. (Draft Pulitzer)

It is not my goal to suggest Johnson "outshone" anyone; I mean only to show that Johnson understood himself to be participating in "the extraction of forms from existing texts" (Lake),

that is, participating in the constructivist moment, as Barrett Watten called it, while maintaining what I read as a sustained investment in organicist and structuralist models that might seem to be only Olson's, but which can, I will show, also be read in Pound and Zukofsky.

Mark Scroggins reminds us of Celia Zukofsky's comment: "Louis always felt that Olson's essay on Projective Verse was really a take-off on his own critical writings . . . a restatement of what Louis had said of the Objectivists" (*Poem of A Life* 265). One thinks of the resonance of Olson's objectism that demanded that poetry be "a high-energy *construct*, and at all points, an energy-discharge" (emphasis mine) with Zukofsky's poetics inspired by the "symmetrical, crystalline conceptual structures of science and mathematics" (47). Andrew Klobucar writes that Olson's sense of poetic engagement of the symbolic, which "begins at the very level of breath . . . producing a "kinetic, fluid theory of language . . . prefaces, for Olson, an entirely new epistemology, one that originates in the development of the natural sciences of the 19th century" (380) and that for Olson:

> [O]bjectivism remained too dependent upon an abstract notion of structure. This quality is, in some ways, substantiated by Zukofsky himself in the 1931 essay where, in no uncertain terms, his methodology appears as a new formal system of organising human knowledge. The capabilities of the Objectivist poem were such that they could provide what Zukofsky called a "rested totality" within one's interpretative framework. (24)

Whether one reads Olson's proposal of *objectism* as a restatement or rejection of Objectivism depends in part on how much stasis and abstraction, and how inorganic and inert, one reads Zukofsky's crystalline, "rested totalities" to be. The struggle, as Klobucar notes, is over Olson's "ontology of flux" and what he saw as "the complex, yet structurally consistent principles behind Zukofsky's poetics, [none of the] premises [of which] seemed to him to be particularly natural" (25). If we read, in the shift in avant-garde values from an Olsonian organicism to a Language aesthetic of material engineering, a parallel of the discreditation of eighteenth-century discourses

of vitalism by nineteenth-century discourses of atomic theory in the natural sciences, then that shift can be read as indexing a new, twentieth-century struggle over epistemologies of Nature *and* of discourse. The attempted move is from modernity, its reifications producing its hybrids, to postmodernity: if mid-twentieth-century projectivism suggests language (culture) is a Nature that science (statements of poetics) can explicate, then Language poetry, reacting against that naturalism, tries to collapse culture into science instead, blending poetics with statements of poetics. The Language poets inaugurate in poetic discourse the move that Eve Kosofsky Sedgwick described as the legible move in critical theory, the declaration: *It's not natural.*

A sense of the illegibility of Johnson's work for his contemporaries might be suggested in the writings of Lyn Hejinian, who, in the joint essay "For Change" that appeared in *The American Tree,* wrote: "the language materializes thought, the writing realizes ideas. One discovers what one thinks, sees, says, and as the words unfold the work, the work, directed by form, extends outward" (487). This sense of the outward extension into form by language, is one Olson and Johnson would have heartily supported; I will be looking at Johnson's different sense of language's self-extension in Chapter Two. Though for Language poets, it is Language that self-materializes, not Nature. In a later essay Hejinian gives a provisional account of the origins of the varying writing practices that would eventually be labelled Language writing. She argues that the social consciousness, connected to the women's and civil rights movements of the era, which these writers were developing in the 1960s "was a response to long-term, far reaching, and entrenched social and political hypocrisy" the strategies of which took many forms: "outright lies" in some cases, and in others, in:

> the more subtle form of a complete failure to examine political language and indeed any language at all, thus establishing the pretense that language is 'natural' - that we speak this way because there is no other way to speak, because speaking so accords with natural

> reality, because God and the angels speak this way, and so too would the little birds in the forest if they could speak at all. To counter such hypocritical strategies requires now, as it did then, one which challenges its 'naturalness,' discloses the world view and ideology secreted not only in our vocabulary but at every linguistic level including the ways in which sentences are put together, and explores new ways of thinking by putting language (and hence perception) together in new ways." (323-24)

Now, finding ourselves in an era of twenty-first century "naturecultures," where boundaries between organic and inorganic collapse on a number of fronts, we have a vantage point from which both Olson's and Zukofsky's poetic projects can be seen as wanting to find "a way to make the poem, as *natura naturata*, model the processes of the creating world, *natura naturans*" (*Poem of A Life* 182). Ronald Johnson very much means to "put language together in new ways" and would agree with Hejinian that there is an organizing principle to the way sentences are put together, only he – a self-declared pastoralist – might argue that God and the angels and the little birds all speak a language from which we have distanced ourselves. For Johnson, a modernist and neo-Romanticist, natural language is "over there," or "back there," like the tree whose shape and identity have been lost through our exercise of culture upon it, to become the "wood" of "table" and "chair." Johnson would agree that there is something deeply social about the way language puts thought together, and means to put perception together in new ways. He does not necessarily identify the moment of human distancing from "natural" language at the Enlightenment, rather, his work takes aim at normative, dogmatic, habituated modes of perception. As Hugh Kenner describes poetic practice in *The Pound Era*, Johnson means to set language "free" from the structures that make language act "as schoolteachers assert words normally act, naming things, making comparisons, completing rational squares by means of paraphraseable sentences" (125). Ironically, a sense of the poetic project as wresting language

from the service of certain kinds of Western ideology and theologies is one Johnson and Hejinian share.

As discussed earlier, nothing – particularly the referentiality of signifiers – was natural for a while in critical theory, and a William Carlos Williams positing poems as "machines" and a Zukofsky that "authorize[d] seeing language as a material sound shape rather than as a conveyor of meaning" (Watten 31) made sense to a poetics that had rejected organicisms. By managing to keep both Olsonian and Zukofskyian poetics alive in his own work, Johnson achieves a convergence analagous to the convergence of disciplinary biology and chemistry into molecular biology; and the recuperation of serious considering of organic form (i.e. dynamic morphology at the level of the naked eye) into discourses of particle physics (dynamic morphology at other scales of perception). I will eventually argue that Johnson also, unwittingly, enacts a kind of neo-vitalist resistance against the mechanist models of mind that prevailed in his day.

Recent writers on Johnson have found different ways to approach the convergence of constructivist, design models of poetics and naturalist models in Johnson's work. Nathan Brown, for example, has argued for Johnson's work as an engagement with "the materials" at a nanoscale model (where boundaries of organic and inorganic blur) and that Buckminster Fuller's "'design science' was a crucial precedent to the formal strategies and mimetic priorities of Johnson's work" where thinking through the "ideological consequences of approaching material form in terms of 'design'" means thinking through "the complicity of design with a certain concept of nature" (38). Joshua Corey calls Johnson an avant-pastoralist who resorts to "ecolage," his coinage marrying the constructivist ethos of "bricolage" with a respect for objects' "non-identity with each other" that echoes the object-orientation of Morton's ecological thought. Corey defines ecolage as:

> a tactic of "making do" that draws its ad hoc materials from both the strategized space of technocapitalist culture and the subaltern "environment" that is the nonidentical Other to that culture. Ecolage attempts to put these materials in relation to each other so as to form new patterns, force fields, or ideograms that suggest startling new connections while respecting their components' nonidentity with each other, perhaps even with themselves. ("Avant-Pastoral" 91)

I read Ronald Johnson's plant-mind, plant-human, and plant-language hybrid representations as part of these new "connections" of materials brought into relation with one another – in a particularly potent discursively-created ecological "space." Johnson's space is one informed *both* by a modern episteme that would make the distinction between technocapitalist culture and its subaltern, Othered "environment" *and* a *pre*-modern vitalist episteme that would pose language as an object of Nature, not culture. This pre-modern strain underwrites the organicisms of Fuller, Zukofksy, and Emersonian Nature and survives, undetected, in the materialism of Language poetics's critique of origin and identity. Further, Johnson works with the episteme of language as a natural object, which supposes a morphological relation of correspondence between extra-linguistically perceived form and language as a form of perception-trace (Zukofsky and Olson's *shapes*), and the social, contingent and modular sense of identity as (de)constructed and occurring within discourse.

Language for Johnson, then, becomes both wave and particle – the sound shape, the "by ear" and bodily emanation of the vitalist model, and the modular building block of the I-beam or the atom of the constructivist model. Both visions of language, as energy-construct or material, sees wordshapes as radically open structures, three-dimensional arrangements changing over time that interact in patterns of vibration and resonance. The contingency hidden by discursive naturalizations of identity, that for the poststructuralists is a decidedly social phenomenon, however, is a contingency that Johnson also exposes as a function of discourse, evident in the

construction of the categories of natural science's taxonomies. That object identities are fluid, and that they are fixed only by the mechanisms of discourse, is a situation Johnson takes for granted. How discourses of naming are intimately connected to discourses of colonialism or gender is a question that leaves Johnson untroubled. It is no crisis to Johnson to apprehend that his world is one of slippery signifiers. Rather, to notice this is to notice something of the denatured Nature of language. He celebrates the naming practices of the taxonomist and naturalist as a will-to-order that the poet also performs, but by his own criteria of correspondences.

Johnson's Cosmos of Différance

Johnson attributes to biological and artifactual forms, only apprehendable through names, the same sense of inevitable changing, of becoming and decay, of temporal contingency, and of identity dependent on a system of identifying difference or non-difference from other forms that poststructuralists would attribute to signifiers as understood through the lens of Derrida's concept of *différance.* He creates, in a number of different works, forms of Morton-esque ecological thought avant-la-lettre. In 2007 Morton asks us to rethink "the environment" using a poststructuralist model of language itself as the figure for it. Deconstruction, he argues, is "ecology's best friend" because it is the best allegory, or method, by which to cognitively grasp the environment at the micro level. Trying to think Nature, for Morton, is like trying to think language; it is grappling with "the structurality of structure" and the imaginative slipperiness of an open, centreless and constantly changing system in which mutually constituting forms take their shape in cascades of *différance*. He writes:

> The environment is that which cannot be indicated directly. . . . It is a background, caught in a relationship to the foreground. As soon as we concentrate on it, it turns into the

> foreground. In ecological terms, nature becomes bunny rabbits, trees, rivers and mountains . . . simply adding something to the list that ends in an ellipsis and the word nature is wrong from the start. (*Ecology Without Nature* 175)

Feminist philosopher and anthropologist Vicki Kirby, whose disciplinary situation reminds us of the way we may have come to this thinking through ecofeminist theory, broaches the same territory when she explores Derrida's suggestion that deconstruction could be a positive science:

> The implication here is that 'no outside of text' does not evoke an enclosure whose limits can't be breached, an enclosure that discovers human exceptionalism in linguistic and technological capacities. Instead, this sense of a system and its involvements (différance) is already entangled in any 'atom' of its expression, whereby 'no outside of text' can be read as 'no outside of Nature'. The logic that informs and justifies the conventional separations between nature and culture, ideation and matter, and human and non- human, are thereby confounded. ("Original Science" 201)

As I will argue, for Johnson, it is not so much that the system of ecology is "like" the system of language, but that the human apprehension of both Natural forms and linguistic forms, and indeed the subject's apprehension of his own form(s), partake of this openness and porous conceptuality, such that Johnson's works can be read as iterative declarations of his vision of the *différance* of ecology. Morton arrives at this point of indistinguishability of text from ecology himself in 2010, writing that:

> Life forms cannot be said to differ in a rigorous way from texts. On many levels and for many reasons, deconstruction and ecology should talk to one another. . . . Semiotic interrelation cannot be a bounded structure . . . if the text has no thin, rigid boundary, what it includes, what it touches, must also consist of life forms, Earth itself, and so on. The difference between what counts as a mere metaphor and what counts as non-metaphorical reality collapses when thinking engages text seriously. ("Ecology as Text" 2-3)

Morton doesn't pursue, in this particular essay, the assertion of a collapse between "mere metaphor" and "non-metaphorical reality." But I agree that the intuition of text-as-ecology-as-*différance,* which I argue that Johnson's work explores, reframes metaphor – and it is the how of this reframing that this dissertation also explores. Morton's phraseology, "what counts as a mere metaphor and what counts as non-metaphorical reality," suggests a long-standing way of understanding metaphor as rhetorical rather than ontological, where there is an ornamental quality, a "mereness" to metaphor and an "hors-de-metaphor" in the reality that counts, that is challenged by the exploration of the breakdown of "the matter-sign distinction" (Morton 3). Johnson's works consistently explore the matter-sign *co*-incidence, and the fiction of a space of "mere" metaphor and an outside "non-metaphorical reality." Interestingly, Morton's own considerations of text as ecology lead him to the category of green plants. He writes:

> blood vessels, leaves, branches, forests and cancer cells have a fractal dimensionality. . . . fractals open up a traumatic dimension of what we cannot call Nature any more, a dimension that is not holistic, but open and strange. The curious thing about forests is that one can accurately estimate how many trees they have by studying the pattern of branches and twigs on just one tree. Forests appear 'natural,' yet they follow the quite logical order of algorithms programmed by tree genomes. An algorithm is a script – a text – that automates a function, or functions, and in this case the script is encoded directly into matter. The matter-information boundary is permeable. (5)

What Morton calls a "traumatic dimension" is one I believe Johnson saw as that abstract, hard-to-access "most strange" place he associated with an Eden, albeit one that was yet here on Earth. In Johnson's "the world focused back at us / like a wide flower: / river, vascular lightning / & leaf-vein" ("The Garden") he sees "the thing itself [as] a plot of an algorithm unfolding" (Morton 5). When Johnson writes of "the atoms, cells & parsley ferns / of the universe" he includes ferns amongst the elemental units of inorganic chemistry and organic biology, and references a basic

example of a geometry occurring in Nature that mathematicians have discovered can be reproduced by iterative formulas.

So what is going on in Johnson's plant-brain, plant-mind and plant-language metaphors? If they are not "mere metaphor," nor its oppositional "non-metaphorical reality," what kind of ontology is suggested by his poetic hybrids of human sentience and plant being? "The Green Man of the title is not a poetic metaphor, merely," writes Johnson in his anthropologically-toned afterword to his early *The Book of the Green Man* (n.p.). "Placed properly on the page an 'I' can not *merely resemble but have all the structural capacities of* an 'I' beam," he writes, shortly thereafter, in a note on the poetics of his concrete work that means to make language as visible "as trees" (*Balloons* n.p., emphasis mine). Finally, in *ARK*, he declares, "that the action of the universe is metamorphosis – its articulation, metaphor" ("BEAM 17").

Johnson's sense that through language, *metaphor* structures ontologies and organizes the terms of a metaphysics, is a sense that takes seriously, as Kirby puts it, "all those claims made by cultural analysts about the materiality of language and the constitutive efficacy of representations . . . more seriously than even their authors envisaged, and enfolded [them] into the question of science and objectivity more generally" (205).

Orphic Vision: Nature Seeing Itself Constructing

I find it fascinating that the title of Kirby's recent paper, "Original Science: Nature Deconstructing Itself," which teases out the Derridean *il n'y a pas de hors texte* into an articulation of the textuality of ecology, echoes the phrase that organizes Johnson's sense of what poetry *is*: "nature looking at itself." (In his quote book, Johnson had copied down a passage from a 1961 review of a book on evolution written by Loren Eisley: "There is an odd little light in our

heads – nature looking at itself, nay, even putting itself into those ghostly immaterial symbols we call words" [Binder]).

Johnson came to the idea that poetry was "nature looking at itself" early in his career, through the work of literary scholar Elizabeth Sewell, and her 1960 book *The Orphic Voice.* The significance of the Orphic myth to an understanding of the poet's task was one Johnson shared with many of his peers. The Orphic tradition as Johnson encountered it through colleagues, including shaman-identified peers of the Berkeley Renaissance like Robert Duncan, Robin Blaser and Jack Spicer, and some New England contemporaries like Denise Levertov and Christopher Middleton, was one of identifying with the lyric powers of the mythic figure, of finding in the Orphic "method and mythology" a way to "re-imagine the role of the author, the place of the sacred, and the function of language" (M. Nichols iv). Jonathan Williams, Ronald Johnson's first publisher, mentor, and his companion of over a decade, likely had something to do with Johnson's introduction to this mythology. Williams describes himself as a "stubborn, mountaineer Celt with an orphic, priapic, sybaritic streak" ("Jonathan" n.p.) who spent his life "On the Road Selling That Old Orphic Snake-oil in the Jargon-sized Bottles" (the title of a 1979 chapbook). An early unpublished poem of Johnson's – one might even call it juvenilia – exclaims: "O Orphic sphincter!" ("Still Life"). Mention of Orpheus dances so often through Johnson's writings, and his correspondence with Guy Davenport, Robert Duncan and Jonathan Williams, that I read Orpheus as a kind of touchstone figure for the poetics of their "tribe." However when turning to describe the Orphic strain in Johnson's modernism, I found little written on it in the work of these writers. British Columbia Blaser scholar Miriam Nichols' unpublished 1988 doctoral dissertation on the "American Orphic" seems to be the only sustained attention to the parition of this theme in this group of avant-garde writers.

Erica M. Nelson, in her book *Reading Rilke's Orphic Identity*, writes that "the Orphic nature of poetry is where the singer-poet *dissolves into nature to sing as nature itself*, as Rilke says in Sonnet I, xxvi to become 'Mund der Natur' ['mouth of Nature']" (38, my emphasis). Robert McGahey, in his work *The Orphic Moment: Shaman to Poet-Thinker in Plato, Nietzsche and Mallarmé*, writes that in the Orphic poise, "the poet [is] an instrument, . . . a medium: one who disappears into *the language itself*" (137, again my emphasis). Perhaps the most helpful study pertaining to my question about why the term floated so freely around in Johnson's circles is R. A. Yoder's *Emerson and the Orphic Poet in America*, who writes of Emerson as the first American Orphic poet. In *Nature*, writes Yoder, Emerson develops an image of the poet as:

> both seer and builder, as the Orpheus-Christ . . . builder of cities and civilizer of men. . . . [He] conceived of the poetic imagination as a power that makes for culture. Culture as an ideal or goal was possible in the 19th century because the 'key' to modern times, so Emerson thought, was that 'the mind had become aware of itself.' To the seminal minds of the age, as Elizabeth Sewell shows . . . Orpheus represented the reflexive or self-conscious activity of the imagination, the power by which man distinguishes himself as the single artificer of the world in which he sings. What proved to be the most important feature of the myth for Emerson and his contemporaries was not the descent into the underworld . . . but the mythical fact of Orpheus taming nature or the wilderness — when he sang, all the rocks and trees and wild beasts arranged themselves in order around this central man. (xiii)

Yoder remarks later that "all American poets are Emersonian" (172) and "[b]ecause America has always had great expectations of a sublime and philosophical literature, its poets have accepted the tradition that Orpheus, the first poet, was the Whole or Universal Man, and they tried to live up to Emerson's magnificent fable of the Orphic poet that promises freedom, revolution and transcendence" (173). Johnson's peers may have had their Orphism from Emerson, then, but Johnson himself deepened his familiarity with the myth and developed a more modern sense of

its pertinence as a model of writing, of self-reflexivity, and an inquiry akin to science by reading Elizabeth Sewell.

Eric Selinger and Joel Bettridge call the Orphic myth "as central a story to [Johnson's] work as Baum's tales of Oz" (*Life and Works* xv). Yoder identifies Emerson's Orpheus as a figure who initiates what M.H. Abrams calls the "crucial motif" of an "organized and balanced unity" for the American line of poetry descended from Emerson, and one could no doubt trace a strong "American Orpheus" in Johnson's often unabashedly patriotic work. However, it is Sewell's Orpheus, the one that Selinger and Bettridge write "would serve as a resource for the rest of Johnson's life" (xv), a figure understood in a context of discourses of Natural history rather than of national identities, that is the one that, I argue, provides a productive frame for reading Johnson's work in dialogue with questions of the textuality of ecology. Johnson wrote, "When I read Elizabeth Sewell's *The Orphic Voice* I knew I wanted to be of that order of writer she talked about. I'd met my myth: Orpheus and Eurydice, and that proved a honeyed terrain" ("Hurrah" 25). Sewell looks back to writers before Emerson to argue for a tradition in which "language and mind, poetry and biology meet in the figure of Orpheus" in the works of "Bacon, Shakespeare, Milton, Hooke, Vico, Linnaeus, Swedenborg, Erasmus Darwin, Goethe, Novalis, Coleridge, Wordsworth, Shelley, Emerson, Renan, Hugo, Mallarmé, [and] Rilke" (5).

> This myth asks a great question about poetry in the natural world, the central arc where language works with and on that most astonishing of biological phenomena, the human mind. . . . Each of [the] great minds mentioned is, in its relation to Orpheus, a stage in the history of this inquiry. (5)

The self-refexivity of Kirby's "Nature Deconstructing Itself" runs throughout Sewell's analysis, where myth, science and poetry are all forms of activity of "the biological phenomenon" of the human mind. "In the Orpheus story, myth is looking at itself" (41), Sewell

writes. "Orpheus is poetry thinking about itself" (47), that is, the Orpheus myth is language that takes as its subject the conditions of its own existence, while itself being a language object that proves the conditions of its own existence. Mathematics, Sewell argues, though thought of as a "wholly intellectual, mental" practice with little relation to the body of its practitioner is a "development and prolongation by the human mind by which matter, inanimate and animate, operates on itself" (36).

Sewell reminds her readers that all human thinking is performed by human bodies. She uses the term "mind-body," to insist that the human organism "thinks as a whole":

> The mind-body may generate forms as languages or terms for metaphoric activity by which to understand itself and its experience; but all form, no matter how apparently abstract and intellectual, may never lose its connection with, its message for, the body. It seems possible that all forms observed by or constructed by the so-called mind are *Gestalten* . . . a figure is always an image; . . . a form, how abstract soever, calls from the body a physical response, is perceived as an image, if that is the right word, by the body. (37)

Sewell hyphenates mind-body, and occasionally, "body-mind," into a single form, creating one of the *Gestalten* she refers to. These terms are used very rarely in this way by Western literary scholars. The handful of recent Western scholars who use the term mind-body generally use it as an adjective to describe the Cartesian split. These scholars include sociologist Krista Comer, who looks at surfing as a way to discuss "forms of living knowledge with the potential to rewrite the mind-body dualisms of Western scholarly tradition" (11), and Craig Hamilton, who writes of Emily Dickinson's poetics of mind-body unification, arguing that her poetry suggests that "[y]our mind and body combined in a single entity . . .is 'Yourself' . . . an entity you have to search for" (290). The closest approximation of the term mind-body as a noun occurring in English discourse is the term "bodymind" - a term whose entry into English language scholarship

is generally credited to philosopher David E. Shaner, who used a Husserlian phenomenological framework to give an interpretation of the term, in order to understand the doctrines of the Buddhist philosophy of Zen Master Dōgen Kigen (1200-1253). Shaner writes:

> Unlike the Cartesian paradigm suggesting that the body and mind are ontologically distinct, for Kukai and Dōgen body and mind are interpreted as one — bodymind. This difference between these fundamental starting points entails a difference in attitude toward mind and body. In general, in the East, body and mind are considered originally one, hence, the problem in Buddhist practice is to verify empirically the primordial "unity of dhyana and prajna." In the West the traditional mind-body problem arises as mind and body are, by definition, ontologically distinct. The problem is to theorize the manner in which they interrelate. In short, the problem in the West is one of understanding the principle of interconnection. In the East the problem is to experientially realize or authenticate original oneness of bodymind. (18)

Sewell poses the Orpheus myth as an early Western example of the theorization of this principle of interconnection, of the "human organism as an indivisable whole trying to understand itself and its universe" (41) and identifies the "Orphic voice" in Western literature as the tradition by which this inquiry continues over generations.

What has been noted by critics as Johnson's ocularity, and preoccupation with seeing, is in part his way of being "that order of writer" that Sewell describes. His preoccuption with physical vision is an inquiry into the bodiedness of the "minded" subject, for whom "seeing" as a physical process and "seeing" as understanding are so fundementally interrelated that the very distinction between seeing/understanding begins to break down (Johnson was also reading botanist Agnes Arber, who treats the subject of ocular vision, scientific knowledge and aesthetic sensibility at length in her book *The Mind and The Eye* (1954), at roughly the same time as he was reading Sewell).

Johnson assumes, as the poet, a subject position that takes as its subject, its own situatedness as subject and bodiedness as subject, even if that bodiedness is most often signalled by a conscious "eyed-ness" to his writing self. Johnson writes early poems dedicated to Elizabeth Sewell that ponder the emergence of writing from behind a wall "of bone, made by a forehead" (*Valley* 23) and ponder objects such as mist as "form," noting that "patterns are temporary boundaries" and "nothing is seen in isolation" (29). In early work Johnson still occasionally uses an "I" to mark the situated seeing/perceiving mind-body that utters "*Orpheus, the metamorphosis / before us"* (29). But by the time Johnson is writing *ARK*, his sense of balance between self-referentiality and "external" reference has almost completely disappeared, and we see echoes of Sewell that focus more explicitly on poetic language as the biological organism's most heightened mode of reflexive observation and documentation. Echoes of Sewell's thinking appear in *ARK*, when Johnson writes that through the eye "light began looking at itself" ("BEAM 4"), or when he sets, on its own line, the phrase "the mind become its own subject matter" ("BEAM 25"). In later sections, Johnson's lines have been honed to a minimalism and geometric precision, and use grammars that confuse subject and object. In these later lines we hear Sewell again in such flickers between the posing of an example and the issue of a command in the line "the globe consuming itself, say / brain by spinal chord," and in the line "sentience itself testament" ("ARK 77") which can be read as or the very being of sentience being a kind testimony, or simply as sentience witnessing itself.

What Johnson explores increasingly in his work is how twentieth-century knowledge from discourses of natural science might be brought to an understanding of the poet's mindbody as (a part of) Nature (inquring into) itself. For Johnson poetry is a language like mathematics, by which matter, animate and inanimate, operates on itself; poetry *is* a form of science. Through

Sewell, Johnson understands poetry as a discourse that, like biology, "appears in its turn as a process of life reflecting on itself" (40).

Johnson calls the interconnected ecology of which he and words were all parts "the tangled actual" (*Valley* 41). "How can I say the 'tangled actual'?" he asks, a question that Joshua Corey would describe as wanting to "pronounce one's ontology" ("American Avant-Pastoral" 16). This move, of putting into question what is pronounced and defined by the question itself, is a move similar to critical deconstruction, is an approach to language that destablizes linguistic formations even as they are constructed. For Johnson, this move frames his work not as deconstruction, but as poetry, poetry as Sewell has defined it for us. This is poetry as a mode of inquiry, a mode that understands objects both textual and Natural to be all part of the same ecological fabric, such that any text that means to describe the fabric is only ever a part/process of it.

Textual attempts at descriptions of ecologies (especially by those who do not exclude text from the ecology of objects) either work via a discourse's consensual assumption of norms of referentiality and syntax (what Sewell describes as having been called scientific or non-metaphorical language), or else the attempt necessitates a language use beyond norms in order to posit a new and non-normative relationality of objects. Such language use "poses" new grammars, new syntaxes, new metonyms and metaphors (sometimes called metaphorical language, writes Sewell, or simply *poetry).* Johnson called these his own "new symmetries." Poetry, by this definition, is a hypothesis of the relationality of subject and Others. Each of Johnson's successive works can be read as iterations of "a question that figures its own reply," as Sewell described the Orphic myth.

We might read Vicki Kirby's "Nature Deconstructing Itself" as yet another iteration of the same inquiry into the place of language in Nature not occurring in the "non-metaphorical" guise of biology or poetry, but as critical theory. As though she is writing poetry, Kirby is forced to neologisms, to a poesis, in her exegesis of her own version of the "tangled actual":

> [W]ithin the agential realism of this open system the human is an expression of the system's self-involvement. The human in this instance doesn't lack language any more than it possesses language, for language is not a circulating commodity but an ontologising energy. For now, I am going to name this open system of entangled 'writings' (differentiations), this field of technicity – Nature, or Life Itself. And if Nature authors the grammatological textile – constantly reconceiving itself, re-presenting itself – then we catch a glimpse of why grammatology might be described as a positive science of 'objectivations.' (208)

Kirby's use of scare quotes in this passage indicates the conditionality of the terms to which she can resort, when terms born in one ontology are being used to try to speak another. The paradigm of an ecological thought, which "smears the text-context boundary into aporia, if not oblivion, [and] requires us to drop the organism-environment duality" ("Ecology as Text" 8) or of Kirby's Life Itself, where language is the transformation from one state to another of an "ontologising energy," means that none of Kirby's words for becomings-of-form – "writings," "differentiations," or "objectivations" – can adequately capture the motion of that conceptual becoming that is functionally "stilled" (I resort to the same quote tactic here) in the word-object.

What is being sought is a word for a basic unit of objects-brought-into-conceptual/perceptual-relation-to-one-another, a category within which *words*-brought-into-conceptual/perceptual-relation-to-one-another would also fit. Any human language units – metaphors, personifications, figurations, metonyms, neologisms – what we might call literary "devices" in this paradigm, are all actions involving the human bodymind, actions of this basic

differentiation/unification-through-relation activity. But – and here is a point at which the constructedness of "non-metaphoric" discourse becomes visible – *words* and *sentences* also fall into this category of objects-brought-into-relation. Kirby calls these actions "objectifications." Sewell also approaches describing such an ontology:

> Every word or group of words is at once a meaning, a history, and the occasion of activity in the mind. A word means the mental activity that it conjures up, just as much as it means the object to which it refers and all the past uses to which it has been put. This activity is an essential part of language's workings, and it is as much physical as mental, the correlation of perception (which is now recognized as an active and not a passive process of body and mind) with concept. (24)

Morton has lately been using the term "sensual object" to refer to this human "unit-fication" (my word again) of experience, and I like it as a way to describe the sense of synthesis into a new object that is at work in Johnson's word-connections. Morton borrows the term from Graham Harman's reading of Husserl's term "intentional object" and it is one that I feel expresses Johnson's intuitive handling of language as part of the material world. The "intentional object" is an object as constituted by the mind, arising from a history of interactions with objects, or else *is* the unit of interaction with the subject, but these intentional or sensual objects formed in relation to the human object are distinct from "real objects" themselves. I quote a lengthy passage from a recent article by Harman explaining Object-Oriented philosophy to do three things: to show the kind of current philosophical thinking that is being brought to ecological thought; to give a quick example of the way that "intentional object" and "sensual object" are terms being brought forward now, in this critical moment, to offer new language to discuss subject-object-relations-constructed-in-language as all a matter of object-relations; and to give contemporary language to the kind of ontology I am arguing that Johnson develops, through Sewell, in his own poetics. Harman writes:

The tree as an intentional object is not a real object growing and nourishing itself in the outer world, but neither is it reducible to the exact details through which it is given at any moment to consciousness. While the real tree is always something more than whatever I see of it, the intentional tree is always something less. That is to say, I always see it much too specifically, encrusted with too much accidental color or from an accidental angle, or in some purely coincidental melancholic mood. Any of these details could be changed without changing the intentional tree, which always remains an enduring unit for as long as I recognize it as one. This is the meaning of an intentional object. It is not an empty *je ne sais quoi* projected onto unformed sense data, because in fact it precedes and shapes any such data.

. . . . . .

On the one hand, my relation to the tree is a single unified whole. I can reflect upon it later as one thing, and other people can reflect upon it as well, if for some unknown reason they should choose to analyze my psychic life. In fact, my relation with the tree is a new object in its own right, even if it does not endure for long and consists of no physical matter. I call it an object because it is a unified reality not exhausted by any relation to it from the outside.

But at the same time intentionality is also two, not just one. For I never fuse homogeneously into the tree in a blinding flash of light. The tree always remains separate from me, standing over against me. Moreover, this twofold is also asymmetrical, since here the real me encounters a merely phenomenal or intentional tree. When by contrast the real tree encounters the phenomenal caricature of me, as it must in all cases when it comes into contact with me, this must result in a different but closely related object.

And we now see that such spaces are always found on the interior of another object. The twofold intentional relation between me and the tree is located inside the unified object that the tree and I form. It is the hollow, molten, inner core of objects where all

> intentional relation occurs. Against the usual model of human intelligence as a critical, transcendent, liberated force, the mind is more like a burrowing animal digging deeper or laterally or upward through the interiors of things. ("Intentional Objects" n.p.)

It is as this sort of unit of relation, "the unified object that the tree and I form," and how naming defines the boundaries of that object, that I am arguing that Johnson explores in his work. It is a poetics in which word=activity, where "objectivations"=perceptions-taking-language-shape, and where poesis itself is the naming of such sensual objects. I have sometimes used the word "concretion" in this dissertation to describe how Johnson's poetics construct a similar ontology. "Figure" is the word that Sewell used and that Johnson quoted; sometimes "trope" (as in Laurie Ricou's *"the primary trope in botanics is the trope itself*") is also helpful; and metaphor, once we begin to bring this work into conversation with the field of cognitive poetics, will reappear as a term that Johnson uses in the sense of intentional object. But concretion is a word that gives the sense of a flow congealing into form, of a materialization of abstraction, and honours the way the word "concrete" described a particular avant-garde movement that explored the boundary of sign and matter. It is also a term that recognizes the *formèdness* of things, and by this I mean that this vision is not one where I argue that conceptual boundaries do not in fact exist or that such boundaries must be proved to uphold fictions of differentiation. It is a term that inquires into differentiation and into the quanta of things. As Harman explains:

> [A] deeply non-relational conception of the reality of things is the heart of object-oriented philosophy. To some readers it will immediately sound deeply reactionary. After all, most recent advances in the humanities pride themselves on having abandoned the notion of stale autonomous substances or individual human subjects in favor of networks, negotiations, relations, interactions, and dynamic fluctuations. This has been the guiding theme of our time. But the wager of object-oriented philosophy is that this programmatic movement towards holistic interaction is an idea once but no longer liberating, and that the real discoveries now lie on the other side of the yard. The problem with individual

> substances was never that they were autonomous or individual, but that they were wrongly conceived as eternal, unchanging, simple, or directly accessible by certain privileged observers. By contrast, the objects of object-oriented philosophy are mortal, ever-changing, built from swarms of subcomponents, and accessible only through oblique allusion. This is not the oft-lamented "naïve realism" of oppressive and benighted patriarchs, but a weird realism in which real individual objects resist all forms of causal or cognitive mastery. ("Well-Wrought" 187-188)

Johnson's "new symmetries" that measure ideas of human bodies or text characters against ideas of plant bodies are more than "mere metaphors," they are imagined units of relation made by his groups of words. His texts are objects that still suggest a kind of human exceptionalism at their heart, because Johnson's Orphic language "sees itself" as a technology of and for the human body. His poetics insist on metaphor as an articulation of the ever-changing flux of the bodied universe, but at the same time also insist that "ratio" – a relationship that simultaneously insists on the similar kind of units compared and on the existence of discrete, countable packets of stuff – "is all."

It is in this context, the context of current critical conversations that imagine an ecology "without Nature" and "Life itself constantly reconceiving itself," conversations that find text-ecology and sign-matter dualisms unsustainable that I explore Johnson's mind-plant, human-plant and language-plant concretions. Such conversations mean to honour the substantial integrity of objects at various scales of being (for example, these are paradigms that would not argue that water is "merely" a relation of hydrogen and oxygen, nor is it merely a consequence of discourse imposing itself on Nature, that is, water exists), and as we will see, the plant is often held by Western philosophical discourse at a place of two scales: seemingly as mere "stuff" and yet also seemingly demonstrating the agency of animal organisms. These planty concretions function as new "objectivations" that address, in a Western tradition, what Shaner would called

the “Eastern” problem, that is, rather than “understanding the principle of interconnection” of the split body-mind, they (however uncannily) “experientially realize or authenticate original oneness of bodymind” (18).

Johnson's Plant/Human Objectivations: The Human Bodymind as Object in Ecology

Object-oriented philosophy provides a model for the kind of inquiry that Johnson pursues as Orphic poetry, a Western tradition of poetry interested in the place of language and its workings in the human mind and body in the context of the biosphere. Grounded in a Romantic-descended, American Transcendental vision of Emerson’s Nature and natural language, inspired by a modernist ethos of making it new, and using the de/constructivist techniques that expose the impossibility of a totalizing narrative of subjectivity, Johnson explores various ways of representing the human embodied subject’s awareness of his own state as an individual object in relation to other objects. Johnson achieves his ambition to be the kind of writer Sewell speaks of, as his innovative word organization strategies can be read as (re)productions of experiences of bodymind. Yet each work, however successful in producing unfoldings of such bodymind-awareness, is at the same evidence of the withdrawals of objects, including the bodymind (or self) from any totalizing linguistic apprehension.

In looking at how Johnson involves representations of plants in his Orphic inquiry, I must first admit to working myself with the category of plant, a category in which, one might argue, “the bewildering diversity of vegetation is reduced, at bottom, to the conceptual unity ‘plant’ in a signature gesture of metaphysical violence seeking to eliminate differences, for instance, between a raspberry bush and moss, a mayflower and a palm tree” (Marder “Vegetal” 469). But if Western metaphysics has indeed “conferred on [the category of plant] a crucial role in the

transvaluation of metaphysical value systems," then it is perhaps on that marginalized role that the uncanny self-awareness of Johnson's concretions depends.

At the very inception of Western metaphysics, Plato "harness[es] the plant for the purposes of justifying the unique theo-ontological status of the human," writes Marder (470). Plato imagined the human being as an inverted plant, its soul "rooted" in the realm of ideas and heavens at the top of the body, through the head. Marder argues that Western metaphysics begins "with the inversion of the earthly perspective of the plant, a deracination of human beings from their material foundations, their transplantation into the heavenly domain, and the correlative devaluation of the literal plant" (471). This inversion continues with early modern understandings of philosophy itself, including natural philosophy, as a tree of knowledge whose root is liberated from the darkness of the ground. Later, Julien Offray de la Mettrie, preceding Heidegger and Nietzsche, overturns old values by asserting that "Man is not, as some have said, a topsy-turvy tree with the brain as root" (78), and Goethe, Friedrich Wilhelm Joseph Schelling and Novalis (all identified by Sewell as Orphic minds) "judged the flower to be the highest spiritual development the plant may attain, so much so that 'flowers are the allegories of consciousness or the head' and the 'corolla is the brain of plants, that which corresponds to the light'" (Marder 473). Finally, as philosophers moved to explode objectivist metaphysics, thinkers like Francis Ponge use flowers to figure the decapitation of old values, emphasizing the bidirectionality of plant growth from the middle, argues Marder. This is a move that we can see developed in Deleuze and Guattari's figuring of the rhizomic plant as a "body without organs" and a model of dis-organization (though Marder rightfully points out that Deleuze and Guattari forget that "the leaf is neither an organ of a larger whole, nor a derivation from the original stem-root structure . . . it is an infinitely iterable and radically egalitarian building block of the tree")

(484-485). For late continental philosophy, plant being has provided a model for thinking an object "not conceived as a totality or as a differentiated whole" and Marder briefly notes the plant's bidirectional self-extension as another alignment by which one might model human subjectivity: "Like a sentient and conscious subject who always finds herself in the midst of something that has already begun outside the sphere of her memory and control, the plant is an elaboration on and from the midsection devoid of a clear origin" (474).

But Marder, in his own thinking, makes a move similar to Harman's decision to return from a purely relational ontology of flux and fluid interconnectedness to an ontology of objects with singularities and essence, however changeable, when Marder shows the dependence of Deleuze's rhizomic "pure multiplicity of immanence" on a misreading of the tree's biology to inform models of hierarchies and origins, and turns rather to the Hegel's seed as a model of "the simple immediate unity of the self and the genus." Marder writes: "the seed's self, relegated to the universality of the element and of light, is always external to itself, [such that] this unity is, at the same time, a disunity, a double indifference of the light and the earth to the seeds . . . we have stepped over the threshold of Derridean dissemination" (487). Marder has identified Derrida's dissemination, as a model "as infinitely deferring the beginning as well as the end" as a concept occurring not only "in the corpus of Derrida's writings but already in Schelling's Naturphilosophie ('The first seeds of all organic formation are themselves already products of the formative drive')," that is, Marder sees in *difference* a deferment similar to that which occurs in an organicist philosophy of form, one that informs both Olsonian projectivism and Sewell's Orphism. For Marder, it is the seed that helps us think beyond Derrida, because it is an object "where the breakdown of the unity and identity of the seed spells out the multiplicity it shelters even in the singular form" and "sketches out a model of justice understood as the aporetic

confluence of indifferent universality (‘seed’ definying the boundaries between species and even kingdoms) and attention to singularity (its appropriateness to each” (487).

Where Johnson’s work creates new “concretions” of body-mind-plant concepts, and new plant-human “intentional objects,” he enacts a seeing-as that participates in this history of seeing the human self and the plant body in metaphysical orders of Being. Jed Rasula called Johnson’s work “a proprioceptive metaphysics,” (*Syncopations* 249), suggesting that Johnson’s innovative metaphysics touch on Olson’s “proprioception.” Olson called proprioception “the data of depth sensibility / the 'body' of us as object” (181). We might say that Olson articulates object-oriented ontology of the human body. As Nathan Brown writes:

> The body is defined as at once an organism and an object: this is the first principle linking Olson's stance toward reality with that of Whitehead, whose "philosophy of the organism" dispenses with the ontological privilege of "living beings" by considering every body as at once an organism and an object. . . . For Olson, the body's experience as an organism results from its production, as object, of that experience. The body as organism is thus a subset of the body as object. . . . The proprioceptive sense of the body's movement thus recapitulates the "character of being"—the physicality—of both the object and the poem. . . . A body is determined as a collective rather than a system, as an object consisting of and among objects, such that "the skin itself—the porous surface along which a body is composed among "interior" and "exterior" components—"is where all that matters does happen."Along this surface, or at this interface, "man and external reality are so involved with one another that, for man's purposes, they had better be taken as one." (114-115)

Posing the body as an object among objects partakes, for Olson, of inquiry into the “data of depth sensibility” of humans, where the surfaces of the body are coterminous with “external reality.” Johnson’s concretion of the human body/brain as plants, and also of language as plants, within a similar object-oriented paradigm, suggests that the metaphysical disruption enacted by Johnson’s poetics, the intervention he makes by placing the plant, “the weed of metaphysics . . .

growing in-between the classical metaphysical categories of the thing, the animal and the human" (Marder 487) in the space of "us" is perhaps a theorizing of the flickering sense of unity and identity of the language-producing subject, at once bodied by Nature and yet understanding itself as discursively constructed. I will argue that Johnson's work shows that the human brain and nervous system are similar conceptual "weeds," objects that defy categorization as animal, human or thing.

Over the course of this dissertation I will trace Johnson's plant-body and plant-language concretions as indicating Johnson's seeing a similar "character of being" in the objects of language, human mindbodies, and plants. What begins as poetic inquiry into the poet-as-object-in-Nature, a pursuit of Agnes Arber's "antithesis of *Mind* and *Eye* . . .[as] epitomizing the broader subject of the relation of the intellect to the senses in general" (115) develops an Orphic vision of the Poetree. It is a vision that sees the human nervous system as plant-like in its plasticity and responsiveness to the "light" of attention. Johnson's vision of the human mind as a "nervetree" that uses language is arrived at uncannily through combining the logics of rhyme and taxonomy to organize his language objects. Johnson's "poetree" is an image of Sewell's concept of mind-body, of an integrated "relation of the intellect to the senses in general," that anticipates neuroscience's confirmation of the relation of human mental learning to the physical "bushy" growth of new synapses.

Chapter Breakdown

My investigation of Ronald Johnson's work proceeds relatively chronologically. I understand Johnson's work as different iterations of the same Orphic inquiry: what is poetic attention, from a biological perspective?

In Chapter One, "Ronald Johnson's *Green Man*: Avatar of the Unprimed Mind," I look at Johnson's early play with the genre of the nature diary to suggest the fundamentality of the human senses, particularly of human eyesight, to the knowledge produced by both scientists and poets. However, in his polyvocal journal of a nature walk in England, Johnson's observing voice notices "Green Men" on the landscape, peopling Johnson's poetic text with plant-human figures of Ovidian shape. Intuitively, the man-plant figure as a popular image seems to suggest that man and Nature are inseparable, but Johnson's work begins to tease apart the nuanced layers of alterity and affinity of Man to and with his others that accumulate in this image. The cumulative effect of *The Book of the Green Man* is the staging of an imaginative taxonomy, where categories of form (and species) are exposed as imaginative constructs based in part on having been primed, or "taught to see," by the writings and language that preexist one's own sensory contact with a given environment. In this chapter I also discuss why the man-plant figure produces such a particular taxonomic/perceptual disruption for the Western subject, distinct from, say, a man-animal hybrid figure.

In Chapter Two, I argue that Johnson's work makes explicit the affinity between the textual materialism of the 1950s and 1960s concrete poetry movement and a vitalist materialism that informs the writings of Goethe, Thoreau, Emerson as well as late nineteenth-century and early twentieth-century linguistics and cultural anthropology. Johnson engages with what Davenport calls "the real Transcendentalism" in both the collage-lyricism of *Valley of the Many Colored Grasses* and in the concrete poetry he was producing at roughly the same time. In this chapter I show that Johnson extends a conversation around the relationship between word, the (embodied) perception of natural form, and the forms perceived that extends back to Goethe (and Ovid) and that uses the figure of the plant to concretize the 'unfolding' experience of coming-to-know. I

argue that in this period Johnson develops a new sense of verse as "projective," that is, of the print line as emerging-in-consciousness as a plant extends itself into concrete spatiality.

In Chapter Three I argue that understanding Johnson's magnum opus, *ARK,* as a garden, as Johnson often suggested we should, is not only about understanding Johnson's utopic wish to manifest an unprimed, Adamic vision but also his wish to cultivate something *of* and "*in*" the human brain. I argue that Johnson's architectural metaphors of "building" describe a poetic process that Johnson also conceives of as gardening or cultivation, and show that Johnson's garden was also for him a figure of the mind and of the unconscious. Despite his sometimes brick-and-mortar terminology, the material with which Johnson means to build is a language that he has already understood as biomaterial. When we note the similarity of Johnson's plant metaphors for his process to twenty-first century neuroscientific metaphors for the growth and restructuring capacity of the human brain, the nerve-plant and brain-plant figures in the garden of *ARK* read like figurative "answers" to Johnson's Orphic question, suggesting that poetry is the product of a Cartesian-primed mind trying to resensitize itself to its own embodiment.

In Chapter Four, I conclude by suggesting that Johnson's figure of the "nervetree" that shows up in *ARK* is an objectivation of the mind "seeing" its own embodiment, as were the foliate senses and green men objectivations of Johnson's earlier work. These plant-sensed humans are Johnson's vision – an assemblage of grafts from the image structures of English poetic history – that make an argument for the place of poetry as embodied practice. I compare Johnson's sense of how conventional language use structures perception to the propsoal by researchers in cognitive science that there is a basic network of associated embodied perceptions that they argue all humans acquire in their early years of development. I then read *Radi Os,* though it was composed in the 1970s, as post-*ARK;* as the 100th section of *ARK,* that overarches

all of the other 99 sections, as Johnson had once suggested. As he does to frame *ARK,* Johnson uses terms derived both from gardening and architecture to describe his process to explain his excision of *Paradise Lost.* After reading *ARK* as a restructuring of neural connections through innovative rhyme, I argue that *Radi Os* can be read as a staging of the Fall as a neural event. I argue that Johnson's pruning of Milton's textual material reduces Milton's divine, proliferate and as yet unfallen Garden into a structure of knowledge, in a text that mimics the synaptic pruning all vertebrates go through as the early proliferation of neural connections in the juvenile brain is pared down and shaped by experience into less branchy but more stable structures of sense-making. The structure Johnson prunes for us, as he tries to represent a sense of joyful human-being from the undifferentiated paradise of all Being – that is, as he tries to achieve a poetics of knowing oneself a human object amongst objects – is none other than a seeing-oneself as plant, as "Man /the Chosen Rose / into Chaos."

CHAPTER ONE
THE GREEN MAN AS OBJECT OF ORPHIC SEEING

> The objects of my life, my attentions of a particular
>
> time, Washington, D.C., December
>
> the 9th, 1961)
>
> arrange themselves as always
>
> at my desk
>
>
> . . . the books have ranged themselves:
>
> *The Mind & The Eye, The Eyes of Discovery, The Distances.*
>
> *Plants, Man and Life —*
>
> *Excursions, The Orphic Voice. On the Nature*
>
> *of Things"* (*Valley* 51)

In this passage from Johnson's "Still Life," an early poem from *A Line of Poetry, A Row of Trees* (1964), Sewell's *The Orphic Voice* is aligned with other texts on Nature that form the "attentions of a particular time." Ranged alongside Lucretius' account of cosmic order, *De Rerum Natura;* Henry David Thoreau's writings of his excursions in the Nature he found near Concord, Massachusetts; and John Bakeless' book on "*the pageant of North America as seen by the First Explorers,*" are two accounts that address the nature of scientific observation. The first is Edgar Anderson's 1952 book *Plants, Man and Life*, which notes that because human curiosity, an emotion, drives the exploratory urges of botanists, that in fact cultivars remain understudied, and that "the scientific botanical name affixed to most cultivated plants becomes just an elaborate

way of saying 'I do not know'"(31). The other is botanist Agnes Arber's *The Mind & The Eye* (1954), in which she characterizes an "ascending scale" of biological thinking, where, at the terminal stage the biologist becomes interested in "how the intellectual and sensory elements . . . are interconnected" and "if it is the visual rather than the purely intellectual aspect of his problems which enthrals him, [the biologist] may discover that his reaction to his experiences is, in the long run, that of the artist" (5). These books, these "objects" of his attention as he calls them, amongst which Johnson places Charles Olson, are each examples of the kind of attention Johnson will explore in his poetry. They are concerned with seeing, with seeing Nature, and particularly with the possibilities of seeing "the nature of things," or things as they present themselves, when the mind of the seer inevitably *describes* the very contours of what is seen.

Johnson sees an affinity between a *poetic* mode of looking recognizable as such in the close attentions of Thoreau to his landscape, or in Goethe's account of the metamorphosis of plants that straddles the line of philosophy and empirical science, and to an attention to the psychological bases of scientific inquiry he finds in the writings of botanists Arber and Anderson. Johnson's attentions, and therefore the objects of his poetic gaze in "Still Life," have no doubt been formed by reading Sewell, who identifies Arber, Thoreau and Goethe as Orphic minds. Sewell also writes that "Linnaeus at Adam's task of naming the living creatures is an endearing figure" (211) who "moved directly along the Orphic line" when he, given any number of possible axes of comparison, "chose sex as the basis for his taxonomic system" (210). Throughout his career Johnson called Linnaeus "a poet," seeing in Linneaus' invention of Latin binomial names for the world's species a masterwork of *poiesis.*

Sewell characterizes the mind, informed by sense impressions, that must choose its own bases for classifying objects, as not only Orphic but *Adamic*, and in doing so provides the ground

to connect her Orphic tradition with another lineage that had only recently been identified in what would become a classic work of literary criticism. Five years before Sewell published *The Orphic Voice*, R.W.B. Lewis published *The American Adam*, in which he characterized the particular preoccupation of American writers throughout the nineteenth century as the production of a new national literature, one that both created a myth revealing the beauty and magnificence of immediate American life, but that also constructed the figure of a new American hero, having radically broken from European ancestry. This figure was to be

> a radically new personality, the hero of a new adventure, an individual emancipated from history, happily bereft of ancestry . . . an individual standing alone, self-reliant and self-propelling . . . the new hero was most easily identified with Adam before the Fall . . . And he was the type of creator, the poet par excellence, creating language itself by naming the elements of the scene about him. All this and more were contained in the image of the American Adam. (5)

Lewis identifies Emerson, who wrote "Adam in the garden, I am to new-name all the beasts of the field sand all the gods in the sky" (79), as a key figure in this hero-creation and myth-creation. Whitman is also paradigmatic: "I, chanter of Adamic songs / through the new garden the West" (qtd in Lewis 43). Ross Hair, author of the first monograph on Johnson, who stresses the “ambitious ocularcentric concerns” in Johnson’s work (2), writes that an “enduring concern of Johnson’s poetry is to recover the eyes of Adam and see the world *as if* for the first time” (*Modernist Collage* 25).

The Book of the Green Man (1967) was Johnson’s first major collection, and like the selection of books once ranged on Johnson’s desk, *The Book of The Green Man* brooks no distinction between the vision of the Orphic poet and that of the scientist enraptured before the thing he will call his discovery. *Green Man* plays with the conventions of the nature diary, a

form that is prototype to both the poems Wordsworth would make of his and Dorothy Wordsworth's writing in their journals and to early forms of botanic and anthropologic field guides and field reports. In this work Johnson explores the capacity of language to register the apprehension of figures against a ground, constructing an unstable "I" that attempts to look at the British landscape with "the eyes of Adam," but who yet manifests a vision and writing informed by all the writings of others' visions with whom the "I" is already familiar. The image of a folkloric Green Man is a hybrid plant-man object: both an imaginary, sensual object and therefore not a Natural object in the terms of modern discourse, and yet is one that has taken material form in drawings, sculpture and in the print of literary texts, and hence now names a set of "real objects" that innocent eyes might yet discover on a walk in England. Why Johnson includes the Green Man in the title of his text of Orphic inquiry is the question that I take up in this chapter.

From the fall of 1962 to the fall of 1963, the young Johnson went with his lover, mentor and publisher Jonathan Williams on a walking tour of rural southern England and Wales. Following the example of eighteenth-century British nature observers and diarists like Dorothy Wordsworth and Gilbert White, as well as of American walkers-in-wilderness William Bartram and Henry David Thoreau, Johnson kept a diary during the trip which he filled with the chronicle of their days:

> 12th: Sun at last. A very clear bright day, though quite cold – a few times we were even snowed on with the sun shining & only a lace of clouds above. Celandine bright along the greeny banks & where the fields slope to the river in soft green banks there were often white violets – a few of purple also. (Holograph Journal)

Upon his return to the United States, Johnson went to live in Demorest, Georgia with his and Williams' friend Dorothy Neal, where he spent the year writing "an innovative version of the

traditional British Seasonal Poem" ("Career") in the manner of James Thomson's *The Seasons* (1730). Johnson's long poem was plotted loosely along the geographic path of his and Williams' recent peripatetic journey. "We toured two years, mostly in England hiking between youth shelters, over Romantic scenery," wrote Johnson in a later reminiscence on his mentors: "First the Lake Country, then from the source ot [sic] the Wye to the sea. This encompassed a lot of poets and resulted in the *The Book of the Green Man*" ("Mentors").

In four suites of short lyric poems, the speaking voice of *The Book of the Green Man* describes a Winter spent covering the same territory Dorothy Wordsworth did in the journals from which William took inspiration, a Spring wandering through Francis Kilvert's Welsh Marches, a Summer passing through Gilbert White's Selborne, and an Autumn in the Shoreham district, where the painter Samuel Palmer met Blake and then painted the pastoral, visionary works which many regard as the most important of Palmer's oeuvre. Johnson's strategy to innovate the seasonal form involves liberally weaving into his constructed lyric line quotes on observations of nature and landscape, citing sources ranging from twentieth-century anthropological studies of vegetation myth to medieval devotional poetry to Enlightenment scientific tract.

The dust jacket of the American edition of the book shows one of the stone foliate heads that Johnson and Williams would have encountered on their journey. It is not clear whether or not Johnson knew that these architectural ornaments were not always uniformly known as images of the “Green Man.” But if Johnson knew that no clear mythologic or literary symbolism was associated with the figure, he left it unmentioned.

Johnson cites Geoffrey Grigson and Nicholas Pevsner as sources of information on the Green Man; but these writers were themselves informed by the 1939 essay written by Lady

Raglan that went unchallenged until the late part of the century. Raglan writes that she was shown a carving of "a man's face, with oak leaves growing from the mouth and ears, and completely encircling the head. Mr. Griffith suggested that it was intended to symbolize the spirit of inspiration, but it seemed to me certain that it was a man and not a spirit, and moreover that it was a 'Green Man.' So I named it" (45). Raglan describes the variations of foliate heads she has encountered in church architecture, noting a tendency to favour oak leaves for the foliage. Raglan states that she unable to comment on the origin of these figures, but is certain that the images have been carved "from real life" and that "there is only one [figure from 'real life'] of sufficient importance, the figure variously known as the Green Man, Jack-in-the-Green, Robin Hood, the King of May, and the Garland" (50). This architectural historical information, however, is not reproduced in the lyric sections of *The Book of the Green Man*, but is partially repeated (unattributed to Raglan) in a few short explanatory paragraphs after the endnotes. These paragraphs, as I will argue in more detail, however, are crucial to creating the deconstruction of readerly vision and reconstruction, or new objectivation, of that vision that the text enables.

Though his move to "make new" a traditional seasonal form was born out of modernist sensibilities nurtured by Jonathan Williams and his coterie, and out of a desire to succeed the innovations of Pound, Zukofsky and Olson, Johnson's poetics in *Green Man* are closest in strategy to what Marjorie Perloff has called the *citational poetics* of twenty-first century conceptual and flarf practices. Perloff identifies Walter Benjamin's citational practice in *The Arcades Project* as a paradigmatic work of "unoriginal genius," a work that does not align its artistic achievement with the expression or exteriorization of an individual and essentialized egoic voice. Johnson's highly allusive *The Book of the Green Man* can surely be read as a paradigmatic example of early postmodern disruptions of the construction of “voice.” However,

in this book Johnson's deconstructive impulse is in fact not so much an argument about poetics, aimed at ideals of voice, as it is an argument about discourse, still steeped in a modernist appreciation for scientific methods, that takes aim across disciplines at constructions in language of authoritative vision.

A longish bit from the first part of "Winter" gives a sense of how Johnson builds his quotes into a self-reflexively constructed lyric voice. "Wordsworth," writes Johnson,

> . . . could not see
> daffodils
> only
>
> 'huge forms', Presences & earth 'working
>
> like a sea'.
>
> It was Dorothy
> who lies
>
> at his side,
> who brought home
>
> lichen & cushions of
> moss,
> who saw

these Lakes

in all their weathers -

'dim mirrors',

'bright slate'

- the sheens like herrings

& spear-shaped

streaks

of polished steel.

For William

there was only

one

wind off

the Lakes -

that, that had no

boundary, but entered

'skiey

> influences'
>
> into his pores
>
>
> to animate some inner country
>
> of deep, clear Lakes. (15-16)

In this case Johnson's quotes are taken directly from the sources he discusses in the present moment of the poem, that is, from the works of William and Dorothy Wordsworth. I include this quote simply to give a taste of Johnson's style; the next stanzas use quotes from such writers as Friedrich Martens (1694), Richard Surflet (1616), and John Lyly (1578).

Denise Levertov, who knew the youthful Johnson through Jonathan Williams (her poetry collection *Overland to the Islands* was had been published by Jargon in 1958), gave Johnson his first big break, perhaps his biggest break into the mainstream of American and British poetry, when she decided to shepherd *The Book of the Green Man* to publication with Norton in New York City and Longman's in London. She had already decided to try to make the book happen "for the sake of its beauties" (Letter from Denise) when she told Johnson she had some reservations about its composition. Worrying that the book relied too heavily on quotation and allusion, and that not enough of Johnson himself appeared in the work, Levertov wrote:

> My overall reaction is that the book is lovely in its parts but that they dont [sic] really quite add up to a whole. That it is England, that it is literary and folkloric England, that it is a book of the eye seeking and finding certain especial values, that it is the product of a sensibility strongly affected by certain other sensibilities and so much seeing what <u>they</u> saw — these are all possible unifying factors but all are somewhat tenuous ones; and the theme of the Green Man himself, his meaning, is never really <u>developed</u>" (Letter Aug 1965).

Levertov's concern that the theme of a "book of the eye" might be too tenuous a unifying principle has been largely put to rest by a host of scholars who have emphasized the complex engagements with seeing and ocularity that characterize Johnson's work. Hair, for example, maps out *The Book of the Green Man* as an exploration of the possibility of integrating modes of vision he characterizes as visionary, idiosyncratic and scientific. Geoffrey Hart reads Johnson's intertextual ecopoem as a representation of Nature perceived through the lenses of various literatures, and Johnson's reconstruction of the seasonal mode as a kind of evolution of a traditional literary form. In his essay on *The Book of the Green Man,* Mark Scroggins focuses on Johnson's assertion that his goal in *Green Man* was to see Britain's canonized landscape through American eyes, and insists that Johnson does so by bringing a Thoreauvian particularism, an almost scientific taxonomic precision, and rustic eye for detail and particularity to a form once full of neo-Augustan personifications, ornament and high diction.

But Levertov's other concern about *The Book of the Green Man*, her feeling that the "intention proposed in the title and introduction are largely lost, petering out" (Letter), has yet to be addressed. So far, critics have not focused on what may well have been signaled in the title. Hart calls the Green Man "the presiding spirit of the whole book" and is the first to suggest that for Johnson "the ‘occult relation,’ in Emerson’s phrase, between human and vegetable passes along a two-way continuum, not simply a unidirectional, evolutionary ladder" (90), but it is outside the scope of his essay to pursue how this "occult relation" does in fact preside over the whole text. Mark Scroggins writes that "The Green Man . . . reappear[s] through the poem as a figure for the interpenetration of the human and the natural, vegetative worlds" (159) but he leaves the term "interpenetration" unpacked, and his emphasis on the *vegetative* natural, as opposed to, say, vertebrate or invertebrate animal "nature," reads as offhand.

None of these readings problematize the "occult relation," which in Emerson is harmonious and born of a deep pastoralism. "In the wilderness," writes Emerson, "I find something more dear and connate than in streets or villages. In the tranquil landscape . . . man beholds somewhat as beautiful as his own nature." He continues immediately: "The greatest delight which the fields and woods minister, is the suggestion of an occult relation between man and the vegetable. I am not alone and unacknowledged. They nod to me, and I to them . . . yet it is certain that the power to produce this delight, does not reside in nature, but in man, or a harmony of both" ("Nature" in *Essential Writings* 6-7). Hart may have read "occult" as simply meaning "supernatural" or "magical," but the OED gives uses of the term into the nineteenth-century that suggest a scientific inflection meaning "of a property or matter: not manifest to direct observation; discoverable only by experiment; unexplained; latent" or else simply "hidden" or "withdrawn" from view.

Book of the Green Man was received in its day as a handsome and reverent pastoral. Since then, the critical assumption seems to have been that the human-to-Nature relation posed by this figure, which has its origins in British medieval May Day pageants and in the ornamental architecture of gothic churches, is largely the same as this Emersonian delight which seems to find something "as beautiful as his own nature" in the pastoral landscape. Reading in the context of ecological thought, it might still be easy to read the figure as constructing Nature "over there," yet this is a premodern figure, originating before what Max Weber called the disenchantment of the world, and certainly recuperated by Johnson for its enchanting premodern resonance. Does it matter that the Green Man is an invention from a premodern era, to the question of how it signifies in Johnson's "book of the eye"?

Johnson writes as if the Green Man is a symbol with relatively self-evident meaning. The endmatter paragraphs mention that the Green Man "was a current legend and was deeply associated with Robin Hood, and the Green Knight" and even that "Geoffrey Grigson writes that traditionally 'on May Day in the village plays and ceremonies he was sacrificed, dying for all the death of plants in winter'" (89). But there is no speculation as to the significance for the people who first dressed in leaves for the pageant or carved the foliate heads into the stone corbels.

It may be that the 1960s intellectual climate in which Ronald Johnson participated (i.e. amongst writers who loved Edith Sitwell and had read Yeats, and during which Northrop Frye was enjoying a height of popularity) was saturated enough with the ideas of James Frazer that the Green Man would have simply been read as a figure of pagan or primitive Nature worship, and no further analysis would have been expected for Johnson's contemporary audience. After all, Frye remarked in 1957 that "*The Golden Bough* purports to be a work of anthropology, but it has had more influence on literary criticism than in its own alleged field, and it may yet prove to really be a work of literary criticism" (*Anatomy* 109) and John Vickery, writing that same year, declared that "following its first edition, Frazer's ideas made themselves felt in nearly every area of the social sciences and the humanities" (271). Perhaps for Johnson's readers, as well for critics writing about *The Book of the Green Man* in the 1990s, Johnson's gesture to a folkloric figure was simply his acknowledgement of modern poetry's affinities to the mythmaking practices of folk ancestors and a declaration of his identity as modern myth-maker. Johnson's focus on a figure of "spring renewal" might have been read then, as it has recently, as a rather uncomplicated symbol of the renewal of vision and of appreciation for Nature that are the explicit themes of the book.

Norman Finkelstein notes what I read as the book's Frazerian resonances in 1993 when he writes that "for all its verbal elegance, [*The Book of the Green Man*] takes us through various historical levels of socialized ritual to a primitive wonder over the land's vegetative cycle and over human means to recapitulate that cycle in words" (94). Curiously, neither Finkelstein nor Johnson make reference to Frazer, whose documentation of pancultural representations of the vegetative cycle, was the "most important" theme of *The Golden Bough*, "the dying and reviving god who is synonymous with the persistence of immortal life in a mortal world" (Vickery 274). It is entirely possible that Johnson, an amazingly adept appropriator of different formal styles, is in his anthropological essay so obviously referencing Frazer that it doesn't occur to source him. Some of Johnson's most important sources are themselves works within the Frazierian tradition: Lewis Spence's *Minor Traditions of British Mythology* (1948) and Alexander Porteous' *Forest Folklore, Myth and Romance* (1928), for example.

But Johnson never claims that his work is true fieldwork. Despite having taken notes on his walk, Johnson's intertextual process involved having "sat down with a host of memories and notes" to work on "a style and form that could be an organic, growing thing" ("In jacket copy"). His essay does not lead us back to any real landscape, but to a constructed one, an "image of England" as Christopher Middleton called it ("In jacket copy") that he himself created. Johnson the poet walks us first through the land; Johnson the folklorist - or is he an ethnobotanist? - leads us back through it; both pointing to a figure neither fully natural nor fully given to the modern psyche, but given to the representation of, and authored by, "primitive wonder over the vegetative cycle." The book is a "re-creation of the myth of the Green Man," writes Finkelstein (*On Mount* 94).

Could Johnson have possibly realized what he was doing in choosing this particular figure, and glossing him as he did? Did he know the Green Man would be read as evidence of a mythology, when no such mythology exists? Did Johnson know, that like the landscape he constructs on the page, "The Green Man" he offers us is a literary construction, cobbled together into a taxon by scholarly accounts, and not by "Adamic" seers outside history's grasp?

First, before I further discuss the genealogies of the literary Green Man and how these remain rather invisible in this book of the eye, it is important to understand the landscape upon which Johnson's Green Man appears.

Johnson announces in the first sequence that his attempt is to "make something circular / seasonal, out // of this 'wheel' of / mountains / – some / flowering thing in its / cycle" (17-18), but the four-part structure of the seasons, and the beginning-to-end nature of the conventional book (which Johnson will transcend more successfully in his concrete work), mean that the reading experience of *Green Man* nonetheless still feels linear and chronological. Johnson's logic of quotation, however, is not chronological, and the insertions of language between quotation marks disrupt the lyric line that strings together the effect of a passing year.

Johnson refuses to construct the grammar of his lyric line such that the quotes might be fully differentiated from that initial speaking voice that says "we" and "I." Thus the full sequence maintains a surface effect of a stable "I" while troubling it at the same time. The language moves in and out of describing the British landscapes with the I's "own" words and using the quoted words of others, sometimes for the length of a page, to also describe the landscape. The language also moves in and out of the I's "own" meditations on perception and quotes from earlier writers reflecting on their own perceptions of their environments. This instability of the lyric voice, and the constant sense of Johnson suturing in others' words to his line, means that what is "seamless"

is the regularity of effect produced by the constant refusal to allow the line to be spoken with one breath. It is a monologue spoken by a chorus, and the effect is a kind of flatness, the flatness of a list, that engages us more as a set of images than as a narrative of two men of letters rambling through the British countryside. Yet, like four paintings hung alongside one another, the composition and tone of each of Johnson's seasons is set in relation to the others.

Both George Hart and Ross Hair go into great detail to chart the four movements of the book and the different modes of perception that each critic reads as the organizing apparatus for that season's language. Hair writes:

> Lofty Romantic vision occurs in Winter; idiosyncratic vision complements Spring; scientific empiricism, Summer; and a syncretic vision all three preceding modes in Autumn, bringing the poem to a transcendent climax. Furthermore, a specific individual, locality and species of bird complements each season and its visionary mode. (*Modernist Collage* 66)

George Hart links each mode of vision, identified slightly differently, with the "genius" whose epigraph opens the season and with whom the section converses. Hart offers the following schema of the major formal elements of *The Book of the Green Man*.

season	*genius loci*	*locus*	*mode*	*symbol*	*process*	*product*
winter	Wordsworth	Lake District	visionary poetry	maze	descent	return
spring	Kilvert	Wye Valley	travel diary	river	peripatesis	renewal
summer	White	Selborne	parochial history	physical eye	metamorph osis	variety
autumn	Palmer	Shoreham	visionary painting	spiritual eye	apotheosis	unity

Table 1: "Formal Elements of *The Book of the Green Man,*" George Hart (In Bettridge and Selinger 174)

Hart continues: "While this structure inscribes an ecocentric rather than egocentric focus, alone it lacks a basis for selecting important or interesting details. Karl Kroeber explains how the lack of subjectivity affects James Thomson's poem (*The Seasons*): 'His subject is all of nature.

Selectivity is antithetical to his central purpose. He thus focuses a problem in all landscape art: any natural scene is an infinite number of appearances . . . any conceptual scheme of choice works against our subliminal sense of nature as a total continuum" (174).

I agree with Hart that one of Johnson's goals is to go beyond Thomson's panoptic but disembodied vision "to create a form that accommodates both selectivity and totality" (175). While Hart focuses on Johnson's selection of other authors' visions to highlight the selectivity of individual perceptions, I see the construction of the book like a piece of landscape art, which seems to have an infinite number of forms to focus on, and no easy thread of narrative to follow, as setting up his circumambient landscape as a metonym for “all of nature” and that its lack of basis for selecting important or interesting details is exactly the ground against which the title, *The Book of the Green Man,* works as a figuring, or what Kirby might call objectivizing, frame.

Mentions of the Green Man within the four-part seasonal structure are relatively few, and are mainly confined to Spring and charged with vernal resonances of renewal. How this book is "his" is unclear, especially if we read the end of the seasonal suite as the end of the story. The faux lyric line does provoke a reader to look for a main character in the schema Johnson has created, but the few explicit manifestations of vegetative or green men in Johnson's diagrammatic plot cannot be strung into a narrative.

In the book's front matter, the title appears a few times and an epigraph makes reference to "*four grett wodyn / with four grett clubes all in grene*" (1).

There are no explicit mentions of green men in Winter.

Spring begins with the appearance of the Green Knight, a quote mentioning Green Men, and an invocation to rise up, "bearded with greenery - the leaf vein pulsing in your throat" (31). Johnson describes an "I" made of vegetable matter in "Emanations" (38), and "a green man out

of Wales" appears with "the Celtic Blodeuwedd, / who was made of blossoms of oak / & broom & meadow-sweet" in "Landscapes and Mandrakes" (45).

In Summer, the stone-carved green men of "The Leaves of Southwell" appear once in a list-like description, heavily citing Nicholas Pevsner, of the natural forms represented in the stonework of the Southwell Minster.

In Autumn, the final season of the book, a long quotation of Pope's parody of topiary mentions "Adam and Eve in yew . . . Edward the Black Prince in cypress, an old maid in wormwood" (74). A final mention – "A man come piping / over the hills – an interpenetration of / moth-wing & seed-case &, burr" (75) – gives way to the culminating poem of the book, and the pages of notes.

It takes some looking to find the Green Man in his own book; one might even "miss" him on the first read. The relationship of Johnson's Green Man to his intertextual habitat is not the high contrast of verdant colour offset inside the hard black type of criticism, but is more a play of relief, texture and contour, of conception, and of differentiating a form out from its ecology of language, or, as Johnson writes:

> As a leaf startles out
> from an undifferentiated mass of foliage
> so the word did from a leaf – (*Book of the Green Man* 54)

So are the fleeting references to The Green Man. The Green Man is a green figure on/in green ground; he "startles out" of the landscape only as much as one green leaf startles from its green group. He as striking, as reticent and as borne out of conceptions of form as the white square on

white background in Kazimir Malevich's avant-garde painting "Suprematist Composition: White on White" (1918)[2].

The "I" voice of *The Book of the Green Man* doesn't frame these appearances in any way that suggests the observer's journey is about searching out or understanding green men, or about discovering in them some kind of unifying feature of the four areas he visits. It is a voice differentiated from the tone of the poetic, that speaks *after* the verse and *after* the pages of notes, a voice without an "I," that finally seems to engage with the question raised by the title and epigraph by addressing the Green Man directly:

> 'The Green Man' of the title is not a poetic metaphor, merely, but is still to be seen in England. It is not uncommon for pubs or inns to be called by his name, a hold-over from times when he was a current legend and deeply associated with Robin Hood, and the Green Knight in *Gawain and the Green Knight.* But he is most often to be found, today, as a face with sad, heavy-lidded eyes occupying the corbel of an arch in churches. There, he has branches growing out either side of the mouth, or is bearded in leaves with more foliage springing from the forehead, or is garlanded. (89)

This voice, which intuitively reads as "Johnson's," but still constructs a non-fiction, prose persona, identifies the "King of the May, or Jack-in-the-Green" as having "a persistent history that can be traced back to May Day celebrations throughout Northern and Central Europe." It invites the reader to recognize the Green Man in a multitude of hybrid human-vegetal shapes, and points out where the Green Man, in his many iterations, "is seen": at South Queensferry, on a boy dressed in clothes sewn with burrs or seed-cases; in the portraits of vegetable men painted by Italian artist Giuseppe Arcimboldo; or in the seventeenth-century gardener anonymously

---

[2] I make this comparison only to hint that Johnson's interest in figure/ground, which he also explores in his concrete work, can be detected here. Both the collage and concrete movements in poetry took their inspiration from early 20th-century visual avant-gardes. Both Ian Hamilton Finlay and Sylvester Houédard expressed their admiration for Russian suprematist work. Malevich wrote *The Manifesto of Suprematism* in 1926; it first appeared in English in 1956.

captured in European herbals in his floral and vegetable "Habit du Jardinier." The Green Man, according to this speaker, can also be seen in "the hand that seems to sprout leaves at its wrist and is used in this book . . . a pseudo-mandrake actually a radish" (90). The radish-hand and the mandrake are, for Johnson, examples of "the reverse side of the coin" - that is, a plant shaped in the form of a man, rather than a man taking on the form of a plant.

In a new "voice" of cultural anthropology we are invited to flip back into the landscapes we have just walked through with the poetic "I" as it echoed earlier writers, and are now led to consider all forms of human-vegetable compounding as "the subject" of the book. Johnson's anthropologist's voice tells the reader, who has arrived at the end of the book, *how to see* Green Men in images or language that the reader will have already encountered. This is why the Green Man is foregrounded in the book's title and more importantly in the essay at the end of the book: using nothing but language, Johnson gives his reader "new eyes" to recross the very landscape which she has just traversed. "Every biologist must be able to confirm from his own experience that perception depends upon preparedness of mind, as well as on actual visual impressions" writes Arber (*Mind and Eye* 117).

So, invited to "see" Green Men with a new preparedness of mind, when I read Johnson's book again, it seems much more populated with them. It is as though Johnson, like Linneaus, has named a new class of form after the folkloric species, an Orphic move in that in the name itself is the indication of choosing the traits (shared plant and human morphology) that create the shared identity of individual forms.

Now, in Winter, first apparently devoid of Green Men, I notice that Johnson's yews are "sinuous" (19). Johnson's description of the lichen and of the earth's concealments both being "bones / that 'being / striken one against / another / break out / like fire /& wax greene'" (26, 28)

now loudly anticipates his “Green Men, covered with green bones” that we will meet in the next section. Hart writes that "present in the maze [of Winter] is an incipient image of . . . the Green Man" (178) but it's unclear what image that is, for the mandrake he mentions in the next sentence does not appear in the maze. The poem that follows is "The Oak of the Maze": if a "plant shaping itself into the form of a man" counts as a Green Man, then surely the oak of this poem is one. This oak is a Man-god/Tree, based on Alexander Porteous' account of a Greek tradition that transitioned from a Nature-worshipping culture to a theist one, where the Oak itself ceases to be worshipped as such and Zeus, the god of Thunder, comes to eventually be identified with the Oak Tree and the ivy that clings to it. “Zeus takes the stately form of life in the vegetable life of the Oak Tree,” Porteous wrote (161) in the book that Johnson is citing here.

What is Johnson's take on this infusion of the tree with an anthropomorphic god spirit? "There are many ways / to look at an oak, & one, with its / own eyes: / the blunt, burning push of acorns" writes Johnson (27). Johnson lets the oak stand as itself, but sees in its very reproductive growth a kind of vegetable looking.

Remarkably, Johnson's characterization of the Oak as seeking and sentient (qualities critics might call anthropomorphic) evoke remarks made by Charles Darwin. Of the light-seeking radicle tips that would be just like those pushing out from Johnson's germinating acorn, Darwin wrote, in the concluding paragraph of his study of *The Power of Movement in Plants* (1880):

> It is hardly an exaggeration to say that the tip of the radicle thus endowed, and having the power of directing the movements of the adjoining parts, acts like the brain of one of the lower animals; the brain being seated within the anterior end of the body, receiving impressions from the sense-organs, and directing the several movements. (573)

Johnson’s anthropological voic, that names the artifacts of culture, now echoes the voice of the man who epitomizes the impulse to the systematic classification of Nature, about whom Sewell

writes “claim[ed] he ha[d] found once for all the natural system which Linnaeus set up as a goal before the eyes of taxonomers” (218). Both Johnson and Darwin, it seems, see Green Men.

In Spring the references to the Green Man, which punctuate the dated diaristic entries of this season, are quite explicit, as we have already seen. The Green Man comes onto the landscape in breathtaking, blooming splendour. But with our guide in mind, a drowned sheep's head "like a withered apple" (35) now might suggests a green animal from the Green Man's bestiary. And the Green Man seems to appear in an inverse and aged form in an observation made through a quote from Kilvert, commenting on the ancient trees at Moccas: "Those grey / old men of Moccas / . . . long-armed, deformed, hunch-backed, misshapen oak men" (36) in language that recalls the more virile oak encountered in the maze and yet echoes the only other "men," the green men, that we meet in this book. The "I" that is "all leaves" and who "ascend[s] with saps / & flower[s] in season / & edd[ies] with tides" (38) was recognizable enough on the first pass, but now I pause over the quote from Henry Vaughan: "'. . . With what floures / And shoots of glory, my Soul breaks.' 'Living bowers'" (42). Can Vaughan himself, with his flowering soul, now be included amongst Johnson's Green Men?

In Summer, Johnson's poetic voice describes a place "between the bearded grass / & man 'looking in the vegetable glass / of Nature', is a network of roots and suckers / fine as hairs" (52). The idea of Nature being a vegetable mirroring of man, taken here from Blake, is now to me a Romantic vision of a man seeing himself in and as green vegetation where greenness *reflects* man; and while "bearded grass" is both evocative of bearded-grass pinks, a kind of orchid, and of the opening line of a poem by James Benjamin Kenyon, I can't help picturing little whiskered green blades that wink with the "one identity" that Whitman's grasses did. The Leaf speaks to the poet, as does the Earth and Air, in Johnson’s poem titled "What The Leaf Told Me" (54), and its

message, the leaf like a "delicate polyglot" tongue "inventing itself as cipher," and growing in brightness until its "massy poplars soon outshone the sun" seems the very dialogue of a man looking at himself in that vegetable mirror. This poem, through the lens of Johnson's taxonomy, seems the "kind of greening speech" that comes but a few pages later from "a throat come / aleaf . . . those mouths" (59), articulating one of Johnson's key apprehensions about the relationship of language to perception, one that he has been exploring in concrete techniques at the same time: that language, with its priming capacity, becomes a light that men "see" by that eventually overtakes unconditioned perception. One of the most subtle forms of the Green Man occurs in the "grotesque and arboreal perspective" of the "injected vessels" of the Summer poem "Exhibit from Frederick Ruysch's Anatomical Museum," a seventeenth-century Amsterdam museum Johnson could have only visited through books. In this case, we learn of Ruysch's "geographical landscapes [made] from gallstones and kidneystones," and 'botanical" backgrounds from injected and hardered major veins and arteries for trees" (Gould and Purcell 31) through Ruthven Todd's study of Blake, science and art called *Tracks in the Snow.* Ruysch's museum showcased what we might now read as macabre versions of Johnson's radish hand: "wrists . . . adorned with organic & injected / frills" (60) severed limbs pickled as vegetables, and trees made – literally – of human flesh.

Autumn's strange catalog-like rehearsals of visions now tease with very animate plants: "'vegetable gold' - the light of suns fold in upon itself, / as leaves / of a cabbage" and "the elder grow first / green, then white / then a lustrous black" (65) and the "budding, leafing, flowering chestnut" (66). If these very active, but still largely realist flora (their motions unascribed to anthropomorphic gods living within them) do not quite fall into the category of Green Man, they set up the movement toward "the 'yellow spot' of clear vision' that sees the "trunk of [a] tree

come suddenly out / of a slope, as Arcimboldo's lemons from a throat" (75). Johnson has already told us that Arcimboldo's seasonal portraits, literally "composed of vegetables" or fruits or plants, are manifestations of the Green Man. In between the rather realist motions of the plants and the land moving as art does are descriptions of "ancient trees whose every leaf is a streak of pale flame" (68), and a reference to a South African vine "said to entangle cattle's / hooves & horns in networks / of fiery tendril" (69) . . . that when cut "seems to bleed streams of living fire" (86). The Autumn section seems to move quickly through different modes of rhapsodic, almost synaesthetic, vision.

If we map these sightings of the Green Man back onto the grid logic of the poem's original mappings, in which we at first seem to be presented with the world mediated through four main protolocutors' eyes, but now take another look at those visions with the “preparedness of mind” (neuroscientists would call this “preparedness” having been cognitively “primed” to perceive a particular object) with the intention of seeing Green men, we find that our vision remembers the differentiated landscape into new wholes. From the flat black and white surface of text, as much as from the green scape the text evokes in the reader's mind, the Green Man “startles out.” Moments of reading the text for iterations of such a strange clade is a deliberate act of differentiation, of seeking to perceive wholenesses by noticing a set of traits in proximity to one another.

Reading "backward" like this, or rather, reading again with an openness to seeing as one sees Green Men, the previous witnesses of the landscape, as Johnson has presented them, seem to take part, in their own way, in the particularization process of naming, taxonomizing and "figuratively owning" these lands. We can still accept Scroggins' argument that Johnson's introduction of a particularist way of seeing to the British landscape is a move that brings an

American transcendentalist lens to the landscape. But this lens unwittingly brings into focus the whole history of the nature diary as a genre, as it becomes more obvious that tropes that served the ecclesiastical and worshipful appreciation of God(s) in nature persist into literary forms that are not quite science and not quite *not* science, and that prefigure not only Thoreau but also prefigure Darwinian scientific genres and Frazerian anthropological writing. The Green Man "can still be seen" in England and yet we have just been led through a reconstruction of that seeing that alerts us to the cultural construction of a productive blindness to that seeing as *scientia*.

We might create our own grid mapping modes of vision, where each season's guiding approach is read against the kind of looking that sees Green Men. Here the main appearances of the Green Man, as we encountered them above, are read not as "mere metaphor" but as forms emerging from an alternative approach to environmental perception to the one being deconstructed from the integrated vision, given to us and Johnson by Wordsworth, Kilvert, White and Palmer:

	Modern Way of Seeing	*Orphic Vision*
Wordsworth	Anthropomorphization: "folk seeing"	With a plant's "own eyes," "vegetable senses"
Kilvert	Dazzle, denomination	Movement of sap is movement of spirit, excitability, semination
White	Dissection, lysis, network	Synaesthesis
Palmer	Ekphrasis, optic nerve vs. inmost spirits	Nature seeing itself, eye and flower both heliotropes

Table 2: Orphic re-visions of modern ways of seeing in *The Book of the Green Man*

Johnson himself emphasized none of the Orphic dimensions of *The Book of the Green Man.* He wrote in fact that *Green Man* is a "progression . . . from the man of single vision to the Visionary Blake encouraged" ("In jacket copy"). But another progression indicated by his choice of "genus

loci" is in the history of diaristic nature writing. A span of one hundred years is demarcated from the publication of *The Natural History of Selborne* in 1789, to Dorothy Wordsworth's journals begun in 1798 and William Wordsworth's *Guide to the Lakes* which appeared in 1835, to Samuel Palmer's diaries and letters treating of his Blake-influenced years in Shoreham from 1826 to 1835, and to Francis Kilvert's diaries, composed from to 1870-1879, in which he openly acknowledges his affection for Wordsworth's journalistic portraits of the Wye. These years and these works trace what Mary Ellen Bellanca has called "the nature diary's formation as a genre – or more precisely, as a subgenre of nonfiction prose" (3). These nature journals not only have been read as forming the "foundation of Romantic nature poetry" (Kroeber 16) but, Bellanca argues, established the observational diarist culture that produced John Ruskin, Henry David Thoreau, Ralph Waldo Emerson, and John Muir, as well as Charles Darwin (5). Quotes from each of these later diarists, save Muir, also appear in *Green Man.*

> The nature diary's origins can generally be traced amid the related histories of nature watching, botanical field practice, and periodic record-keeping that stretch back into the seventeenth century and earlier. . . . [T]he most proximate factors that shaped the genre . . . reached a critical mass in the 1770s with the appearance of several practical tools for the naturalist, including preformatted journals for field notes, pocket guides to the British flora, and user-friendly scientific classification systems. (Bellanca 11-12)

E.D.H. Johnson called the period from the late eighteenth century to late nineteenth century the "golden age" of British nature writing, writes Bellanca. This century, she argues,

> was a century of epochal transition in Western understanding of the universe, as prescientific worldviews comprising myth, folklore, magic and uncritical acceptance of ancient texts gradually ceded to a more materialist outlook informed by an explosion of factual knowledge based on direct observation of physical nature. (4)

At the beginning of this period, "virtually all naturalists were amateurs by definition," but by the end of the nineteenth century "information about nature had become so complex that its study, of

necessity, grew ever more formal and branched into scientific specialities" (4). Johnson's progression from "single vision" to Blakean visionary does not follow a chronology of the lives of his naturalist muses: Palmer, whose vision closes *The Book of the Green Man*, wrote before Kilvert, whose writings inform "Summer."

The Book of the Green Man, as a diachronic assemblage of naturalists' texts, is a simulacrum of the nature diary, exposing the constructivism of the observation and documentation practices of the incipient sciences, discourses that would eventually dismiss the contributions of these amateurs. *Green Man*'s preoccupation with form and seeing form reflexively implicates such seeing in the perception of the text's genre, as poetry or nature journal, and thus as poetry or proto-science.

Reading *Green Man*'s foregrounding of practices of assembly and construction in the nature diary genre as a deconstruction of it suggests that Romantic poetry and its formal innovations occur not only as reaction to the neoclassicism of its immediate literary predecessors but also as part of the differentiation of naturalist writing into writings in the disciplinary sciences, and hence could be read as one of the "scientific specialties" into which this early genre eventually split. Another of those specialties, whose form became the field guide, is cultural anthropology. Johnson's *Book of the Green Man* is also a simulacrum of the literary conventions of that discourse. The folklorist/anthropologist voice in the concluding paragraphs of the book invites us to look at the Green Man with both scientific and literary lenses on, to "see" the Green Man both as a real object, that could be encountered on a walk and could be observed, measured and collected (though I would understand this seeing to be another sort of sensual object); and as a sensual object, one that occurs within the imagination, though here one cannot tell whether the Green Men of the text are all poetic renderings of the encounters of Johnson with real objects, or

are textual objects that are themselves only assemblages of texts or reproductions of a sensual encounter with texts. Without the disciplinary context to locate the ontology of the narration, it is unclear whether we are being invited to look at a real landscape with a certain preparedness of mind, or are being invited to look at a text with a different priming entirely.

The idea that perception is filtered through one's motivations for looking, or that having been been exposed to visual images of a particular form – having been "primed" – will effectively change one's visual perception of an environment to include that form, is one with a long history in contemporary cognitive and perceptual psychology. *The Book of the Green Man* stages a readerly experience of priming. The principle, which also explains a subject's tendency to retain new information that conforms to previously held belief, informs the reception and interpretation of information presented to the other physical senses, including social and interpersonal cues.

Researchers in behavioral neuroscience and specialists in the priming phenomenon, Emily Balcetis and David Dunning echo Arber's writing on preparedness of mind affecting visual apprehension when they write: "Perception of an object [or a person] is importantly influenced by the perceiver's expectations as well as the context surrounding that object" (613).

Johnson's text suggests that the preparedness of mind that an authoritative text can give to the observing biologist or cultural anthropologist can also guide a reader through a text. If we read the voice of the prose paragraphs closing *The Book of the Green Man* as that of a literary critic, a James Frazer, as it were, of texts, the work also suggests that the same principle of priming underlies the critical practice of "reading for" particular motifs or representational strategies. This is not only to say that researchers will tend to find what they are looking for in texts, but also to argue that this principle is at the heart of identity-based critiques of literary

representation, in that underneath the faith that literary representation matters, and that texts can construct ideology and subjectivity, we assume that literature and other media produce semantic exposures that prime readers to perceive, interpret and speak about their worlds in line with that priming.

For example, when I started this doctoral project the field of critical plant studies had not yet been established (if we mark its establishment as the launch of the Critical Plant Studies book series at Rodopi Press in 2012). Without that field to legitimate my approach to texts, I could only say that I came to the discourse of poetic scholarship with an interest in representations of plants, specifically where plant representations might inform representations of human subjectivity. I read widely and "found" what I was looking for in places where others might not.

My senses trained to a specific track, Percy Bysshe Shelley's "The Sensitive Plant" to me hummed with resonances of the interesecting discourses of human sensibility and mental horticulture of its day. Wordsworth's flowers invited me to ask what it means to "enjoy" breathing. I saw the hand of the neurophsyiologist, as Erasmus Darwin was, all over his *Loves of the Plants.*

So, when I first encountered Ronald Johnson's plant-brains and language-leaves on the black and white pages of avant-garde poetics criticism, they popped, in almost synaesthetic colour, off the two dimensional, black-and-white critical pages where I first encountered them. It took nearly three years of "looking" for phytomorphized people and anthropomorphized plants in the disciplinary landscape of English Literature to "find" the olive coloured, clothbound *The Book of the Green Man* on the shelf at UBC's Koerner Library. And so the Green Man of *The Book of the Green Man* also "pops," for me, out of Johnson's intertextual garland, like a three-dimensional figure on a flat ground. Upon reading *The Book of the Green Man* with a group of

Johnson enthusiasts at Kansas University, I learned that the plant-man figures do not jump out at other readers. Their reactions were similar to Levertov's.

However, just because I am primed to find him, and see him "everywhere," does not mean my perceptions are inaccurate. Until, as a discursive community, literary critics name a critical perspective, the researcher who goes looking for and names “new” forms risks their field work seeming idiosyncratic. Yet an intuitive understanding of the way our critical reading skills are primed also makes us appreciate the critic whose idiosyncratic sight newly parses a established textual field. If, thereafter, one cannot read the text under discussion without seeing what that critic saw, the field is permanently informed.

Guy Davenport understands the potential of a text to prime its readers as *the* transformative power of poetic vision. He notes that after reading *The Book of the Green Man*, he realizes he has been trained to now "see" certain forms he might encounter in the scape of his reading or otherwise as a species of the *Homo Vertus*:

> Some weeks after I read Mr. Johnson's *Book of the Green Man* I was looking at Nelson Glueck's book about the ancient Nabataeans and was able to say of the strange leaf-bearded and leaf-haired demons depicted there, 'Here's Ronald Johnson's Green Man way back in the Biblical Edom.' Two days later the Jolly Green Giant suddenly lost his commercial enamel and stood there on his tin of beans as a household god thoroughly numinous. (*Valley* "Introduction" 12)

Davenport has been "primed" to freshly see Green Men in his natural environment, though they have always been there. He is primed to see as Johnson has been by the writers who have preceded him, and as *Green Man*'s readers are by language as simple as the title of the book, and then more ideologically by the essay-like instructiveness of the book's final paragraphs. If I am successful, readers of this dissertation will see the plant-human concretions in Johnson's work, like the Green Man he makes his own, as images of their own embodied, reading selves.

Like the landscape that has been witnessed many times before, and the accounts of them that precede and prompt attempts to "make new," the Green Man is not the poet's invention but rather evidence of a perceptual shift that earlier minds have made and that the poet's work brings back into the field of contemporary perception. Davenport puts it slightly differently:

> It is always difficult to know how much of the world the artist has taught us to see; once we see it we are quick to suppose it was always there. But there were no waterfalls before Turner and Wordsworth, no moonlight before Sappho. The apple has its history. For it is not things which poets give us but the way in which they exist for us. The rich theme of *The Green Man* has always 'been there' in the history of things, in folklore, in architecture, in poems. (12)

A conscious seeing, then, is not simply the act of noticing something in the visual field, nor even is it meticulous description or prolonged attention. Johnson's collage of visions silently acknowledges the formative power of histories and hierarchies of ways of looking.

We see what we are taught to see; we see what we are tuned to see. Helen Luster, one of Johnson's correspondents, wrote to him, "It is amazing what a hold your 'Green Man' has on me. I mean, I'm not 'into' him, he's into me. Of course, he isn't your Green Man really; he belongs to us all . . . [he] is just there if and when we choose to tune into him" (Letter from Helen Luster). *The Book of the Green Man* is a self-reflexive act of this tuning; Johnson's choice to "tune in" to the Green Man is a deliberate act of attention to attention.

It is also a deliberate staging of taxonomic inventiveness, of the Orphic mind, deliberately crossing the conceptual "enclosures" that taxonomy enacts on the total continuum of the landscape. Unconfined to a single taxon of either human species or plant species, in fact not even fully belonging to one taxonomic level, straddling the species category of the human and the entire kingdom of *Viridiplantae*, the Green Man seems to belong, like other mythic hybrid figures such as the centaur or the satyr, fully to the imaginary. Yet as a symbol, the Green Man

also belongs fully to an idea of the natural, to the idea of fit within an order that "belongs to us all" and has "always 'been there' in the history of things." Johnson, like a object-oriented Linneaus who sees no distinction between perception of forms on the natural landscape and the forms of the imagination found in literature, sets out to impose his own order upon the spectrum of perceptual and imaginative forms. Deciding himself what goes in and what stays out and incorporating the visions that have gone before, he creates a surreal clade, an uncanny taxon of "Green Man" that includes any shape, naturally or artificially occurring, that compounds perceptible forms of vegetabilia and those associated with "human."

Johnson takes pains to present the Green Man as a figure whose genealogy can be traced, but he traces that genealogy back only so far as his desire to maintain a poetics within pastoral and American Adamic traditions would allow. He presents the Green Man divested of a number of more threatening or aggressive resonances, such that we can read Johnson as recuperating, in the late 1960s, on rising tides of environmental movements that would swell in the 1970s, a (white, homosocial) male icon of ecological mindedness, as a counterpart, or argument, to the iconicity of Gaia, beneficient earth mother.

I see Johnson doing something akin to the move Jill Konway and Yaakov Garb, writing about modern episodes of feminist politics, describe in Robert Bly's writing in the 1990s, which they read as a men's movement reaction to the sense of attacks on masculinities at play in the ecofeminist movement that aligned Nature and the feminine:

> While Bly was one of the early celebrants of the Great Earth Mother that was to become the central motif of some forms of ecofeminism, his interests mutated so that his early devotion to fertility goddesses was countered by the cult of the wild-man, the green man, and a pantheon of other male gods represented by the men's movement as embodying socially valuable qualities. (273)

Those critics, then, who read in the Green Man an unproblematic icon of ecological harmony or Spring renewal miss some of the resonances that are lent to the book by a fuller exploration of the history of the Green Man as a cultural symbol, and of his trajectory as an object of study in Western scholarship. These explorations add new dimension to Johnson's attention to the Green Man at this moment in American modernist poetics, at the height of civil rights and feminist movements with which the Language school poets were aligned, and given Johnson's later explicit statements of wanting to write "without history." In the remaining part of this chapter, I will trace some of this history of the Green Man, and show how resonances of "green" wildness and proliferation as sexual energy have been stripped such that by the time Johnson turns to the Green Man, the "green" foliage with which Man has been combined is no longer the icon of a fearsome, god-filled Nature whose uncanny, semiotic significations must be interpreted by Man but has become the modern figure of raw commodity and useful *matter*.

One of Ronald Johnson's first explicit references to the Green Man proper comes from the following sentence: "They are called woudmen or wildmen, thou' at thes day we in ye signe call them Green Men, couered with grene boues" (n.p.).The OED gives this quote to Jacob Larwood and John Camden Hotten in their history of signboards; in a passage of the Spring section of *Green Man*, Johnson elides the reference to woudmen, quoting only the fragment of the sentence following the 'though' and attributing it to the Harlein manuscripts in the British library. *Green Man*'s epigraph, a quote Johnson lifts from Lewis Spencer's quotation from a 1553 diary, refers to "four grett wodyn / with four grett clubes all in grene;" later Johnson glosses the word wodyn in his author's notes as "wild men" (83). Johnson is obviously aware of a relationship between green men and wildmen, but he does not pursue the connection between green men and wildmen in his own gloss. Norman John Greville Pounds, writing in 1994, unreservedly conflates the

Green Man and the wild man of English folklore, suggesting the interchangeability of the two figures:

> The green or wild man was a syncretic figure who appeared in the early Middle Ages and survives today in inn signs and popular folklore. . . . He is usually represented as covered with hair and often with animal features such as hoofs and occasionally horns. He is alternately seen as kindly and sinister, as wise and stupid, as the embodiment of freedom and strength and as cowardly and cunning. These contrasts in themselves indicate the breadth of the traditions that have been conflated to produce the syncretic green man. But above all the green man, or 'wodewose' responds 'to a persistent psychological urge . . . to give external expression and symbolically valid form to the impulses of reckless self-assertion which are hidden in all of us . . . able to call up forces his civilized brother has repressed.' (394)

Pounds gives us an even wider angle on the context in which Green Men appear in the British countryside, and more information about the context from which Johnson's quote is pulled:

> The green man . . . appears to have been used as a negative statement of the values accepted by society. People could not define culture, morality, civilisation, but they could say what it was not. The wild man was thus a figure antithetical to accepted standards, but neverthess one to whom people would on occasion long to revert. He epitomized 'man's uneasiness in his civilization'. It was probably in this sense that the green man became an inn sign. A manuscript of the early eighteenth century spoke of "woudmen . . . covered with grene boues . . . used as signes by the stillers of strong waters . . . a fit emblem for those that use intosticating lickers which berefts them of their sennes.'" (398)

The sense of the Green Man as symbolizing an antithesis, or unease, with accepted, civilized standards disrupts the easy reading of him as seamlessly standing for "interweavings of man with earth." Here the Green Man is a symbol of wildness linked to a lack of moral stricture.

Johnson's poetic voice and his scientific voice, through their elisions of the unease held in his image, perform a prelapsarian innocence of the Green Man's subversive resonances and potentiality. But Johnson was no innocent in terms of his own subject position in relation to a

Christian moral code of civilized behaviour. Eric Selinger gives us a hint as to how we might begin to understand the Green Man's unruly potentialities when he notices the connection between the Green Man and Whitman:

> By spring we meet the Green Man in propria persona: the nature genius who came to Sir Gawain as the Green Knight . . . The I of these poems is a bit of a green man himself. As he hikes along the river Wye he quotes Whitman to claim that he incorporates fruits, grains, esculent roots ("Ronald Johnson" n.p.)

Where Pound admits only grudgingly that he is of "one sap and one root" with Whitman, and grudgingly pronounces that "there be commerce between us" ("A Pact" 98), Johnson serenades his romantic American forefather and identifies with him. In an earlier poem called "Letters to Walt Whitman," Johnson writes: "But I have come O Walt / for the interchange, promised, of calamus / masculine, sweet-smelling root, between us" (*Valley* 91).

The hints of the Green Man as existing in a kind of sexual commerce both with the earth and with the textual bodies of literary fathers are not as explicit as in the "nights of 'love-root'" in"Letters to Walt Whitman" (*Valley* 98) nor as in the copulation of the void that will take place in the "multiseeded soil" of the mind in early versions of *ARK* (“Two Poems" 102). Nonetheless, echoes of Johnson's Whitmanesque calamus that "seasonally thrusts itself up for lovers" return in Hart's reading of *The Book of the Green Man'*s Autumn section, where he notes that "in Palmer's paintings . . . the land is 'perpetually coming / to harvest,' and, not for the last time in the poem, a line break emphasizes the sexual pun on the word *come*" (184). *Come* is also the imperative of choice as Johnson's unattributable voice addresses the reader, or perhaps the landscape, urging either to foliate:

> 'Rise, and put on your foliage.'

Come, as the Green Knight to Gawain at the beginning of

the new year – (31)

Later, in "Landscapes and Mandrakes," Johnson writes, "Then came, like the Celtic Blodeuwedd / who was made of blossoms of oak . . . / a green man out of Wales . . . / as if all Hafod // rose up again, & came in strides of vistas into England" (45). Eric Keenaghan, writing about Johnson's "Letters to Walt Whitman," says that "Johnson's echoes of passages about natural phenomena and order are recontextualized to create recognizably homoerotic distortions that establish the 'naturalness' of homosexuality" (370). The resonances between this poem's Whitmanesque "landscapes projected masculine" and *The Green Man*'s are strong enough to support a reading of the "presiding spirit of the whole book " (Hart 178) being as yet that "persistent psychological urge . . . to give external expression and symbolically valid form to the impulses . . . his civilized brother has repressed." Jonathan Williams, Johnson's companion on his British walking tour, who appears in *The Book of the Green Man* as simply “Jonathan” in the dedication, begins to take more substantial shape as the wordless presence behind the author, marked only by the occasional "our" or "we" in his lover's poetic diary. The Green Man is suddenly much more than benign herald of spring, but rather is posed by Johnson as sightable evidence on the British landscape of a homoerotic *nature* not visible to the dominant or polite (and homophobic) logics of natural order.

By the time Lady Raglan names her Green Man, preparing the way for Johnson to recuperate him as an icon of British folk culture, the threatening aspects of the Green Man's leafy countenance had been, if not erased completely, certainly effectively elided. Coming to Johnson already stripped of his associations with animate wildness, Johnson incorporates his own syncretisms into a new Green Man clade of objects that he then sights/cites in a faux nature-diary, in a reconstruction of an eighteenth-century form of natural observation. By doing so

Johnson gently alludes to this Green Man's associations with both pre-Christian paganism and a British folk ethnicity, and poses him as emblematic of a kind of pre-modern vision, but it is a pre-modern vision which a modern man might without shame wish to repossess (I think Johnson's vision idealizes homosociality while often retreating from explicitly identifying with homosexuality, so I hesitate to qualify his vision as that of a queer man)[3].

Johnson's figuring of this Green Man is celebratory and is even a kind of advocacy for such an "extra-ordinary" perception. If such a way of seeing is not acknowledged as a modern scientific way of perceiving Nature, for Johnson, that lack of acknowledgement is the disavowal of the Orphic inventiveness at work in scientific classifications. Such vision, in a modern society, has become disavowed, marginalized, though Johnson reframes that marginality as liminality, as poetic genius, as a privileged place outside mundane function – understanding Orphic vision, whether practiced in the sciences or in literature, to be at the extremities of a mundane habit of perception. This argument, I think, could even extend to Johnson's vision of homoerotic desire, where a love for one's own identical form manifests itself as a liminal, extraordinary form of Nature's self-replicating reproductive urge.

But this layer of queerness given to the complex avatar of seeing Johnson has constructed, can be interrogated further. Is Johnson suggesting that the primitive, or poetic, seeing that he is counterposing against a kind of taxonomized empiricism, is somehow related to homoeroticism? Having noted the possibility of the Green Man's presencing of an unruly queer sexuality in a work of "hypercultivated" British landscape aesthetic, I'd like to return to the Green Man's association with wodemen, or wodewoses. In William Sayers' article on the

[3] I am perhaps quite persuaded by Eric Keenaghan's argument that "equating Johnson's poetic with the articulation of a gay politics, identity and literary tradition impoverishes, rather than enriches, our understanding of it" (363). A full reading of *Green Man* in light of Keenaghan's discussion of Johnson's world-building as community-building, and his assertion that Johnson developed a "very humanistic, and radically queer, vision that texts and bodies might commune, singularly, in some future Eden" (396) still remains to be done.

etymology of "wodewose" he writes: "To students of English the *wodewose* is best known as a stock figure in Elizabethan parades and drama, a savage, naked man decked out in leaves and boughs or moss and ivy, carrying a huge club and tossing firecrackers" (12). Descriptions of the medieval wodewose emphasize his hairiness and nakedness.

In his leafless version he should be familiar to twenty-first century readers who might recognize in him an antecedent to Darwinian representations of pre-evolved man as well as to colonial representations of indigenous peoples. In fact, Sayers himself illustrates the force of the "wild man" / aboriginal association by being compelled to negate what he seems to assume is an obvious origin of this figure: "Although Europeans were then meeting a multitude of indigenous peoples in the Americas, wodewoses were not, however, their simple reflexes. Rather, they had impeccable origins in Old Europe" (12). In an aside to his main argument (which endeavours to disentangle the meaning of "wod" from "wood" - i.e. the wodwose is not a "woodman" and return to its Germanic root meaning "wild") Sayers notes:

> Wodwys finds a predictable home in a Scots rendering of the romance of Alexander dated to 1460, where we read of a race in India: “The wodwise [. . .] was routh men and hary all-attoure. And in thare hand thai bare ilkane ane stoure. Thai war all nakit with hingand taty hare Thar feitt was smeith with hede and handis bare Thai war richt mekill men of sembly mak.” (16)

Johnson's Green Man is all vegetable, having lost the traces of hirsutism, animality and threat that accompanied him as a variant of the wodewose. Johnson is not fully responsible for this de-epilation, as Lady Raglan's influential 1939 essay, which went unchallenged for decades, did much of this work in folkloric and cultural anthropologic letters before Johnson sought out the Green Man in Grigson's and Pevsner's writing.

Were Johnson cataloguing a figure that had retained his hairyness or hornedness, rather than simply his planty-ness, I doubt such a Man could have carried the Transcendental resonances of Emerson, Thoreau and Whitman that the Green Man does in Johnson, because with those "animal" attributes, the Green Man would still be a figure inhabiting what Julia Kristeva would call the space of the abject, in this case a figure that disturbs orders of culture that would imagine a modern human male subjectivity as in a position of mastery over his own animal, physical embodiment, rather than one recuperated to express the “sensitive” side of that very sense of mastery.

Richard Nash, in his study of accounts of the appearance of embodied figures in the eighteenth-century public sphere that helped produce and circulate the idea of the *noble savage*, and hence worked to construct "a particular notion of what counts as human," (7) argues that:

> the figure of the wild man constitutes a complex *alter ego* to the idealized abstraction of 'the Citizen of Enlightenment,' and following his movements . . . helps illuminate the process by which that idealized abstraction is reified into a particular construction of what constitutes 'human nature'". . .. I contend that while expressions such as 'wild man' and 'noble savage' operated as metaphors, they also served as markers for real material beings; that, if anything, the trajectory was not one of a metaphor being 'taken literally . . . [by] mistake,' but rather that *a preexisting mythological terminology actually shaped the preconceptions and hence perceptions by which real beings were observed and recognized by Europeans*" (3, my emphasis).

The Green Man, then, as a wildman figure forming part of this preexisting mythological terminology, would have been tangentially at play in this shaping of perception of newly observed beings, that is, the Green Man figure, implying wildness in the self, is implicated in the priming of European observers to see, in the moment of the construction of their own modernity, indigenous peoples as the primitive versions of themselves. Nash continues:

> At the same time that early modern science sets about discovering in nature the physical embodiment of the legendary satyr - half man, half beast, English literary history marks itself as an 'age of satire.' The wild men, feral children, satyrs, orangs and apes of eighteenth century-natural history represent a dangerous and degraded vision of ourselves against whom we define the category 'human.' (Nash 29)

Nash's account of the anxious attempts to establish the limits of species identity posed both by Darwin's narrative of human kinship to "nonhuman primates" as well as the grounds for inclusion or exclusion of “pygmies,” Hottentots and Khoi-San suggests that the man-beast threshold is a frenetically constructed and reconstructed dyad built up very much against emerging taxonomies of "primate." "Gould reports that one derivation of the term bushmen for the Khoi-San was as a variation of 'orang-outan' or 'wild men of the woods" (16) writes Nash; elsewhere Nash discusses Edward Tyson also discussing both large primates and the Pygmy tribe now known as the Twa as wild men of the woods (19). "What doubly defined the 'wild man,' in opposition to his cousin, the citizen, was language use and sociability" (186), Nash concludes.

In his book Nash cites a pamphlet from roughly 1726 that claims to be an account of "*Lastly, of the wonderful Wild Man that was nursed in the woods of Germany by a Wild Beast, hunted and taken in Toyls; how he behaveth himself like a dumb creature, and is a Christian like one of us, being call'd Peter; and how he was brought to Court all in Green, to the great Astonishment of the Quality and Gentry"* (50) and who, according to the marginalia, was "taken by some Huntsmen [from] a thickett in the Forest & pulled him out of a great hollow Tree . . . he had a hoard of Acorns, Apples and Nutts on which he lived" (52). "Peter" the Wild Man is not quite a Green Man at Spence's procession at Lord Mayor's Day in London, but like Davenport, trained to see the Green Man in his various forms, and led through the silt of bibliography that links him to the wodewose and wild man, I see in Peter the green man *in medias res* of the divestiture of his greenness from his wildness. "He was glad in Green Wast-coat when I see him

in May 1726" writes Johnson, in the margins of the pamphlet. The once-feral boy is brought in as strange foil to the black Moroccan ambassadors, the "Black Quality," who wear sheets, are vegetarian, but are strangely "Gentlemen . . . Black of Complection, but of a clear Conscience" (54). Nash reads the appearance of this wild man in England as "not so much that his presence destabilizes the rank order that organizes a disciplined, classed society; rather his appearance underlines the fact that those apparent orderings are already subverted" (56).

In Nash's example, the wild man in Green is performing the same work as ever, embodying an unfathomably wild, yet human, disgorgement from the forest. But now the *green*, once signifying kinship to enfairied forestation, no longer presents itself as irrepressible wildness but rather as a tangle of horticultural wealth waiting to be organized, from its status as the colour of uncanny proliferate alterity to the pleasing colours of successful science and commerce, of pastoral dreams, green thumbs, groomed lawns, of medicinal and botanical gardens, of the domestic garden of the emerging British middle class, and, by the end of Thoreau's life and during Emerson's, of American money. The green jacket is a figure of civilization-in-process, placing the wearer at the threshhold between the uncultured and the cultured, as did the grass-green coat that the country-mannered, 'rustic' John Clare wore in London (Clare is referred to more than once in twentieth century criticism as the Green Man) before his years of madness, or as still does the prestigious Green Jacket at the august Augusta National Golf Club in Georgia, which caused such a stir when donned by racial and class boundary-crosser Tiger Woods.

Nash describes points in the constellated trend by which the figure of a woodwose or wild man, however folkloric in its origins, provided the conceptual ground within which to receive the new "perceptions," particularly of various aboriginal peoples, appearing on the stage of the civil British imaginary. His account is one in which the mythological figure of the woodwose comes

into an alignment with "wild men, feral children, satyrs, orangs and apes," all functioning as figures of a lack or loss of the civilizing or acculturating forces of Western institutions, which were also of course at play in the representational battles to include or exclude the various indigenous peoples of the British colonies in the taxon of *Homo Sapiens*. These new axes of civilized to uncivilized, unracialized to racialized, that by the twentieth-century were firmly set in the American imaginary as the legacy of Darwinism, shifted poles of representation such that the Green Man version of the wildman, that is, the version that Lady Raglan would bequeath to later folklorists and hence to Johnson, was no longer fully "intelligible" as having served, pre-Darwin, a function of creating a "civilized" public that later representations of the Black man or Red Man would do for the eurocentric "Western" psyche. Think of him as potentially the non-ethnically-othered "missing link" or lately-ennobled savage; he is a culture's imagination of its own undomestication, the figure embodying a culture's attempt to imagine itself outside its own technologies of the self.

By the late twentieth century, in the British and American imaginaries, the idea of an apex of human modernity, progress, or civilization, was itself an idea "unmarked" by the visibility of a non-European ethnicity. Richard Dyer has argued that whiteness appears "unmarked, colourless, bland and invisible," (Jackson 56). Could it be that when Robert Duncan writes, picking up the trope of natural language that runs from Goethe to Emerson, that:

> the tree, the cup, the star, the bird
> in all the rich garden of what we would cultivate in ourselves
> *moan* and strive to utter what they are
> up. (*Bending* 136)

that "the garden of what we would cultivate in ourselves" is that unmarked interiority, the immaterial, hence colourless, mind of a Descartian split subject? It is the invisible "cultivation"

of the *coloured* man into the *colourless* Man which is made "visible" through the Green Man's image of proliferate wildness and alterity. However, the succession of other images of wildness, and of *colouredness*, refacted through transatlantic discourses of race and evolution, change the context of reception for a (white) man's image mixed with greenery in this twentieth-century text.

To read the Green Man figure in the context of the other figures of alterity to unmarked cultivation that existed in the twentieth century, figures bounded by discursive, naturalized clades of race instead of clades of human, animal, green thing, suggests that in that context greenness no longer suggests the same kind of alterity from unmarked subjectivity. The modern construction of green alterity at work in Johnson's text may also be at work in many late twentieth-century and even twenty-first century conceptualizations of the relationship of the unmarked, civilized "human" to plant matter.

Toni Morrison argued in 1991 that racial alterity, specifically blackness in the case of America's vision of itself, structures a sense of whiteness as the "mute, meaningless, unfathomable, pointless, frozen, veiled, dreaded, senseless, implacable" life of middle-class American normalcy, one that Jack Kerouac, in 1957, would exemplify when he wrote that "the best that the white world had offered was not enough ecstacy for me, not enough life, joy, kicks, darkness, music, not enough night . . . I wished I were a Denver Mexican or even a poor overworked Jap, anything but what I was so drearily, a white man disillusioned" (qtd in Jackson 1998). Johnson’s representation of whiteness, on the other hand, is a subjectivity with an American self-identity, that attends to his British forefathers' landscape and names a public who has "a sequential foliage / firmly planted in / our veins, / we stand in our rayed form: / blue-eyed / a chicory" (11).

The blue-eyed "us" that looks upon the English countryside, sees a figure of themselves in the Green Man. This is indeed a realization of what Johnson later calls “mind become its own subject matter” but it is the product of a mindedness still identifying with mindedness from the Western tradition, split off from the body. The Green Man, not that Johnson ever admitted it if he knew, is exactly “mind” realizing its own *visible,* not colourless, materiality. His work suggests that the mind that identifies with whiteness is identifying with colorlessness and immateriality, but Johnson never comes out and says (at least, not until *ARK*, that “whiteness” and the “mind” of the split mind-body are the same idea of pure formlessness in his object-oriented vision.

But if the figure of Man in the Green Man is the modern unmarked, but civilized European man, for whom the figure of the black man or Indian now stands in for all kinds of repressions and abjections that once were held in green, what is left *within* the signifying space of the twentieth-century Green Man's greenness? I have shown how homosexual desire might be one of green's containments, but one can reach that conclusion without taking two centuries of racializing discourses into account.

Richard Hayman has argued, in an attempt to counter relatively recent writing that repackages the Green Man for ecoconscious audiences as "The Father of the Forest; Spirit of Nature" (Curran and Daniels 2007), or "the archetype of our oneness with Earth" (Anderson 1998), that the Green Man was associated with worldly fleshliness and the soul's entrapment within the body. Hayman cites one ninth-century theologian, Rabanus Maurus, who described leaves as representing "lust and sins of the flesh" (“Ballad” n.p.) supporting an argument that in the ninth century, at least, green leaves signified an "us" – fleshly as our own bodies, raw and uncultivated by Godliness.

After Descartes, after Darwin, and after centuries of colonial contact, far more recognizably anthropomorphic forms signify a raw human, a raw "us" in the Western imaginary; and culture begins to lose the agricultural resonances of its etymological origin. These sensual objects are constructed not through metaphors of flesh as wild vegetation, as spiritual seeds sown in the flesh but with a lack of *cultivation* by religion, but as animals uncivilized by *culture,* by rational society. Through the nineteenth century and into the early twentieth century, as figures of ape-like animality and racialized figures are increasingly conflated through discourse, as new real objects are used to construct sensual objects of the Western rational subject's imagination/disavowal of its own embodiment, these new mind/flesh hybrids resonate less as forms "outside the garden" than they do as lagging behind in narratives of development, as "unevolved." Once animal forms take over such signification, green forms cease to signify the disavowed flesh of the Western rational with the same tinct of abjection.

Carrie Rohman has argued that "the displacement of animality onto marginalized groups served as a fundamental modernist thematic that sought to purify Western subjectivity . . . enact[ing] an anxious *disavowal* of Darwin's incriminating suggestion that even Western subjectivity has animal roots" (29-30). This animalization of disenfranchised groups, Rohman writes, also involved "the concomitant humanizing of imperialist power" and reads in the work of T.S. Eliot, Joseph Conrad, and D.H. Lawrence the "vigorous retrenchment of Western sovereignty through the primarily racialized displacement of animality away from the European subject" (30). Johnson's recuperation of The Green Man as a figure of mind-body reintegration manages a breathtaking unification of the Western subject with his materiality without any confrontation with the deep threat that the "eruption of animality" (30) posed for the humanist subject.

As long as the subject of modernity grapples with its being-animal, discourse that would see a *likeness* between plant being and human being, or a communicative relationship becomes by definition pre-Enlightenment, pre-industrial, unscientific, and "occult" not in the sense of hidden but in the sense of irrational and mystical. If Wordsworth's *Preface to the Lyrical Ballads* marks a precise moment where a Romantic poetic vision becomes authorized, then Ronald Johnson's *The Book of the Green Man* defines a long Romantic period (demarcated by the first and last publications of Johnson's visionary models) as one in which the genres that distinguish poetic, subjective observation from scientific, objective documentation are in active construction.

The documentation of *likeness* between the plant world and "us" is the province of primitives, of children, of "those who look with awe and wonder," or of poets giving "us" back our "elementary feelings" or our Adamic, primitive way of seeing. Implied in Johnson's revisioning project is the understanding that modern vision, that is, the vision of a civilized and educated and rational man, must first see none of *itself* in the figures of plant form – this vision can only be accomplished with the help, and through the *genius,* of the poet. This logic would not mean to imply that ecofeminists and aboriginal people are poetic geniuses, but rather, implies that such non-Western or non-masculine subjects do not need the poet's help to undo all that two centuries of rationality has done to "our" sense of self-in-nature.

Confronting and assuming a developmental or biological "reality" of human kinship to a particularly mammalian animality is the province of the sciences, animal tests and lab rat experiments resting, for example, on the observations of physiological similarities amongst mammals. It seems that first, a broadly held cultural assumption that the flowers do not confront us in any way other than "mere metaphor" with ourselves is required before post-Enlightenment poets can go into the countryside so cheerily seeking our correspondences with those flowers, in

the practice of a privileged mode of perception and communication, that Wordsworth would yet call “man speaking to men.” As long as anxieties around the integrity of boundaries of empire and civilization are policed at the racialized animal/human boundary, the animal/thing, or animate/inanimate boundaries in the Western imaginary seem to relax. The entanglement of orders signified by the Green Man’s hybridized figure is, for the modern imagination, a now-fictional tangle, a knot already unravelled by science.

There seems little question that while modern “selves” were *more* than animal, not *less,* the question of the status of the human subject as Natural object or thing becomes muted. We see rather the displacement of the non-animal Western subject into the (im)materiality of discourse and text, a displacement explored by Language poets and one that Johnson only partially resists. But Johnson shows us that for the modernists, and in some ways still for the Language poets, the subject (whether constructed of atoms or of text) could still be *material.*

For me, the most exciting work Johnson does in *The Book of the Green Man* is to isolate the figure of the green plant (and its green leaves, and stalks, and buds) in its various literary forms as a taxon, a clade of cognates that can be brought into relation with the category of Man. Johnson's intertextual collage technique, that pieces together a "seamless" textual landscape from the "silt of bibliography" (headnote to citations in *Green Man*) is textual analogy for the multiform continuum of nature, and his isolation of the Green Man in nature and "on" the landscape is analagous the "startling out" of natural forms into conceptual-linguistic forms. Johnson creates a textual event in which we experience an alternative differentiation of our natual world, where startling out from the masses of green form comes not just "the leaf," nor "the bud," but also "the Man."

Greg Garrard has noted in the chapter on animals in his overview of ecocriticism that "the play of likeness and difference in the relationship of humans and animals in general may be analysed in terms of the distinction of metonymy and metaphor." He quotes Roy Willis: “The distinctive peculiarity of animals is that, being at once close to man and strange to him, both akin to him and unalterably not-man, they are able to alternate, as objects of human thought, between the contiguity of the metonymic mode, and the distanced, analogical mode of the metaphor” (140). Ronald Johnson has given his whole book to a figure born of an era where plants were read as "both akin to [man] and unalterably not-man," but has done so as a gesture of American modernist ambition in a historical, epistemelogical and ontological period or context, where the metonymic potentiality of green plant forms were unintelligible, or, rather, seeing the metonymic potentiality of green plant forms to man was *unintelligent*.

I argue that *The Book of the Green Man* is only the first work in an entire oeuvre that in its resistance to the full dematerialization of the bodymind of the Western subject, becomes an investigation of how plant, and "plant stuff," might be a form of what also takes its shape in human mindedness - a form of that pure formlessness that through him we see variously named as Nature, as “mind,” as “whiteness.” Johnson's later models of the universe as Man and tree will pose this Man-plant metonymy as evidenced by the structurality of language, by the cladistics of genre and syntax, and by categorizing both plants and poems as kinetic objects that act as aesthetic pleasures to the similarly kinetic human bodymind.

The ontology that I mean to argue takes its shape in Johnson’s poetics was signalled by Johnson most clearly in his articulations of his poetics as horticulture, as a gardening of the senses, or as gardening of the brain. *The Book of the Green Man* is a work at the beginning of this work of ontologization, that signals Johnson’s interest in the taking-shape-processes of both

real objects and sensual objects. In *The Book of the Green Man,* Johnson shows that there is a relationship between a modern observer and writer's representations of plant forms and men as Natural objects on a continuum of potentially rational or irrational beings and that writer's intelligibility to a modern reader as scientifically rational or as poetic visionary.

Johnson also shows that such intelligibilities are discursively constructed and depend on the modern reader's exposure to discourse that will frame what they see. By staging and restaging the processes of perception, priming and reperception, *The Book of the Green Man* also seems to ask the same question as the child, who Walt Whitman wrote came to him and asked: *What is the grass?* Whitman answers: "How could I answer the child? I do not know what it is, any more than he" (147). Johnson's taxonomical boundary transgressions in *Green Man* do not openly refuse to know what the grass is, but suggest that our knowing is inextricably bound up with earlier knowing. Johnson "makes new" orders of material being by taking a stance of deliberately naïveté in the face of established names and orders, as does Whitman, the original American Adam, who remains open to the child "fetching it to me in full hands," and deliberately imposes orders upon this green "it" divested of its name and history:

> I guess it must be the flag of my disposition, out of hopeful green stuff woven.
>
> Or I guess it is the handkerchief of the Lord,
> A scented gift and remembrancer, designedly dropt,
> Bearing the owner's name someway in the corners, that we may see and remark, and say, Whose?

Or I guess the grass is itself a child, the produced babe of the vegetation.

Or I guess it is a uniform hieroglyphic;

And it means, Sprouting alike in broad zones and narrow zones,

Growing among black folks as among white;

Kanuck, Tuckahoe, Congressman, Cuff, I give them the same, I receive them the same.

And now it seems to me the beautiful uncut hair of graves. (147)

"Tenderly will I use you, curling grass," concludes Whitman. Once he chooses to use the name grass, demonstrates how the namer brings the "it" into a linguistic economy/ecology of objects: "grass" is the name of this "green stuff" that is there to be used, a “uniform hieroglyphic” that is the raw significatory material for any of the names Whitman makes of the sensual object of his attention to its green form.

The name "grass" seems to make an unknowable "it" knowable; just as Lady Raglan used the name "Green Man" to make a number of unfathomable "its" cohere into a neat story of vegetation gods and primitive misapprehensions. Johnson, in a pose of both Whitmanesque faux naiveté and his own false taxonomizer's authority, deliberately confuses the stuff of human with the stuff of green, exposing the unfathomable *itness* shared by both, an *itness* that, if it produces anxiety for a Western subjectivity as *animality* does, may soon be contained in the word *matter* or *material*. Soon Johnson will pick up on figures he has already worked with in his earlier book, and grant the "itness" of green stuff not only to the human form as visible to the eye but to the human in its interiorized form, as "a new foliage of sensings" (*Valley* 86) and to "that greening

purple cabbage / (that is the brain)" (23). Johnson will look, as if it were green stuff, or rather as if it was greenly material, at the unfathomable perceiving and language-producing human "mind."

CHAPTER TWO
JOHNSON'S FLOWERS OF CONCRETE THINKING

In the first chapter, I looked at Ronald Johnson's representation of the amateur naturalist's attention to landscape as both an Orphic and Adamic seeing, a seeing conceived as preceding naming or ignoring existing names in order to name again, names from which new taxonomies of Natural order and new ideas of form might emerge. I argued that *The Book of the Green Man*'s pastoralism, which idealizes such seeing as a Natural, pre-civilized attention to forms, depends on a historical and literary shift in the signification of the green plant in relation to the figures of the animal and the human, that allows the green plant form to signify as "universal hieroglyph" or the simple "stuff" of Nature. In this chapter I look at the progression in Johnson's aesthetics that leads him to eventually state that his concrete poetics allows his reader/viewer to see text as if one were seeing a growing plant.

In the first part of this chapter I show that Johnson became interested in concrete while developing a poetics that could participate in traditions of both American Adamic or Orphic seeing. I will situate Johnson in the broader context of the international concrete poetry movement, giving an account of Johnson's apprenticeship in both folk aesthetic and concrete, and show the opportunity Johnson sees to advance an American modernist and nationalist ideology of poet-as-Adamic-seer through combining the organicist dimensions of projectivism with concrete's materialist programmatics.

Perhaps unconsciously confronted by the problem that the histories of American Indigenous peoples pose to his pastoral ideals of American Adamic seeing, Johnson eventually shifts the ecology of objects in which he Orphically "looks at flowers" from the rural landscape of America as a field of observation to the open field of the modern imagination, though he

expands Olson's two-dimensional cartography where words are placed on the page like towns on a map (Collis "Susan Howe" 64) to a three-dimensional space of potential imagined as an emptiness still somewhat rendered by a blank page. This space, or field, of mind for Johnson is traversed with properties only beginning to be accessible to the inquiries of molecular biology, atomic physics and astrophysics, a mind both as explorable as outer space, and yet the material ground of the activating energies of language.

In the second part of this chapter I read some of Johnson's concrete works alongside the lyric-collage poetry he wrote during the same period, and argue that Johnson's work in concrete experiments with the idea of the changing plant form as a canonical model of self-extension. I show that Johnson can see in Emerson's and Olson's adoption of ideas from theories of Natural language the inheritance from Goethe of the suggestion that the human invention of language forms occurs via the same principles as does the human classification of biological forms. Thus, I argue that Johnson's work participates in a history of the use of plant form as a model for the emergence of language and invention of written characters. In the service of his own modernist drive to "make it new," Johnson's innovation in concrete is his integration of the ideas of a Transcendental-Romantic figure of the plant as an ideal form of differentiation and growth with concrete's emphasis on the materiality of print, through which Johnson develops a "concrete line" that he will later use in his magnum opus, *ARK.*

Mary Ellen Solt published one of concrete's definitive anthologies, *Concrete Poetry: A World View,* in 1968, at the peak of the movement's popularity. Documenting the international movement that began in the 1950s and sprang up in a number of avant-garde circles around the world, especially in Brazil and Switzerland, Solt's account of her "world view" of concrete ranges from Brazil to the UK through Western Europe to Iceland and Japan. Of the U.S.,

however, she writes: "Although a few isolated poets have been making concrete poems for some time, it would be an exaggeration to speak of a concrete poetry movement in the United States" (n.p.).

"I was one of the concrete poets," Ronald Johnson told Peter O'Leary in an interview. "Jonathan Williams and I were about the only Americans involved, who were allowed to join! [laughing]" (579). Indeed, the list of Americans whose names appear in the publications of the time is short: the key players were Emmett Williams, Jonathan Williams, Ronald Johnson, Mary Ellen Solt, Jackson Mac Low and Aram Saroyan. Solt, however, was more recognized for her anthology and dissemination of concrete, despite the loveliness of her *Flowers in Concrete* (1966); Mac Low was also a composer, painter, dramatist and multimedia artist whose dalliance in concrete was brief; Emmett Williams had lived for a long time in Europe and had forged his connections there. Aram Saroyan was probably the only other American whose concrete poetry appeared in the international consciousness: his one-word poem "lighght," which was chosen by George Plimpton to appear in *The American Literary Anthology* and won $500 (a handsome sum in 1965), causing the newly created National Endowment of the Arts' first big controversy.

Solt did argue for an American foundation to concrete by pointing to the American poets like e.e. cummings and Pound, whose work inspired the poets who began working in concrete in other countries, and then by looking to Louis Zukofsky's "Julia's Wild" and Robert Creeley's "Le Fou" as examples of contemporary work that shared some sensibility with concrete. “All of Zukofsky's work,” she writes, “which concentrates upon the musical value of the syllable as the repository of sight, sound and intellection, presents a preoccupation with language as material of the highest and most complexly synthetic order” (*Concret Poetry* 49). But finally Solt admits

that there was not enough of a critical mass of Americans working in concrete to create an American scene for the mode.

Ultimately Solt points to projectivism in her account of concrete impulses in the United States. The tenets of projective verse agreed with the sense-oriented approach of concrete poetry. Though projective verse stayed with the line and conventional linear syntaxes, it was nonetheless concerned with speech and the direct capture of sensory experience. Edward Dahlberg's insistence that poetry should document the flow of perceptions one after another, and Robert Creeley's dictum that "form is never more than an expression of content," the two principles brought together in Olson's manifesto, also underwrote the aesthetics of concrete.

The field sensibility of projective verse, the sense of the style as "open" or happening "in the open," whether that be outside the constraint of inherited meter, or outside the narrowness of mental abstraction in the fullness of embodied space, shared concrete's concern with spatial representation. Olson's field, "the large area of the whole poem . . . where all the syllables and all the lines must be managed in relation to one another" (*Collected Prose* 243) echoes de Campos' call for graphic space to be a structural agent upon which the problem of the "functions-relations of this material [word]" (*Novas* 214) is played out; Olson's emphasis on "the typewriter as the personal and instantaneous recorder of the poet's work" (246) anticipates concrete poetry's investigation of the print medium's privileging of type and concrete's prescient, McLuhanesque insistence that typewriting, as techne of the work, is its own signification.

It seems to make sense then, that the two Americans who were "allowed to participate" in the international concrete movement were direct inheritors of the Black Mountain tradition. As Michael Basinski writes: "Olson's open form permitted Williams and Johnson to embrace [Ian Hamilton] Finlay's ideas about concrete poetry" (200). Johnson, Williams and Solt were all

introduced to concrete through Finlay. However, among Americans, Finlay found his own sensibility to be more in line with Zukofsky's and Lorine Niedecker's than Olson's. To trace the continued combination of both a naturalist projectivism and a materialist constructivism in Johnson's concrete work, one must look at how Johnson changes the scale of his American Adamic visioning through his concrete experiments.

Young Ronald Johnson's "immediate patrimony in letters" (Davenport, *Valley* 11) came from Jonathan Williams, who had already founded the Jargon Society (a small press) and had published such figures as Olson, Creeley, Joel Oppenheimer, and Kenneth Patchen when the two met and began their relationship. An account of the aesthetic Johnson shared with Williams is in some ways an account of *the* form that concrete took when produced on American soil, as well as an account of what kind of American soil was hospitable to concrete. Guy Davenport once characterized Williams as a "cultural anthropologist," (*Elysium* n.p.) trying to describe the latter's collector-gatherer's approach to artists, to friends and to poetry he "found" in the language of the country folk of his Appalachian locale. In Williams' aphoristic, often tongue-in-cheek verse, we see a preoccupation with place that echoes an Olsonian "com[ing] back to the geography of it" and that resonates within "that strain of American poetics [in which] locution has always meant location" (Pritchett 25).

Jonathan Williams takes up the cause to create American place by approaching local language as a feature of his immediate environment, documenting it with the objectifying yet conservationist gaze and zeal of the nature enthusiast. His work often reintroduces vernacular, "folk" language into the frame of letters, "plucked still ringing from the air," as Johnson put it ("Jonathan" n.p.), pulling regionalisms onto the page like a botanist pressing flowers into a book.

Jonathan Williams demonstrates an inherent valuing of "locution as location" in his creation of place through his listenings to its vernacular music, combining this reverence for originating language with a kind of pastoralism that finds a more authentic Americana in the tones of rural inhabitants. In his ventriloquization of the American Adams he hears, Williams displaces authorial originality onto the agrarian while still asserting editorial command, becoming an Orphic seer of the scientific strain, an elite anthropologist of the local vernacular. Williams encourages associations of his poetic stance with a kind of "unobtrusive measures" anthropology.

Of his book, *Blues and Roots*, Williams notes: "I listened to mountain people for over a thousand miles and I really heard some amazing stuff. And I left it pretty much as I heard it. I didn't have to do anything but organize it a little bit, crystallize it. That's the thing I love about found material—you wake it up, you "make" it into something" (Beam n.p.). And of a later book, at that point unpublished, of photographs and quotes called *Walks to the Paradise Garden,* Williams comments: "These are the quotes as I found them. It's like picking flowers on a hillside. Here's a daisy. There's another daisy. Let's pick a book full of daisies" (n.p.).

The metaphor of flower collecting for his gatherings of found speech registers Williams' collection of this raw stuff in its many forms, and was a trope that operated through his life's work and Johnson's as well. The titles of Williams' books are testament to his "years [of] botanizing, jotting down specimens of authentic American speech, graffiti, superstitions and nostrums" (*Blues* back cover). They include: *In England's Green & (A Garland and a Clyster)* (1962); four books respectively titled *Twelve, Ten, Four* and *Eight Jargonelles from the Herbalist's Notebook (*1965-67*), 50 Epiphytes* (1967); *Polycotelydonous Poems* (1967); *An Ear in Bartram's Tree* (1969); and *Blues & Roots, Rue and Bluets: A Garland from the Appalachians*

(1971). The years of these books' publication corresponds quite closely to the years of Williams' and Johnson's involvement in concrete.

As I will discuss shortly, Williams was hardly the first writer to use rhetoric that compares spoken languages to flowering plants. Importantly, the move of characterizing the speech of rural people as wild flora was more than simply ornamental. The flora metaphor picks up on nineteenth-century discourses of linguistics, anthropology, botany and zoology in ways that elide the human bodies from which the language "appears" and associate the agency of language production with the soil and climate of a region. There is an ethic tacitly at work here that regards the "unobtrusive" collection of "authentic" speech, without informed consent, by those who seek it out for its aesthetic value to be as unproblematic as the culling of aesthetically pleasing flowers from unowned land.

In *The Book of the Green Man*, Johnson posed as a naturalist and used a cuttings-collector approach to the heritage he and Williams explored together in the landscape of England, Scotland and Wales, and Johnson will return to the aesthetic of incorporating fragments of material from one's environment into a larger work in *ARK.* In his concrete, Johnson again exposes the Orphic parallels in Williams' anthropological approach to language and a naturalist's approach to non-human forms, but becomes even more interested in the strategy of conceptual syntheses that he explored in his representation of Green Man objects.

The influence of Lewis' American Adam thesis was still high when Williams, Johnson, Niedecker, and Solt began publishing in Finlay's magazine *Poor. Old. Tired. Horse* (commonly abbreviated as *POTH*). *POTH,* which ran from 1962 to 1968, and quickly became a leading publication of concrete poets from around the world beginning with its sixth issue. Meanwhile,

in 1966, Chad Klinger wrote a book called *Charles Olson's Maximus: The New American Adam,* and Lewis' ideas were critically extended in D.W. Noble's *The Eternal Adam and the New World Garden: The Central Myth in the American Novel since 1830* (1968). In 1964 Leo Marx addressed the popular American pastoralism from a different angle, linking the "image of America as garden" (39) to lingering European, colonial ideas of the new world as Arcadia and "a tendency to idealize rural ways" that he felt had become "an impediment to clarity of thought" (7). If Johnson had read any of these critical texts, his work suggests he was more interested in Klinger's and Noble's identification of American tradition than in Marx's critique.

Williams' ear for music in the American vernacular ("She looked out o the winder as white as any milk" [qtd in Davenport, "Geography" 187) was similar in spirit to Ian Hamilton Finlay's early drive to visually represent the rhythms and tones of Glaswegian speech:

hooch
a heilan coo
wis mair liker
it
        the hiker
s
hoo hoos
ferr feart
o ma
herr-do

("Glasgow Beasts", *Poems,* n.p.)

It was Finlay who made the first leap from an aesthetics of the vernacular and a folk nationalism to concrete. This evolution of approach can be traced in the gradual change in *POTH*'s content from celebrations of the rustic and vernacular (Niedecker, Pete Brown, Larry Eigner) toward strong visual experimentation (beginning with Augusto de Campos, Pedro Xisto and Marceo Moura). Solt, Williams and Johnson, in conversation with Finlay's shifting taste, came to explore the same territory.

Johnson's poems appear for the first time in *POTH* in issue nine. In this issue, Johnson is still finding himself, still working in the aphoristic style that mimics Williams' interest in overheard language and that dominates the poems from *Sports and Divertissements*:

TENNIS

"You play?"
"O.K."
"Good serve."
"What *legs*."
"Nice nose."
"*Your* serve."
Game! (n.p.)

These appear immediately following Niedecker ("Ice / on the minnow bucket / / and a school of leaves / moving downstream"). Niedecker's last appearance in the series is in issue thirteen; in the full issue nineteen, Johnson publishes *Io and the Ox-Eye Daisy*, his first major concrete work. Both Williams and Johnson appear in the final issue (n.p.) where Finlay begins the turn toward a

new distillation that will mark his break from this early visual concrete into new dimensions. (See Figures 2.1, 2.2, 2.3 at the end of this chapter).

"I certainly don't remember when I became privy to the word *Concrete*, as coined by the Eugen Gomringer and the Noigandres gents," wrote Jonathan Williams in Solt's anthology,

> Finlay has been my tutor in the concrete mode, and he is, to my taste, the first exponent of the poem manufactured as an object of contemplation. But to pin down my first use of *concrete*, memory dates that from October, 1962 during a month's hike of the Lake District. . . . It was an acrostic ["A 75th Birthday Maze for Dame Edith Sitwell"], and the impetus had come from visiting the ancient topiary and maze gardens of Levens Hall. . . . The notion was naturalistic in the obvious sense, as form as been said to be nothing more than an extension of content. However, cowbells in a Mahler symphony don't stay cowbells . . . there is the new, second formal content of art, and letters in a poem are not made out of clipped, shaped yews and beeches. One cannot be a man of letters, as we say, without coming to a recognition of their look, as well as their sound and various notations (85)

Contemporary images of Levens show only the boxwood hedges and dense trees clipped into cartoonish shapes; one old postcard, a “snap taken in the early 20th century,” however, shows that at one time the topiary of Levens included some letterforms clipped from the hedges, and Williams’ comment suggests that those letterforms may well still have been present when he, Finlay and Johnson were there. While Williams takes pains to say that the material of letters and that of trees is hardly one and the same, for him the concrete impetus is “naturalistic in the obvious sense” if one subscribes Dahlberg’s/Olson’s insistence on form as an *extension* of content. It will take some time before Johnson’s concrete work begins to marry the ideas of

concrete poetry and naturalistic, formal extension into a vision of poetry as Nature's self-extension similar to the self-generation of a plant.

Johnson, for his part, took the same encounter with the topiary of Levens, and compared the practice of the cultivation, growth and pruning of trees and the generation and editing of poems. These comparisons are laid out rhetorically in the lyric/collage poems that he wrote during the same period as he was making concrete works, and that eventually appeared in his book *Valley of the Many-Colored Grasses* (1969), and that I will later argue (in Chapter 4) informs the approach to his "pruning" practice in the erasure poetics of *Radi Os*. In the lyric-collage work we see Johnson exploring the idea of the garden as a new "ground" of field poetics and space of subjectivity within which sensual objects take shape.

In "The Garden," Johnson argues, "This is the Garden, where all is a poet's topiary," and uses the language of Joseph Addison (1762-1719) on the freedom of poets to write about any plant in any season to evoke the poet's capacity to evoke an unlimited sequence of forms: "His soil is not restrained to any Set of Plants, but is proper for Oaks or Myrtles. . . . It is here," writes Johnson "I have made clear space to cultivate the Wild, Espaliered, Tangled, Clipped Estate" (*Valley* 17-18).

Drawing on the recontextualizing techniques of Dada ready-mades, Jonathan Williams uses the space of the literary page as the cultivating frame of high culture, acting on the rawness of what he called the "jazz" of rural speech to make it intelligible to readers of avant-garde American poetry. When Williams turns to landscape as an aesthetic object, he values "the formalism of precise, clipped greens" (*Elite* n.p.) and uses British garden aesthetics as a counterpoint to the "uncouth" of the vernacular, free rhythms of his Americana. Williams inverts the association of British formalisms with formal impositions on language and formal poetics by

pointing to the topiary at Levens as a joyous *excess* of formalism, and insisting that critics, or any man of "great learning, taste and sensibility," would disapprove of its "outré" effects. Williams was also passionate about "outsider" art of all kinds, including the scrap-built, front yard Gardens of Revelation that dot the American landscape (see "*ARK as Garden"* Selinger), and here cunningly performs an insider's knowledge of conservative aesthetics by winkingly imbuing this 900-year old garden with the "charm" of the naive artist's work.

For Johnson, the "metamorphosis of the universe" is much more front of mind than is reframing the vernacular. In his writing of the period, he describes the interconnectedness of the heterogenous real as "the tangled actual," and as the "twigged, branchy writing" of natural forms (*Valley* 24). The woodsy interweave of forms that Johnson observed, in *Green Man*, in the stone carvings of branches interconnected with other beings, is for Johnson the "concretization" of the actual dynamic relationship between things.

Williams, the "truffle-hound of American poetry," is going by the pleasure of his ear and eye. His is a sensibility formed by genteel Southern upbringing and Princeton education: his aesthetic is recuperative, domestically "primitivist," in that it reaches out from an assumed place as a man of letters to extend the scope of the centre's gaze. He is a publisher, already responsible for "concretizing" language into books, who might respond, perhaps, with ennui to the theoretical dimensions of play with books' materiality. Williams' concrete is always edged with insouciance, a wit that thumbs its nose a little at pedigrees and carefully clipped hedges, and yet displays that wit's cultivation (see Figures 2.4 and 2.5).

Johnson, the younger and less established poet, is still grappling with "voice" and developing an approach that will distinguish him as more than simply a disciple of Olson or a protegé of Williams. But Johnson is not irreverent. His quest to distinguish himself *within* the

W.C.Williams-Pound-Olson tradition, his anxiety--cliché as it might seem-- to transcend influence yet be aligned as heir to these greats, marks Johnson's work and his private letters to friends and potential funders throughout his career.

The shaping of topiary form, for Johnson, is not simply metaphoric for, but metonymic of, the taking-shape of the "twigged, branchy writing" of nature's forms, of which language is one. Topiary, for Johnson, is a trope that sums up Olson's sense of an ideal poetics, one he differentiates only slightly from Zukofsky's "objectivism":

> What seems to me a more valid formulation for present use is “objectism,” a word to be taken to stand for the kind of relation of man to experience which a poet might state as the necessity of a line or a work to be as wood is, to be as clean as wood is as it issues from the hand of nature, to be as shaped as wood can be when a man has had his hand to it. ("Projective" n.p.)

Topiary as a practice provides Johnson with a rich trope for the poetic shaping of the formless, cultivatable, green whiteness discussed in the last chapter, the self/breath/language that Olson has already suggested "necessities the practice of the self / that matter, that wood" (*Maximus* 31).

So while Williams insists that "letters in a poem are not made of clipped, shaped yews and beeches," it is in part because he is invested in a deeply production-oriented relationship with print, and is interested in the *print* sign as object and with the variations of persona amongst various "types." Williams locates his concrete in a tradition conversant with Bauhaus and various threads of abstract expressionism; he explicitly mentions his formation in the Chicago Institute of Design reading Biederman's *Art as the Evolution of Visual Knowledge*, and reminds us that "there is always Pound's realization that it is the *sign* that constantly renews its vitality, as against them there dim symbols" (qtd in Solt 86). For Williams, it is the transformation of wild vernacular into a print object that enlivens it, that "wakes it up."

Johnson, however, is interested in the materiality of syllables and letters within a natural order. "The *f* and *v* are a dried and pressed *b*," Johnson reminds us in "The Garden," (*Valley* 47) pointing to each symbol as representative of bodily gesture, and asserting his interest in the letter-object as an invention. In this collage selection, Johnson points to the original human-object-to-nonhuman-object encounter with Natural form that engenders language as well as the moment of 'engendering' of the letterform. But it is the "thinking through" of the relationship of letterform to natural form that Johnson's poetic explorations stage, exposing a lyric subjectivity as perhaps inadequate to the task. In his early work in *Valley* he is already working his way into the theoretical object-oriented spaces that form the atmosphere, the *poetics-space*, of his later concrete objects.

Having looked at how both Johnson and Williams, in their own ways, translated an American folk-aesthetic into a materialist, woodsy understanding of language as it emerged from bodies on a landscape, I now turn back to the way that Williams looked at his vernacular-making subjects, as themselves American Adams, to inform my reading of Johnson's increasing look at synthesis, or the bringing together of two concepts into one, as a key gesture of Orphic seeing.

When Johnson was writing *Valley* and working in concrete, H.L. Mencken's *The American Language* (1921) would have still been an authoritative narrative of how American English came into being. Though R.W.B. Lewis does not mention Mencken's account in his construction of an ideal, innocent American inhabitant of the new world, he may have been aware of Mencken's construction of "the great masses of the plain people of this fair land" (424) as the authors of "the American language" and his dramatization of the encounter such innocents have with the world around them, a dramatization of the invention of the language in which the new American mythos could be told. American English comes into being not spontaneously and indigenously

with the evolution of a primitive man on native soil, but is a fashioning of “new words of English material” (54). Authenticity in American idiom is not the trace of bloodline and association in its tones but is evidence of the "ingenuity and inventiveness" of the population, and documents the fresh perception of bodies bringing English into contact with a new landscape, of bodies establishing possession of a landscape:

> the generation born in the New World was uncouth and iconoclastic; the only world it knew was a rough world, and the virtues that environment engendered were not those of niceness, but those of enterprise and resourcefulness. Upon men of this sort fell the task of bringing the wilderness to the ax and the plow, and with it went the task of inventing a vocabulary for the special needs of the great adventure. Out of their loutish ingenuity came a great number of picturesque names for natural objects, chiefly boldly descriptive compounds: *bull-frog, canvas-back, mud-hen, cat-bird, razor-back, garter-snake, ground-hog* and so on. . . . These early Americans were not botanists. They were often ignorant of the names of the plants that they encountered, even when those plants already had English names, and so they exercised their fancy upon new ones. So arose *Johnny-jump-up* for the *Viola tricolor,* and *basswood* for the common European *linden* or *lime-tree (Tilia),* and *locust* for the *Robinia pseudacacia* and its allies. (Mencken 56)

Williams acts like a mid-twentieth century Mencken, making concrete - by putting into print - the ethereal fashionings of speech made by the "loutish ingenuity" of fellow uncouth and iconoclastic Americans. Johnson wants to recreate that ingenuity itself, cleansing it of its loutishness, reinvesting it with the botanist's acuity it always had, by reenacting it in the space of avant-garde poetics. "Pluck them Wm / Bartram . . . neither Bosch's oranges, nor what brought Marvell's golden heat to song, can match / fruit as yet unseen, & yet to name" (*Valley* 33). Johnson shows a bit of the Williams collector sensibility in his affectionate lists of common, compound names for plants that recur in his poems. But Johnson also demonstrates sense that

this kind of "uncouth invention" is a kind of Orphic seeing, when he writes of poetry that can give us:

> the world focused back at us
> like a wide flower . . .
> words may be pulled up like onions,
> a humus still clinging to them, sweet to the taste . . .
> Eye-bright, Heartsease, Five Finger, Liverwort, Beard-Tongue, Bloodroot. (48)

Note that these syntheses are not metaphors as much as they are joinings, compounds that objectivize, as the Green Man is a kind of compound; in these junctions is not only a comparison of the two terms, but new identities fashioned for objects, in the Adamic re-naming of one real object with the names of two sensual objects.

Importantly, naming this compound-making stance Adamic, or Orphic, locates the original first-seer of these poetic traditions in a Western European mythology. It is a form of modernist primitivism that sidesteps the question of the Other. If primitivism is a stance in which "the ideals of the Other have been fatefully interwoven with an urge to the authoritarian," (Varnedoe 376), then Williams is more the modernist primitivist, performing a vexed anti-authoritiarian authority with his collections of folk saying and outsider art, with a glance back at Wordsworth's turn toward the language of common men. If Williams is involved in the Adamic project of creating American language, it is as its curator. Johnson, however, sees his own task - the poet's task – as to name.

As the son of a lumberyardman from Ashland, Kansas, Johnson is not quite at the same distance from the uncouth inventors from which Jonathan Williams sources his found material. Young Johnson wishes to jump classes, jump orders to enter Sewell's "Order of Writer" (my capitalization) at a moment where the terms by which one entered the contemporary canon were shifting. Johnson sees his own task as extending a tradition of literary greatness, through that Adamic naming by which Whitman and Thoreau created an American literature. "The goal of the modernist poetic is to give the words themselves 'reality,'" writes Walter Benn Michaels, "to write 'like an Indian'" (85). Johnson's patrimony in letters works by identifying with an idea of rational subjectivity that has already distanced itself enough from uncouth speakers – be they backwoods Appalachians or Indians – to use their language as raw material for their own cultural production. Michaels is quoting William Carlos Williams, whose characterization of writing "in the American grain," was to write "like an Indian," as "be[ing] himself in the New World, Indianlike" (137). Johnson is pulled in two directions, wanting to establish himself as a man of letters, but being told that in order to do so one must become an extension of Nature. When Johnson begins to think seriously about Man as an extension of nature, he may quickly have arrived at W.C. Williams' conclusion, that it is *the Indian* that is "a natural expression of the place, the Indian himself as 'right,' the flower of his world" (138).

Bringing his Orphic seeing, that seeks to see objects as though as-yet-unnamed, to the objects of Americanized English language, Johnson runs into the problem of the language's obvious non-indigeneity. Having already worked in *Green Man* on the nature of language to condition one's ability to see anew, Johnson's work through this period tacitly stages the work of American literature as a transplantation and domestication of the English language, whose

ideological project is to discover or establish American "roots" that antedate written histories and that ground the new-world language back in its mythic origin.

The problem Johnson encounters is first staged when he is still looking to Olson as his model of American myth-making. When in the poems "Indian Corn" and "Quivira," Johnson looks to his own Kansas environs with myth-making eyes, looking to narrate it as a place of origins and namings, someone "else" is always already here, and Johnson's storytelling impulse turns to a meditation on power and truth:

> Columbus, as the first Western eyes, called it
> panic grass – Maize, of a 'quaking' ancestry, i.e., the
> attempt, always, at classification. Though the myth of an Indian
> *Chiomecoatl*, or an ear of blue kernel
> shook out of the wings of a turkey (as it flew from
> The-Star-That-Spreads-Its-Hair in a morning
> sky), or *Kan* of the Codex, is a confusion of deities, closer,
> as myth is, to roots:
>
> . . . . . .
>
> What is myth, but the power to tell
> the truth of it? In words
> not even the *real* planted here –
> with its rootless reaching from the base
> arrested in movement down,

or its bright green

of leaves, caught in transpiration –

could tell. For truth

includes not only the even row

of kernels, but grey-black

growths, that I have seen split the greenest husk

– & *Kan*:

in which scholars

cannot see the simplicity of a kernel

germinating: (*Valley* 39)

In the next poem, "When Men Will Lie Down as Gracefully & As Ripe –" Johnson contemplates the power of printed language to evoke "real" events in the imagination and to colour the experience of sitting on the banks of the Potomac, while simultaneously narrating the disappearance of the Indian from the land as part of the movements of natural transformation and asserting the power of the author to create, by naming, the very shapes of the natural world.

My guide book had only to say –

'here you may see the ebony spleenwort

growing in profusion'

for me to walk

in my head, dark & enforested,

in a flora perfect

as that the Douanier made.

INDIA, TO THE WEST

& we inhabit it: wheat above the waist,

in orchards carpeted with

mustard . . .

How can I say the 'tangled actual' . . .

And if I cannot speak

above the land itself – its echoes

& rumours . . . ? . . .

These oak leaves float down to sea, upon a river,

because I say it, here.

I have seen the ebony spleenwort:

& as the Indians

have assumed a name & 'India' proved

real, the stiff scalloped fronds & the wiry

black roots of a fern

are *spleenworts*, as if earth

uttered it. (*Valley* 43)

Johnson invokes *Le Douanier*, primitivist painter Henri Rousseau, for whom Johnson has written and published a small chapbook of poems, "Assorted Jungles," that are reproduced in the later pages of *Valley.* Is there an irony in Johnson's suggestion that language can evoke landscapes "as perfect as" the Douanier's painted jungle? Rousseau was a self-taught post-impressionist painter, iconic of the designation of "naive artist," mocked in his own day for the flat childishness of his landscapes; he painted jungles without having ever left France based on visits to *Le Jardin des Plantes.* Their perfection, such as it is, has little to do with a faithful reproduction of a firsthand encounter with landscape. Johnson seems to acknowledge the great gulf between linguistic utterance and "the real" while asserting the "spell" of language, that can give us beauties and stories *more* appealing than the grey-black fungus blight of raw truth.

He also seems to acknowledge the role of power in speaking the incantatory: that there might be some situation, though not here, in which Johnson might not be able to speak "above" the rumours whispered by "the land itself'; but that generally those with the power to repeat, and repeat, a name create the real: Johnson's Indians euphemistically "assuming" a name. I'm not entirely sure what to make of Johnson's suggestion that "India proved real" – was that the perspective of the native population, who suddenly felt their storied connection to the land displaced onto the name of another continent?

In any case Johnson's attempt to stage patriotic Adamic moments of English-language encounter with American landscape inevitably proves the futility, or at least profound identity

crisis, of any attempt to do so with a clarity of vision that can see objects independently of their framings by discursive, especially nationalist, histories. A sincere quest to mythologize (if myth is "the power to tell the truth of it") the birth of "an American language" would necessarily confront the presence of indigenous languages on American soil, evident in the very names of states like Kansas, languages that already embody the sense of locale and generative energy that are now being sought for English, and document the violent invasion of this non-native language into its newly claimed habitats.

In *Valley*, Johnson moves from these musings on the (im)possibility of imagining a heroic American mythology set in an Edenic American nature to a plea for literary comradeship and intercourse with Walt Whitman, in which Johnson poses the green spears of light, of poetry and knowledge, as emergent from darknesses. He asks Whitman: "[A]re these landscapes to be imagined, / or an actual Kansas–the central, earthy, prosaic core of us?" then answers his own question: "All is Oz . . . and the mystic, immemorial city / is rooted in earth" (97). The poems on Rousseau which follow first describe Rousseau's landscapes, starting with "the dusk of rapt serpent" of *The Snake Charmer* (1907) populated by "a dark-skinned enchantress: / a silhouetted shape of the inky night, lynx-eyed, black hair landing to the knees, / flautist of the sinuous phallus" (99) before he reminds us that Rousseau did not paint actual "Aztec" landscapes but imagined ones: "Poor Rousseau / the mind striped & / tigered / & roars at its own jungles / –roars & roars, / roars" (101). The progression in *Valley* documents Johnson's own movement from innocence to experience, though not necessarily to greater empathy, as he assumes greater and greater authority in the practices of poetic mythmaking, cultural production and strategic *homage*. The ideal of American mythmaking is always undermined by American colonial history.

Whether or not it is the intuition of this dead-end that prompts Johnson to become interested in the glyph or letterform is hard to say. The Roman letterform has the primitivist appeal of the indigenous object yet the folk and nationalist appeal of its primacy in Anglophone writing traditions. Johnson has already taken, from Thoreau, permission to look at the letterform as a natural object: "the earth expresses itself outwardly in leaves . . . the liver & lungs & the *leaves* of fat, externally, a dry thin leaf, even / as the *f* & *v* / are a pressed and dried *b*" (47). We will see this trope, of the letter as leaf, recur again and again in Johnson's concrete explorations.

But before turning to Johnson's concrete, let me point out that it is to Thoreau that Johnson returns in the final poem of *Valley,* "The Unfoldings," which attempts some of Johnson's first integrations of concrete and lyric/collage form. In "The Unfoldings," Johnson puts Thoreau into conversation with natural historian and theologian John Ray, who extols the beauty of nature one can see by microscope; Antonie van Leewenhoek, "father of microbiology," who saw the first single-celled organisms through his handcrafted microscope; William Herschel, discoverer of Uranus; Johannes Kepler, who advanced the Galilean design of the telescope to found mathematical relationships between the distances between planets and their velocities that would provide a basis for Newton's laws of gravitation; and Leonardo da Vinci as he imagines the eye as "a magnet" for images; as well as with composers Leoš Janáček and Charles Ives, the first a Czech former folklorist who wrote squirrels, "cricket[s], midges [and] a roebuck" into his piano concertos; the latter "the purest definition of the American musical maverick" (Alan Rich qtd in Hair, "Local Colour" 132) and who Johnson credits with writing "the interlapping / counterpoint / of // undulating lines / of mountains / with / celestial orbits" (108). In "The Unfoldings," Johnson's ideal observer shifts, as he redraws his lineage of heroes of Adamic naming, connecting Thoreau and Whitman less to the botanist-naturalists like Gilbert White and William

Bartram, than to the natural scientists who negotiated other "meeting points between savagery and civilization" (as Frederick Jackson Turner described the American frontier), Western observers who found other vistas of lawlessness and wordlessness that a man of letters could consider and name. By turning to the landscape as seen under the microscope or as seen by space explorers, Johnson can continue to pursue the modernist ideal of Adamic vision, and be a namer amongst the astronauts and atomic scientists who were then planting American flags at new boundaries of the known world.

The formal innovations in "The Unfoldings" emerge not simply out of the ontological problems Johnson runs into in *Valley*, but from some of the potential solutions he finds in concrete. Johnson realizes in *Valley* that the naturalist namings and classifications that he so evocatively restaged in *Green Man,* which could be so easily framed developing, almost evolutionarily, out of an Anglo-Saxon mythmaking of the British countryside, cannot be so easily restaged as the modern form of indigenous knowledge of the American landscape. One reorientation Johnson tests as a way to steer around this problem, while still engaging in the American Adamic project, is to style himself a musician: words can be approached as tones, vibrations of air, divested of their functionality in narrating histories. To approach the word as a vibration is to approach it as a physical state, as a note that can be removed from scales and ordered afresh, and sounded (in theory) as though outside the economy of English knowledge-making. The word's print notation approached as an object becomes a visual shape, a thing that can be arranged not into the sentence but rather, as Gomringer might have said, like a constellation. For Johnson, who now suddenly compares poets to "gardeners and astronomers," words might also be arranged more like a bunch of flowers, natural objects individuated from the tangled actual by the hand of the artist, like sprigs clipped from the ordered branches of syntax

and etymology. America, instead of being a storied land, might be reinvented - discovered, revealed - by poets to be a set of relations, perceptible as not as story but as a feeling, a vibration, an order of imagination, an Oz. America, to Johnson, was becoming a wor(l)d.

A closer reading of the evolution of Johnson's concrete work, which takes place during roughly the same period as his writing of the poems collected in *Valley*, charts Johnson's exploration of concrete's potential to deliver the history-less encounter with the word-world (a world nonetheless presently American) that Johnson seeks to engender. To do that, I want to go back to Johnson's connection to Finlay. Finlay's practice and Johnson's diverged by about 1970, and Michael Basinski has argued that no meaningful influence can be said to have taken place between the two after this time (202). However, after the heyday of concrete, Finlay moved onto to his magnum opus, the literal garden-building of *Little Sparta*, and Johnson began work on his twenty-year project, *ARK*, an "imaginary" garden "built" of language. For both, the development of their poetic practice could be, or needed to be, expressed in terms of landscape design. This was not, I argue, simply a matter of aesthetic taste, that is, I don't think this parallel occurs simply because both men love flowers or gardening. I believe both Johnson and Finlay discovered that the relationships of agriculture, botany and aesthetic horticulture to the land stood in well for their intuitions of the relationship of language to the mind that concrete poetry foregrounded. Concrete practice torqued the experience of metaphor, substantiating it, deposing metaphor from its etheral abstraction as an event "in the mind" to an event "in the material." "That the action of the universe is metamorphosis - its articulation, metaphor . . . matter: writer" Johnson wrote, later, in *ARK* (“BEAM 17”). This is more than a metaphor of metaphor; it is a theory of language. Let's see how Johnson gets there.

In *Sports and Divertissements*, which first appeared in Finlay's journal POTH, Johnson engages in his own "listenings," not to a rustic vernacular, but to the repartee that takes place in dress whites on the manicured grasses of tennis courts and golf greens. The influence of Williams' aphoristic wit is evident in this work, but Johnson doesn't pull it off with the same authority. Where Williams brings corn pone into conversation with Catullus, Johnson brings the lilt of the cultured, outdoor game into the discursive space of another cultured game: language play. Where Williams succeeds in achieving a tone of cant by bringing a "wildflower" primitivism to an avant-garde gallery gaze, Johnson's pieces in *Sports* fail to achieve the volume and dissonance produced by Williams' ready-mades.

Johnson is more successful, and seems to have found his element, when he ventures into territory that Williams hasn't comfortably adopted: a concrete poetry that treats the letterform as a visual shape that is as elemental as the circle or the square, and that looks for its origins to the imaginary landscapes of Greek myth. Where Williams' sense of concrete did not venture far into the sequential, preferring as he did to work with visual or aural flashes of instantaneous pun, Johnson develops an interest in a dynamic sequentiality to his concretions. He develops an interest in the experience of readerly perception that unfolds over multiple pages. In *Io and The Ox-Eye Daisy*, some pages of which we saw above, the O is returned to its status as a printed circle. The page becomes a space of representation and environmental context through which the same circle can become a moon rising above a horizon, or an O in the pair of OOs that translate a cow's moo into a human moo, or the iris of a stylized eye, lidded by parentheses.

In *Gorse Goose Rose*, Johnson's concrete practice makes a decisive break from a Williamsesque wit but still engages the wildflower aesthetic of *Green Man* and early *Valley.* (See Figures 2.6, 2.7, 2.8). Set in Scotland, dedicated as "Scotch Shapes and Landscapes . . . for

Ian & Sue, who inhabit them," the representation of these natural forms as language forms could suggest the emergence of words from a "primitive" encounter with "shapes" on the landscape without troubling a colonial conscience (or at least, the attempt might seem less problematic to an American, who might see the Scotch words as far more indigenous to their locale than any English word on American soil). The book begins with a direction:

> go se
>
> go se (n.p.)

a human command to go and look, in rather featureless, identical lines of text, which is immediately transformed by the presence of a standing rose (an icon of natural individuation) into a landscape upon which other forms, goose and gorse, become visible and named. The physicality of the book allows the red word rose to be placed into the landscape and lifted away from it, for the play of differentiation and unification of forms to become a matter of spatial orientation.

This work still has the feel of Johnson finding his own stride. Poems in the book like "raindrops," in which letters cascade down the page, or "this little thistle" in which are scattered across the page like thistledown, owe much to Gomringer's "wind" (1953). The book also indulges the sensibility that takes the flower as aesthetic-object-par-excellence, the figure of life against a ground. But Johnson is in good company here, as the flower is the object, the natural concretion, upon which entire histories of aestheticism have been projected, and he is not the only one to use his concrete practice to suggest Western poetics more broadly as a particular history of representation of natural objects. Gertrude Stein alluded to the primacy of the rose as

object in aesthetic contemplation in her famous line "rose is a rose is a rose," and concrete pioneer Augusto de Campos would eventually salute her for it in visual work of his own.[4]

We can see other concrete poets playing with the same elemental shapeliness, or formliness, of letter, word, and flower in such poems as bpNichol's “rose poem” (1966), Gerhard Rühm's "die blume" (1966), or the entirety of Solt's *Flowers In Concrete* (1966). Even Richard Brautigan broke out briefly from a more traditional poetic practice to produce the art book *Please Plant This Book* (1968), which Nichol echoes later when his own practice moved into three-dimensional poems (see examples in Figures 2.9 to 2.12).

In two of the poems in *Gorse Goose Rose* we see Johnson playing with the word-as-shape, staging the kind of naive inventiveness that Mencken attributed to the first fashioners of American language. In "chestnut leaf-horse," Johnson makes concrete the suggestive title of one of Williams' poems, "Syllables In The Form Of Leaves," as he simply arranges and rearranges the nouns in shapes that change the contours of an imagined object, the hyphen acting like a branch between the syllabic leaves of a word-form. His *horse chestnut-leaf* echoes the *heartsease* and *bloodroot* plants of *Valley of the Many-Colored Grasses*, and Adamic naming seems to take language/nature as having its elements, its simple shapes, that when compounded make up the art-object/organism.

When we see Johnson using the names of the native plants gorse and furze, next to the lowlands Scots words firth, fern and peat, organized by their rhyme, Johnson creates a taxonomy of like forms that evokes botanical taxonomies, implicitly suggesting a logic of like morphology equalling common ancestry and relatedness: language, people, and flora are authochthonous.. On Johnson's Scotch landscapes, his shapes, both plant and word, can come from the same place, in

[4] See *Gertrude Stein* by Augusto de Campos, Editora Noa Noa, 1988 (cover art).

a way that cannot happen on American soil, as Johnson has learned trying to explore the etymology of Kansas and its place-names in "Quivira."

In the "green LEAF" sequence, however, Johnson exposes the openness of the wordshapes, paradoxically throwing into relief the illusory nature of the seemingly smooth contours around concepts that words engender. The very integrity of adjective, verb, and noun are compromised as the noun matter that is leaf and the adjective matter that qualifies it as green or blue become obviously the same matter; the modifying stance and the modified phenomenon in the phrase become indistinguishable. Johnson works on the same concepts (of the concrete indistinguishability of an adjective from the matter that is described by it, of language as a record of segmented observation, and of the circumscriptive power of the word) in *Valley,* in his poem "Three Paintings by Arthur Dove," where in the section "Plant Forms" he declares: "Color is a *condition* of the plant – / color of the flower, / & pod, // embedded in the bud. // . . . If we could look at an orange flower long enough / it would become blue: / spathe, sheath / petiole, blade, / stalk, & root – // 'these moving circles, in which we walk'"(59). In each of these examples from *Gorse Goose Rose*, Johnson stages an encounter that analogizes the sensual object, the phenomenological encounter with an object – that is, the human object encountering another object and appreciating, to the degree possible, the shared objectness of self and other – by approaching the word as itself an object that *reembodies* or the object of reference, that the word itself is an *objectivation,* that takes shape in an almost sculptural relationship (a word is the sculpture of an encounter; of a sensual object).

Johnson again uses the flower as his analogy for the object-status of language in the concrete broadside *Sun Flowers*, this time letting the flower relate to language at the scale of

poem rather than word. In the book collection, "Sunflowers" is a lyric poem formatted as a centred structure:

SUN FLOWERS

The sky is apple green
in a dark field,
encircles

a sower casts his seed
While the sun, became pale as silver,
his head.

The staggered lining ensures the eye reads two separate lines before jumping back to the left of the page, and subtly establishes a "grain" of right-to-left radiation from the "spine" of space at the centre of the page, against which the eye must read left-to-right. The rhythm is tacitly slow, fast, slow, fast, as the reading flow goes against, then with, then against the visual structure of the poem. Bruce Kimmelman credits Dirk Stratton for pointing out that in *ARK*, "the ratio of Arches (33) to lines in each one of them is almost exactly the ratio of florets and spirals in a sunflower – which ration expresses what is called the Golden Section" (424); we see evidence of such play in "Sunflowers" / SUN FLOWERS as there are thirty-three lines radiating from the poem's stem-like centre. In the poem's broadside version, which is counted in Johnson's bibliography as a single publication, one sheet of white stock is folded such that the invisible line that forms a centre margin is actually formed by a physical divide between the "leaves" of the folded sheet on which the poem is printed.

In the broadside (see Figures 2.13, 2.14, 2.15), the physical presentation proposes alternative readings. The separately titled leaves seem to begin two separate poems, "Sun," and "Flowers." One must unfold the entire sheet to read the poem in its entirety, but if not refolded so that each one-by-three section column meets the other with the spine of space running through its full length, the poem becomes inverted, with "Flowers" running down the *left* side of the sheet,

and "Sun" running down the right, leaving the left-set "Flowers" as the intuitive choice of first poem to read. Was Johnson trying to achieve an effect in the broadside that he had not, or not quite fully, achieved in the more traditional (though still visual) presentation of the poem in *Valley*?

He likely got the unfolder idea from Don Sylvester Houédard. In 1963, Houédard, another of concrete's most visible proponents, wrote to Ronald Johnson about some new poems he was writing, that he "thought might be called 'openings' or 'unfolders' . . . john furnival and i just invented these new poems (handmade) that open like flowers or icecream cones so we sent them to moscow. they're part of link suprematism-spatialisme" (Letter 11 Nov 1963). A few months later, Houédard, in another jagged letter composed in his typically lower-case and fragmented style, mentions his desire to create "typestracts on screen growing visibly" and "visual parallels of [henri chopin's] audiopoems - simultaneity, growth & concreteness," that Robert Lax had sent him some work for his unfolders, and between these disjointed pieces of information, an interjection: "now I use the word PARADADA to mean all that" (Letter 10 May 1964).

Houédard is referring to a term he coined to describe the avant-garde moment as he saw it. His "Paradada" manifesto, which appears in a collection of essays on "avant-garde activity" (that includes such fellow contributors as Marshall J. McLuhan, Decio Pignatari and Allan Ginsberg) is called *Astronauts of Inner-space* (1966), and makes a brief, staccato account of a whole host of artists whom Houédard wishes to include under his banner. For Houédard, the "poet-typographer [makes] cloisons evaporate - not only in IHF's poetypography but in eg bruno munari / pierre faucheux / edward wright (& *first things first* manifesto signatories - furnival's *openings/unfolders* a response to that appeal)" (31). According to Houédard, the unfolders respond to the dissatisfaction of a number of members of the graphic design community who

lamented that the outlets for their skills promoted a consumer culture rather than using all the new technologies and capabilities of design to foster creative thinking. I couldn't find direct evidence to prove that Houédard's "most famous poem . . . 'Frog-pond-plop' . . . which he presented in the form of an opening poem unfolding according to an origami principle" ("Don Sylvester" n.p.) was an unfolder of the same type he mentioned to Johnson, but the timing ("frog-pond-plop" appeared in 1965) seems about right. It seems fair to read the broadside of *Sun Flowers* as organized according to an "origami principle," and to read its unfolding materiality as conversant with the explorations Johnson makes in *Valley*'s "The Unfoldings." In any case, in his broadside Johnson was clearly consciously playing within the strategy Houédard called *paradada,* a term he used for a whole host of avant-garde practices, which included a "4-D poetry [that] logically closes 1st cent modern art from 1863 napoleon III *salon des refusés* – and logically postwittgenstein treats language as *matter*. Poems looked *at* not *thru*" (30).

Houédard's unfolders responded to an emerging consciousness within the graphic design community that embraced a kind of anti-consumerist, activist typography, a "poetypography," that emphasized the mindful use of print technology. That movement actively saw itself as "space-age," moving from arts of single media to works of intermedia, the "fusion" of media paralleling the fusion of the atom that had propelled them into the nuclear age. Johnson's own materialism thus converges with the thread of "concrete spatial 4-D kinetic" alive in this modernist progression, but his is a materialism emerging from a more organic and organicist sense of the world's materiality.

Johnson's materialism, as I have shown, is grounded in a positivism that Guy Davenport called "the real Transcendentalism, which holds that a man must do his looking for himself" (*Valley* 14) and that Davenport aligns with Black Mountain School alumnus Buckminster Fuller,

who invented the geodesic dome. While Johnson never used the term himself, I believe his work can be read as a literary example of a modernist strain of *biomorphism*, recently discussed in the visual arts by historians Isabel Wunche and Oliver Botar in their 2011 study of biocentrism in visual modernism. The OED defines "biomorphic" as "resembling a living organism in shape or structure"; with a rare and obsolete meaning that simply makes the word synonymous to "biological." This definition fits both iterations of *Sunflowers*, and suggest that what may have motivated Johnson, beyond his desire to participate in the space-age movement, was the attempt to more deeply concretize the biomorphic impulse of the poem.

Wunche and Botar credit the coining of the term in the arts to Geoffrey Grigson, the art and literary critic and cultural historian who was in fact friends with Ronald Johnson, and whom Johnson had certainly read (we may recall Johnson insisting in the notes of *The Book of the Green Man* that "one should read *all* of Grigson; his books are seminal and essential") and drawn on in his early writing. Grigson wrote:

> Abstractions are of two kinds, geometric, the abstractions which lead to the inevitable death; and biomorphic. The biomorphic abstractions are the beginning of the next central phase in the progress of art. They exist between Mondrian and Dali, between idea and emotion, between matter and mind, matter and life" (qtd in Botar and Wünche 63)

Johnson seems to echo Grigson in a letter to Ian Hamilton Finlay:

> Lines, even most Concrete ones (except for, I suppose, Apollinaire[)] are so damn linear & Mondrian! Not that that bothers you, but I cannot reconcile myself to all that inevitable, dreary square & rectangle tango over & over. How lovely to be able to make moons at will–or even Mary Ellen's marigolds. . .! As you know I do not object to abstraction but for me it must be the natural abstraction of the circle, the plow contour, spiral shell. . . . I agree with you absolutely in that form is not squares or circles, etc. and that a circle as such is not sun or eye or moon. But it is the business of the poet to make it so. . . . And there is such a thing as natural abstraction–that is my point, man himself is

> nature therefore how could he abstract anything out of nature?" (qtd in Hair, *Modernist Collage* 45)

Johnson would also eventually call *ARK* "a biological form" (qtd in Biglieri 455). The term *biomorphic* may describe not only Johnson's intention around the shapes of his poems, but also describes his developing sense of language itself as the shape of a 'pure form' that is Natural in its essence. Written language can be considered "non-representational form," in that the forms of Roman *letters* are not meant to represent objects-in-the-world, yet in combination they make shapes that mean, in another way, to refer directly to those objects; they objectivate sensual objects. Johnson develops this sense of the glyph as a Natural form through another set of concrete experiments.

We have seen how Johnson was interested in the one-to-one relationship of word-to-natural object in *Gorse Goose Rose.* Two of the poems in Johnson's drafts of early concrete work show him playing with posing the flower as the unit in which the flux of nature seems to be arrested into individuated form, and the word as the unit that frames the perception of that seeming arrest:

<u>bouquet</u>

```
flows
flows flows
flows flows flows
flows flows flows flows
flows flows flows flows flows
flowers flowers flowers flowers flowers
```

two bouquets

owls vowels
owls vowels
vowels

(“Concrete”)

Johnson pushes the spatialized aesthetic of Gomringer's constellations into a logic of *arrangements* of language. Johnson's logic of arrangement might place his words in a purely aesthetic relation to one another, selecting for complementary rhyme and form as an ikeban artist selects blooms for colour and shape, setting vowels next to owls as one might put a tulip next to a tiger lily. However, within that evocation of artistic control is also the lingering echo of Joseph Addison, whom Johnson quoted at length in the first poem of *A Line of Poetry, A Row of Trees*, insisting that through his imagination, the poet can transcend the constraint of the seasonality and the natural rhythms of which the poet is a part:

For the poet
‘may draw into his Description
all the Beauties of the Spring & Autumn, & make
the whole year contribute
something to render it the more agreeable.
His Rose-Trees, Wood-bines & Jessamines may flower
together,
& his beds be cover’d
at the same time

with Lilies, Violets & Amaranths.

His Soil is not restrained to any Set of Plants, but

is proper

either for Oaks or Myrtles,

& Oranges may grow

wild in it'. (*Valley* 17-18)

Most important in the concrete experiment is Johnson's interpretation of the word 'flower' and the shifting meanings, in fact shifting modalities, activated by placing it in the concrete field. The etymological resonance of flow with flue and flux, that suggests the flower is a fluxer, a flow-er, is suggested by lining the text in a way that emphasizes the left-to-right flow of visual tracking. The flow-er is the ur-word, the ideal symbol of ideation that begins at the head of the word, at its left-most instantiation, and flows temporally, either through pronunciation or reading, into its being as discrete idea. Again Johnson is greening the formlessness here, suggesting how the motion of green stuff parallels the whiteness of mind taking shape in letterforms. Like the object of object-oriented ontology, the word itself is a process, an objectivation that activates the realization of a sensual object. We see Johnson return to this idea in an early draft of "The Microscopic Telescope," which appears later in *Eyes and Objects,* the work in which Johnson transitions to ARK's structural poetics:

THE MICROSCOPIC-TELESCOPIC IN AND OUT DOOR

****

Vast Flow-er

****

****

to the last,

least aster. ("Microscopic/Telescopic")

Here Johnson toys with the visual marker of the asterisk as aster, both flower and (Latin) star, where the aster is the radiant shape, the "confluxus radiorium," "the force of outward luster, mind," that is Johnson's radiating, axial, iterative, and fractal unit of matter and being. He develops the thought later in a draft of *Wor(l)ds,* titled "How To See Flowers":

The mind at large. ONE, through the stem of bone. Vast flow-er

to the last, least Aster undulatus.

("Wor(l)ds __ How To See Flowers")

He eventually includes it in the *Wor(l)ds* draft quote we saw earlier in the *Green Man* chapter, tying the flux to a seminal energy:

From the flow-er *comes* the wor(l)d, its globe-like flower

sprout out your eyes.

("Wor(l)ds 23 [1]")

In *ARK* Johnson will develop the idea from a number of angles; as for Johnson the flower is the idea of the idea; the word for the physics of the word. "Call this," he writes in *ARK*, "flowing-back-on-itself hourglass of / equilateral font / of the self in ever-changing forms-through-fountains-heft" ("BEAM 29"). For Johnson, the flow that creates form, that creates both fountains and fonts, also creates the ever-iterating self. Humans, as objects, are, like Johnson's other objects, flow(er)ings in a field of flow(er)ing time and space.

What is important here is Johnson's development of a sense of font and flow that begins to exceed the constraint of linearity. Johnson experiences the visuality of the glyph, which draws on a sight-line perpendicular to the line of type and triangulated between two eyes, with an increasing consciousness of the process as occurring three-dimensionally, and then ultimately four-dimensionally.

Johnson's maturity in concrete comes when he embraces his sense of the linear flow of reading and type as radiating outward, and the processes of expression and reading as expressing an *unfolding*, "outward luster." This development is visible in Johnson's later concrete works, *Balloons for Moonless Nights,* and *Reading 1* and *Reading 2* (see Figures 2.16 and 2.17). These two brief concrete works were published as single-leaf broadsides by the Finial Press in 1968. Both works are concerned with the place of the word and text in an understanding of language as a process situated within discourses of natural history.

In *Reading 1*, the word book is set down in type, and set below a copyeditor's insertion mark handwritten in blue ink between the **b** and **o**, is a mis-set "r". The typeset "book" is transformed into a "brook" by Johnson staging a readerly refusal to acknowledge the permanency or authority of existing type. It is, of course, his own authority and collusion with the technology of printing that Johnson undermines with a written "correction." At one level, Johnson reminds

his reader of the embodied "handedness" of the writer and the reader by performing in print the dynamics both of self-correction and of the author-editor relationship. At another level, he foregrounds the left-to-right flow of the reading process and eye-scan, the left-to-right sequentiality of type, and the object-presence of the word's materiality in print. The manner in which "it is written" lays down a line of text like a rut or channel that the reading eye and mind follows, the flux of attention moving through the flue of sounding that occurs in the mind as a reader reads. Johnson diverts the scanning attention that would flow uninterrupted from b to o through the utterance and apprehension of "book" up, out of the type, into the afterthought, but perhaps better thought, "r," before letting the attention merge back into the flow of the original word. In *Reading 1* Johnson brings to immediate awareness the gestalt-like perception of individual words that comes to characterize a habitual reader's encounter with written language. By interrupting the word "book" with his "r", Johnson both challenges and reinscribes the illusion of a word's wholeness and the seeming finality – the *writtenness* – of a truth or thought set down in, or rather *as*, a book. No doubt in the mid-twentieth century, before revisionary flexibility granted by electronic word processing, book production would have involved degrees more authorly and editorial decisiveness to still the potentially endless process of revision onto a page. Johnson reinvests the word with its vulnerability to that revisionary flexibility, reminding his reader of the inventedness of words and of their object-being as sequences - or flows - of sound, of breath and of attention, reminding too of the reading process as also a mental *flow*. The mind reminds itself that it is a body engaged through eye and hand in a reading process now deeply mediated by technology; the body returns to the site of its own production to remind itself of the *nature* of its own knowledge.

Johnson's intuition of the lettristic *character* as a trace of gesture, as mark of movement's flow, underlies the way *Reading 2* works as an object pointing to its own status-in-relation-to-reader as a sensual object. *Reading 2*, like *Reading 1*, is a concrete poem that works as a textual event, but where the temporality in *Reading 1* is marked through the left-to-right movement of eyescan, the temporality of p(rose) is difficult to 'see' because it is an etymological temporality, the timescale of the formation of words and grammars, and of the emergence and persistence of the words rose and prose. There is movement in *Reading 2*, but it is a radiant, multidirectional and extending motion, like the expansion of ripples on a water surface, or of radiant light from a point, or of soundwaves. Johnson sees this movement in the pace of a particular matter: the blooming rose, its parenthetic waves of energy moving slowly outward. The root of this rose, is inseparable from the root of its/the word. The root of this rose and of the word that contains it are both invisible. These roots reach backward, as if the flat, facing page is only a "now," that puts a momentary, two-dimensional frame on the uninterrupted temporality of language's unfolding from an anterior time and space. The experiential ground in which the word "rose" is rooted is deeply present but entirely immaterial, a once-upon-a-time set of sense contacts with the material object (process) that is the rose, by bodies whose intergenerational contact with ours is evidenced by the currency of their word with our understanding. Johnson's word(s) bloom(s) in the ground of history: of natural history, of book history and of disciplinary and political histories. Johnson, a poet fascinated with the representation of Nature in language, understands that prose is the vehicle of scientific and regulatory discourses. It is a mode of language which does not call attention to itself to the point of undermining its own authority, a mode that within these extra-poetic discourses seeks to be "invisible" in its transparent presentation or conduction of meaning.

Johnson understands the phenomenological event, the sensual object, at the core of language to be the naming of forms. For Johnson, all words are the trace of moments of poesis and language itself, existing in a kind of representative, almost metaphorical, relationship of wordforms to Natural objects; a profoundly occult relationship of the real object to the sensual object a subject apprehends. The "invisibility" of prose, or what might be asserted as the capacity of language to present an accessible truth, is transformed into a highly visible presence that stands, within the representational space of the page, both in place of the rose and in *the* place of the rose. *Reading 2* challenges the authority of a supposedly disembodied prose by exposing a process of perception, of the perceptual "bracketing off," of Natural forms from an undifferentiated totality, and their bracketing off by naming, yet does so through making an object that points to the sensual object of reading-a-word. Johnson demonstrates that prose cannot stand "outside" Natural laws of perception and naming that poetry always seeks to make visible, while he also allows prose to keep its always-emerging and new embodiment of all the beauty and history of its characters and wordforms.

Reading 1 and *Reading 2* are perhaps the most distilled realizations of Johnson's intuitive sense of the appropriateness of concrete poetry's techniques to his Orphic project. *Reading 1* and *Reading* 2 derive from the conceptual experiments of *Gorse Goose Rose* and *Sunflowers,* but reduce those works' looser play with the elements of visual punning and structural homologies with natural form to the scale of one word. They are complementary structures that together produce Johnson's multidimensional object of language, but that especially model the *kinesis* that Johnson finds inherent in the textual experience. It is this kinesis that Johnson refers to when he calls his work in *Songs of the Earth* "kinetic concrete squares," a series of poems that relies heavily on the "vectoredness" and sequentiality of reading. It is a fractal, opening, branching

kinetics that Johnson recognizes in the emergent taking-form of many Natural objects: the opening into flower or splitting off into leaf of the rosebush, the rivulet trickle of the river broken into brooks, the syntactical unfolding of the sentence from its first spoken syllable into the sentence structure of thought.

I'd like to make a brief detour into considering how the same formlessness of rational mindedness, or of Western subjectivity, was still at play in the theories of deconstruction and their ideas of the subject that were emerging around the same time. When Paul de Man, in his 1954 essay "Form and Intent in the American New Criticism," famously critiqued the New Critical trend in American scholarship for "considering literary texts as if they were natural objects," he understood that "the large metaphor of the analogy between language and a living organism" had a long history in nineteenth- century thought. Characterizing the preceding thirty years of criticism as expressing a "more or less deliberate rejection of the principle of intentionality," de Man traces this history from work by his contemporaries like Northrop Frye, back through I.A. Richards and A. N. Whitehead and ultimately to Coleridge's organic imagination (27). De Man reminds us that while Coleridge's "esemplastic imagination" was founded on "a participation of consciousness in the natural energy of the cosmos," Coleridge still insists on free will as the human element responsible for the construction of the poem. De Man himself rejects the organic analogy for poetry precisely because, he argues, "the structural power of the poetic imagination is not founded on an analogy with nature . . . it is intentional" (28).

De Man recalls M.H. Abrams' insistence that though Coleridge admitted of an unconscious element in creation, that design was the key to poetic creation: "What the plant is by an act not its own and unconsciously, Coleridge exhorts us 'that thou must *make* thyself to become'" (qtd in de Man 28). De Man means to resist the reification of forms into totalized structures, insisting

"form is never anything but a process on the way to its own completion," an observation in complete harmony with Johnson's poetics. But de Man goes on to remark that the "completed form never exists as a concrete aspect of the work that could coincide with the sensorial or semantic dimension of the language" (32). It is here that de Man clearly parts ways with concrete poetics *as poetry*. In the same essay de Man also takes issue with structuralist Serge Doubrovsky for reestablishing the link between literary totality and the intent of the writer or subject, again a stance Johnson would not argue with, but de Man furthers his critique by attacking Doubrovsky's references to the theories of Maurice Merleau-Ponty, in which, de Man argues, "the world of the imagination . . . becomes a more complete, more totalized reality than that of everyday experience," and that by pointing to Merleau-Ponty, Doubrovsky has "chosen perception as his model for the literary act" (34). De Man insists that Merleau-Ponty's thought, particularly his theory of plastic form sketched out in *Eye and Mind*, did not extend to literary language, and that Doubrovsky is wrong to try to make it extend thus. "Literature bears little resemblance to perception," wrote de Man, adding famously:

> literature begins where the existential demystification ends and the critic has no need to linger over this preliminary stage. Considerations of the actual and historical existence of writers are a waste of time from this critical viewpoint. These regressive stages can only reveal an emptiness of which the writer is well aware when he begins to write. (35)

Johnson's work in many ways supports de Man's denunciation of the urge to read a poem as a totality, but the mistake, for Johnson, would be in presuming that an analogy with Natural form suggests anything other than objectivation, an open-ended instantiation of flux-taking-form, in the event of the poem. Our discussion of the international concrete movement and of Johnson's preoccupation with eye and mind suggests how divergent this approach to literature was to the

emerging criticism that was about to lead into decades of deconstructionism as the prevailing American critical mode.

Our look at Johnson demonstrates his keen interest in the literary as a mode of perception, and his fundamental awareness that the "situation of the eye" was the apparatus of the able-bodied reading mind. De Man rejects biological analogy at the point of intentionality: a plant has no intention, and de Man is arguing for writng as a conscious, intentional act of will or design. However, Johnson's sense of literary emergence does not do away with intentionality at all, as his use of building, gardening and architectural terms for his poetics show. Nor would Johnson argue with the relative irrelevance of an author's personal history to his work – Johnson's poems after his first book were remarkably free of personal reference, perhaps indicating that Johnson's awareness of that "emptiness" to which de Man refers, the absence of a stable self, the absence of a uttered "I" outside of narration. Yet that emptiness for Johnson is sublimely embodied; his awareness of that "esemplastic" emptiness is as a physiological presence, the bodymind that registers the impossibility of "I" as a stable object, yet still experiences itself as a sensual object, fluid and untotalized, as form itself.

"It *is* a design," writes Johnson in his poem "The Garden" (my emphasis). "Andrew Marvell's brain made of / arched petals & furrowed / peach-stones" (47). Johnson is always self-consciously aware of the poet's ability to place words in their orders on the page. Yet the human poet's intentionality, for Johnson, is always grounded in the body, in the fleshliness that makes the poet a Natural object as much as any of the objects he describes. In that case, given the poet's lack of responsibility for the design of his own body, for the structurality of his brain and therefore his writing and thinking instrument, writing itself, however experienced as humanly intentional, is a process of emergence-into-being that takes the shape of spoken word or print

word, underwritten by the organizing principles of nature. It – writing, or the brain itself – is, Johnson continues,

> A design Thoreau saw in
> the flowing thaw of bodies, leaves & lobes
> of a hand, &
> lichen of an ear.
> 'No wonder the earth expresses
> itself outwardly in leaves
>
> it so labors with
> the idea inwardly: *lobe*, a word
> especially applicable to
> the liver & lungs & the *leaves* of fat,
> externally,
>
> a dry thin leaf, even
> as the *f* & *v*
> are a pressed and dried *b'*. (*Valley* 47)

As Jed Rasula points out in *This Compost,* the passage of Thoreau that Johnson sets to his own line is itself indebted to the work of linguist Charles Kraitsir. Kraitsir, in pursuit of the contours of a universal natural language from which all other languages might be said to be derived,

describes the propulsion or containment of the outward flowing breath from the body as analagous to the shapes in nature to which the words will be associated:

> *crp, glb, grp, grb, blk, glm, krp, klp,* are roots of *corpus, globe, grope, crop, block, bulk, bulge, grab, group, conglomerate,* and words of similar meanings. So an object or action, which expresses free outward motion, or that in thought, which is naturally symbolized by free outward motion, will need labials and the liquids, thus: *lb, lv, lp, lf, fr, fl, pl, pr,* are roots (or different forms of a root,) which vegetate into the words *labia, live, lip, liber, love, laub, free, flow, blow, bear, fare, plane, flat, pluvia, flamma, fire.* (qtd in Rasula 144)

The analogy of language to plants in Kraitsir, the use of "root" to refer to what the OED calls "an ultimate unsayable element of language; a morpheme, not necessarily surviving as a word in itself . . . an etymon" ("root" n.p.), is a usage the OED traces back to the 16th century. The word root as a sense of origin, be it of virtue or vice, or of disciplines, can be traced back even further, to 1340. The use of the word root to mean a family ancestor, or in fact also to mean descendant, can be traced back to the Bible. When Kraitsir uses the verb "vegetate" to describe the "growth" of linguistic roots into full words, he is using a metaphor that itself has roots extending back deeper than our sources of exegetical knowledge. Yet there are literary moments, as Johnson would have us recognize in Thoreau, where the analogy of language change to plant epigenesis is inverted. Rather than characterizing speech as a vegetation of morphemes, Thoreau refigures plant growth as the "speech" of the earth, in a figuration of natural "expression" that uncannily anticipates the metaphorics of contemporary genetics.

The scientific question of whether the principles governing plant growth and language change were in fact the same was addressed in 1879 by John Piele, a philologist at Cambridge University, who wrote that:

> the analogy between language and a plant seems incomplete. We may fairly enough speak of the growth and decay of language; meaning thereby the constant development of new forms, to meet the waste caused by the rubbing down of words in daily use or their falling out of use altogether. But the growth is not due to any inherent vitality in languages, as it is in plants: it is due to the action of man governed by laws of association—how established we cannot tell—between certain sounds and certain things. (160)

Peile also argues that the death of a language by killing off its speakers is "a violent death . . . altogether unlike the ordinary decay of a plant" (161). Peile makes this point within an argument that the study of language must "be classed neither as a historical nor a physical science, but be placed between the two" (161). The attempt to discuss scientifically the relation of language to the human organism is indeed the very discipline of linguistics to this day, and the debate around how to use language to characterize language continues to include the question of how applicable organic metaphors are to describe the dynamics of grammars and morphemes.

Johnson's evocation of Thoreau's conversance with contemporary philology, and his deliberate re-lining of Thoreau's text, both honors the flow that Thoreau categorizes as expression, while tacitly staging the impulse to break the line and be the instrument of that intentionality, or design. Johnson also points to the reliance on language of the language-using body to describe language, which in turn describes language's reliance on the names of bodies to describe other bodies.

The longer passage from which this text is lifted is Thoreau's meditation, in "Spring," on a mass of sand whose structure is to him "a hybrid product, which obeys halfway the law of currents and halfway that of vegetation," a sort of grotesque vegetation or architectural foliage more ancient, he suggests, than acanthus, chicory, ivy, vine or any other vegetable leaves:

> What makes this sand foliage remarkable is its springing into existence thus suddenly. When I see on the one side the inert bank, -- for the sun acts on one side first, -- and on the other this luxuriant foliage, the creation of an hour, I am affected as if in a peculiar sense I stood in the laboratory of the Artist who made the world and me, -- had come to where he was still at work, sporting on this bank, and with excess of energy strewing his fresh designs about. I feel as if I were nearer to the vitals of the globe, for this sandy overflow is something such a foliaceous mass as the vitals of the animal body. You find thus in the very sands an anticipation of the vegetable leaf. No wonder that the earth expresses itself outwardly in leaves, it so labors with the idea inwardly. The atoms have already learned this law, and are pregnant by it. The overhanging leaf sees here its prototype. Internally, whether in the globe or animal body, it is a moist thick lobe, a word especially applicable to the liver and lungs and the leaves of fat (*laibo*, labor, lapsus, to flow or slip downward, a lapsing; *lobos*, globus, lobe, globe; also lap, flap, and many other words); externally a dry thin leaf, even as the f and v are a pressed and dried b. The radicals of lobe are lb, the soft mass of the b (single-lobed, or B, double-lobed), with the liquid l behind it pressing it forward. In globe, *glb*, the guttural g adds to the meaning the capacity of the throat. The feathers and wings of birds are still drier and thinner leaves. Thus, also, you pass from the lumpish grub in the earth to the airy and fluttering butterfly. The very globe continually transcends and translates itself, and becomes winged in its orbit. Even ice begins with delicate crystal leaves, as if it had flowed into moulds which the fronds of waterplants have impressed on the watery mirror. The whole tree itself is but one leaf, and rivers are still vaster leaves whose pulp is intervening earth, and towns and cities are the ova of insects in their axils. (*Walden* 206)

Thoreau's words echo Goethe's axiom that "all is leaf," a statement Goethe makes in *The Metamorphosis of Plants* (1790). Stephen Jay Gould, in his book *The Structure of Evolutionary Theory* (2002), calls the book Goethe's "most extensive study in formalism, and probably his finest contribution to science . . . For Goethe, the leaf represented an archetypal form for all plant parts growing from the central stem . . . [T]he "leaf" [of Goethe's axiom] should not be taken literally as the actual reduction of all serial diversity to the actual form of a stem leaf. . . . The

'leaf' represents an abstract generating principle, from which stem leaves depart least in actual expression" (285). For Gould, the vegetation of the plant and the assumption of its progression from cotelydon to the refinement of the flower is "the primary Western metaphor for intelligibility in any growing, or historically advancing, system" (286).

Directly following "The Garden," filled with lobed brains and vegetating labials, Johnson nods to Goethe. This time, in "Emerson on Goethe," he presents us with an excision from Emerson's chapter on Goethe in "Representative Men" (1883), then "ventilates" it in *Valley* (49) by again setting the text to his own line:

> Nature will be reported. All things are engaged in writing their history. . . . The air is full of sounds; the sky, of tokens; the ground is all memoranda and signatures; and every object covered over with hints, which speak to the intelligent. . . . Nature conspires. Whatever can be thought can be spoken, and still rises for utterance, though to rude and stammering organs. If they cannot compass it, it waits and works, until, at last, it moulds them to its perfect will, and is articulated. (747)

In this passage Emerson compares the "self-registration" of nature, of the river leaving its channel in the soil or the leaf its imprint in the dirt, to the actions of men leaving their imprint in the memory of their fellows. One sees this self-registration in the writer who strives to find the right word, and, with him, "nature conspires." Johnson stops here; Emerson continues:

> This striving after imitative expression, which one meets everywhere, is significant of the aim of nature, but is mere stenography. There are higher degrees, and nature has more splendid endowments for those whom she elects to a superior office; for the class of scholars or writers, who see connection where the multitude see fragments, and who are impelled to exhibit the facts in order, and so to supply the axis on which the frame of things turns. Nature has dearly at heart the formation of the speculative man, or scholar. It is an end never lost sight of, and is prepared in the original casting of things. He is no permissive or accidental appearance, but an organic agent, one of the estates of the realm,

> provided and prepared from of old and from everlasting, in the knitting and contexture of things. (*Essays* 747)

First Johnson frames for us a nature which expresses itself – whether in language or natural form – in units of which the leaf is fundamentally representative; then frames for us a writer who is "an organic agent" whose words, and whose structures, will themselves be a form of natural expression, hence, a form of this archetypal leaf – or, as Johnson is busy working out elsewhere – a form of the flow-er.

Thomas Pfau, an eminent twenty-first century Romanticist, recuperates Goethe from the position that he fell to under criticism's deconstructionist reign, which saw organicism dismissed for decades as unsophisticated thinking. Pfau picks up on Gould's assessment of Goethe as a formalist, and reads Goethe's botanical writing as participating in the late-eighteenth-century reappraisal of a number of key concepts, which, along with such terms as "taste," "subjectivity," "history," "form," and indeed, "life," also included the concept of *difference.* The movement was from a notion of difference as "sheer heterogeneity," where things were differentiated from one another not as individual, forms-in-themselves but as the disaggregated, static and dissimilar parts of the natural world, toward a notion more akin to differentiation, Pfau argues. In the eighteenth century, he writes, the concept of difference underwent a "revaluation in which the emergent biological sciences played a major role, the notion of difference . . . being saturated with a temporal, dynamic quality" and "serves as a conceptual tool allowing the scientific observer to trace *relations*" (5-6).

For Pfau, Goethe's work resolves a theoretical dilemma, the dilemma of "the mind/world relation since that very relation itself constitutes not a belated synthesis of heterogeneous entities but precedes all analytic or reflexive discrimination" (7). This is the same dilemma Sewell describes as postlogical thinking, as a mind trying to suture itself back into the Nature from

which it has never truly been disjunct except in language, as an attempt "to classify his own nature from within" (264). She reads Goethe as confronting the mind/world relation in his attempts both to typify the growth of plants and the "growth" of poetic genius, and it is this same relation – "man himself is nature therefore how could he abstract anything out of nature?" – that Ronald Johnson is also at work to confront in both the semantics and the formalism of his work.

Goethe resolves this dilemma, Pfau writes, not by further theoretical argument, but by "a concrete and dynamic model of what it means to be in the presence of phenomena," a model that anticipates modern phenomenology (30). This "concrete thinking," the illustrative precedent of which Pfau finds in Ovidian metamorphosis (and that we have seen in Johnson's sightings of Green Men), is for Goethe a "higher kind of knowing that can only eventuate qua 'seeing'" (6): Not to be confused with mere gazing or sense-perception, 'seeing' in the Goethean sense reappraises the modern object as phenomenon, that is, as a manifestation of life" (30).

Such seeing apprehends the "concrete, dynamic," nature of differentiated and differentiating being in a process that is itself temporal and "eventual." Goethe's model of seeing the plant as "all leaf," that is, all substratum of self-differentiating substance always in metamorphosis, foregrounds the essential incompatibility of the plant's successive emergence, both as vegetative growth and as reproduced through flowering and fruiting, with static mimetic forms of representation (38).

Johnson "sees" language in the Goethean sense, and addresses the incompatibility of its instantially static word-morphology with the flux of nature by exploring ways to reinvest print language, perceived in its instantiveness, with this same flux: "The ultimate significance of this quasi-phenomenological mode of seeing that takes shape through Goethe's writings has to do with how it reflects back to the observing intelligence its own cognate structure" (Pfau 34).

Johnson sees language as a set of objects, made by (human) objects, that itself makes objects both sensual (ideas, experiences) and real (material texts) within the ever-changing metamorphosis of objects that is Nature. This means he sees language as an outwardly visible manifestation of the relation of the real mindbody to real objects (even if Harman might argue that real objects do not enter into relation with one another). If, as Pfau argues, "Goethe's botanical theory remains groundbreaking less for what it tells us about plants than for its superior insight into all sensory experience as inherently dynamic, intelligential and profoundly intertwined with the aesthetic process of *Darstellung* [representation]" (39), we can begin to see how Johnson's fascination with the relationship of sensory experience to representation in language might return again and again, as Goethe did, to the plant as the representative model of that dynamic inner cognate structure, undifferentiated from Nature, that literal, or "scientific" language cannot adequately objectivate.

To return to Johnson's treatment of *Sunflowers*, then, we can now appreciate how he uses the visuality of concrete poetry to try to produce that moment of phenomenological appreciation, that *aperçu,*or what Kirby is calling objectivation and what Harman/Morton are calling sensual objects, that Johnson sees as his task to render. By directing the eye of the reader along a movement that mimics a tracing of the stem and leaf structure of the plant, Johnson mimics the trajectory of perception that Pfau describes as "a succession of discrete and differential perspectives registered as a continuous and evolving phenomenon" (33). Through formal play, Johnson reinvests the objectivating dimension of this seeing, what Goethe calls "concrete thinking," into the event of its reportage, by restaging (and I use the word *stage* here instead of represent to indicate the process- and performative orientation of Johnson's thinking; he knows

himself to be creating the script for an act of reading) the act of visual scanning and bringing eye motion into the awareness of the reader.

But Johnson's ambition is not simply to stage the *aperçu*, but to register this sensual object "within an observing intelligence," and suggest not merely the ontological belonging-together of observer and observed object but the attendant moment of the immanence of subject formation. The apprehension of 'all is leaf' in its unfolding requires that the subject too become self-aware of her own being-in-process, and herself as being-in-formed as her perception, should she decide to articulate it, "unfolds" itself in language. Her language, held within the "seeing" moment, is a concretion of the experienced being-togetherness of observer and observed, and an emphatic declaration not so much of the thing's existence, but of the self-awareness of the existence of the perceiver made possible by its interaction with difference.

Understanding Johnson as attending to language in a kind of suspended state of Goethe's *apercevoir,* or as trying to make the objectivating action of language noticeable in the moment of reading, can help us understand the deeper investigation of aesthetic experience at work in what might seem a whimsy of looking at letters as if they were flowering plants, that occurs in one of Johnson's later concrete works, *3 Concrete Poems. 3 Concrete Poems* is a boxed set of colored panels, that can be arranged to form the poems *Balloons For Moonless Nights, arrows like S's,* and *GsAeRcDrEeNtS*. In the clothbound booklet accompanying the panels, Johnson writes:

> Til recently, poetry, like prose, has been invisible. We can now make a line of poetry as visible as a line of trees. We may see, not through, but with the letters. (*The 't' leaves. An 'r' branches. The 'e's have annual rings. Below the snake believes it is an 's.'*) It is a magical world where all is possible. And placed properly on the page an 'I' can not merely resemble but have all the structural capacities of an 'I' beam. (n.p.)

Johnson's visionary project, as he describes it in *Balloons*, is "seeing the world in a grain of sand" – shifting his intent, it seems, from wanting to be an Adamic seer of *America* to an Adamic seer of the cosmos, an "astronaut of inner space" (as Jeff Berner's book of avant-garde manifestoes, in which Houédard's "Paradada" appeared, was called), a pursuit, which much like planting a flag on the moon, Johnson might still claim as an American accomplishment. Naming Samuel Palmer, Thoreau and Agassiz as influences, along with taking inspiration from his typewriter and from roadsigns, Johnson connects certain modes of looking (Palmer's Romantic, almost hallucinatory vision of Nature, Thoreau's botanizing, diarist observational practice and Agassiz's insistence on iterative, careful scrutiny) with the concrete mode of composition that foregrounds the print page and sees typesetting as part of compositional practice.

As Johnson talks of "thinking at the typewriter," and then, when the physical limits of the 8 1/2" x 11" page begin to constrict, he begins to "make his own letters" and "think in ink," Johnson becomes the poetypographer whose sense of graphic design can inform composition at the moment of creation. This mode of composition, where the production of sentences and their setting into type converge into the same act, anticipates the writing practice that has become commonplace since the advent of the personal computer, in which writers can have immediate control over design elements like font, kerning and layout. However in 1964, "typewriter poetry" was a specific variation of visual poetry, an avant-garde engagement with the machinic production of print products, of which Houédard, inventor of the *unfolder*, was a key proponent.

When Johnson declares his desire to "think in ink," he decides to think in the "substratum of substance" that theoretically precedes the letterform, and is the medium by which letterform takes its shape. Johnson's "ink" is Goethe's "leaf" – the material through which an abstract generating principle, that formless whiteness, becomes visible. When Johnson declares that

poetry, like prose, has been invisible, he is echoing "the old and venerable rule that the typography of books should be transparent, like a wineglass in which text is held" (Bringhurst *Surface* 11). That rule was first stated by Beatrice Warde in 1930, to which she added that it would be "mischievous to call any printed piece a work of art, because that would imply that its first purpose was to exist as an expression of beauty for its own sake and for the delectation of the senses. . . . Type well used," argued Warde, "is invisible as type, just as the perfect talking voice is the unnoticed vehicle for the transmission of words, ideas" (13).

Typewriter poems as a movement developed out of this same play with design elements, expressing, as did the *first things first manifesto* (see Poynor 1999), a resistance to engaging the functionality of the typewriter only in the service of corporate and consumerist interests. Johnson, for his part, expresses none of these political motives for his pursuit of type play. He is still focused on achieving a kind of transparency in the representation of things. What confronts Johnson when he goes to "make his own" letters, is his experience of writing as not merely of setting-into-type but as the creative process of the type-founder, or of the designer of typeface. Johnson's contemporaries in concrete were also interested in typeface design, but Johnson's Adamic sensibilities, informed by the natural-language philosophy we have just looked at, means that Johnson engages with type-design at the level of Goethe's looking: type itself is an instantiation of the "leaf", of the pure fluidity of shape or form.

Johnson's appreciation for the letter as shape must itself be understood as a stance occurring within a particular history of the letterform that Johnson, as a twentieth-century American, inherits. Robert Bringhurst, in his study of Canadian book design, writes:

> European typography was born and raised in the Renaissance, nourished in trim and rapid penstrokes made by lively, well-trained human hands – but in conquering the world,

> becoming all things to all readers, typography had lost not only its local freshness but much of its intellectual and physical vitality . . .
>
> Renaissance letterforms tend to be structures growing naturally out of the pen nib. Victorian letterforms have for the most part disintegrated into shapes. They are as a rule, allusions to structures drawn, not written. (47)

So if Johnson sets out to make his own letters based on the typeface that he encounters in twentieth-century print books, or even that he sees produced by his typewriter, Johnson is setting out to recreate, by hand, the mechanized shapes that are themselves already degradations of structures that were originally instrinsically traces of handedness. The letters Johnson creates in *Balloons* and *Signs* are the products of drawing and painting technique, not of writing, they are not forms emerging from the flat edge of a nib. Johnson's substance of the letter is an almost completely abstract fluidity that he shapes; in this he assumes a freedom of design more akin to today's designers of digital type, who are unconstrained by the dimensions of metal type in their imaginings of new letterforms, that are integrated only by scalable vectors that presume an imaginary type body. Johnson's letters are objects-objectivized; manifestations of that pure vectrality, that sizeless "shapeability" of ink.

By being less interested in letterforms as evolution of manual writing than as individuations of pure form, Johnson's Adamic vision takes up the Roman alphabet as relics of a moment of invention, of the translation of sense experience into ideogram.

By imagining the taking-shape of letters as the epigenetic emergence of leaf and branch, Johnson enters into dialogue with a long modernist conversation around the written character and the role of the poet in harnessing the natural forces at play in the formation of written language.

Johnson's leafing T suggests he looks upon the glyphs of his own language as first Ernest Fenollosa, and subsequently Pound, looked at the Chinese character:

> Chinese notation is something much more than arbitrary symbols. It is based on a vivid shorthand picture of the operations of nature. (Fenollosa 6)

> One of the most interesting facts about the Chinese language is that in it we can see, not only the forms of the sentences, but literally the parts of speech growing up, budding forth from one another. Like nature, the Chinese words are alive and plastic, because thing and action are not formally separated. . . . the one necessity, even in our own poetry, is to keep words as flexible as possible, as full of the sap of nature (17)

> . . .the single upright line is like the growing trunk-line of the tree sign (60)

Fenollosa's idea was that in the Chinese ideogram, a Natural connection between object and sign was possible, and was preserved in the Chinese script in a manner that phonetic language could not achieve. The characters, to Fenollosa, were little pictures "organized by 'natural suggestion.'" Pound's 1936 preface to *The Chinese Written Character* declares ideogram to be the basis of a new universal language, "more basic than Ogden's basic English and more reliable" (Saussy 7). Fenollosa saw language itself as "natural poetry" and words as themselves "original metaphors" (back to the problem again of what to call the form-taking process of the sensual object that I have been calling objectivation) (15).

Pound's essay is still considered a major document in American poetics not so much for its accuracy concerning Chinese characters but for its "lasting appeal as a manifesto for the new poetics of the twentieth century" (1). Fenollosa gives us written language still bearing the trace of its relation to nature and bearing the capacity to present natural relations in ways that phonetic alphabets and oral language cannot; Pound finds in the ideogram a model of "valid thinking" that

takes place in concrete images, not in descriptions of feeling. We see in the idea of the Chinese character having a pregnant, charged and luminous energy, in the idea of their superior capacity to "show forth the motive and vital forces" (9) an anticipation of Charles Olson's insistence on "the kinetics of the thing . . . a poem is energy transferred" (n.p.). We hear in the description of the Chinese character as "budding forth" the echoes of Kraitsir's vegetating natural language and Thoreau's earth expressing itself in lobes, now given to the line of character rather than the flow of breath. Finally the Poundian search "for a functional poetic framework based on universal signs" finds its way into the writing of Haroldo de Campos, and his *Pilot Plan for Concrete Poetry.* As De Campos puts it:

> concrete poetry: product of a critical evolution of forms. considering the historical cycle of verse (rhythmic-formal unit) to be closed, concrete poetry begins by taking knowledge of graphic space as structural agent. space qualified: spatio-temporal structure, instead of solely temporistic-linear development. from there the importance of the idea of the ideogram, from its general sense of spatial or visual syntax to the specific sense (fenollosa/pound) of method of composition based on direct juxtaposition – analogical, not logic-discursive – from elements. (217)

Further, de Campos points to the ideogram as an "appeal to non-verbal communication. the concrete poem communicates its proper structure: structure-content." In its early stages, concrete poetry will take shape as a "movement imitating natural appearance (motion); organic form and phenomenology of composition prevail," later it will resolve itself into "pure structural movement, at this phase, geometric form and mathematics of composition . . . prevail" (219).

In Olson, we see the projective movement of the circulation of pumped blood and percussive exhale of the breath as Olson's basic unit of the syllable: "For from the root out, from all over the place, the syllable comes, the figures of the dance: "'Is' comes from the Aryan root, as, to breathe. The English 'not' equals the Sanscrit na, which may come from the root na, to be

lost, to perish. ‘Be’ is from bhu, to grow.” (*Selected* 18) Olson makes "the push" of the line analogous to the budding and growth of plants, suggesting that the same vegetative force that produces new words off the linguistic root (syllable) should push through to form the LINE.

> It is my impression that all parts of speech suddenly, in composition by field, are fresh for both sound and percussive use, spring up like unknown, unnamed vegetables in the patch, when you work it, come spring . . . what Fenollosa is so right about, in syntax, [is] the sentence as first act of nature, as lightning, as passage of force from subject to object. (21)

In this essay Olson clarifies his position in relation to the Pound-Williams-descended "objectivism," which he sees as a quarrel with subjectivism and the tradition of lyric subjectivity, naming his stance an "objectism" that describes

> the kind of relation of man to experience which a poet might state as the necessity of a line or a work to be as wood is, to be as clean as wood is as it issues from the hand of nature, to be as shaped as wood can be when a man has had his hand to it. Objectism is the getting rid of the lyrical interference of the individual as ego, of the “subject” and his soul, that peculiar presumption by which western man has interposed himself between what he is as a creature of nature (with certain instructions to carry out) and those other creations of nature which we may, with no derogation, call objects. For a man is himself an object . . . (24)

Olson's insistence that man is shaped by a larger force, which, if he listens "through himself" will lead him to find that "his shapes will make their own way" sounds much like the sentiment Johnson would locate as originating in Emerson's discussion of Goethe, with whom nature conspired to mould words to its perfect will.

What is the difference between Johnson's conceptually leafing T and, say, the leafing "O" that gives the Whole Foods logo its organic feel? The Whole Foods logo in fact works with the logic that puts print on the side of a Nature/civilization divide that the addition of a leaf 's non-lettristic

shape balances; a fig leaf on the knowledge of corporate communicative power. Where it begins to approach Johnson's play is in the leaf's transformation of the oblong "O" into the body of a round fruit: Johnson wishes to suggest that organic materialism in the letter without adorning it. The shape of the letter is the fruit of the formless-taking-shape, the fruit of objectivation, the fruit of cerebral process. Rather than reshaping the text itself into the plant form, as Reinhard Döhl did his *Apfel,* Johnson looks on the letter with a object-oriented gaze that "reanimates" it as a trace of gesture, as an artifact of Nature's self-registration, made of that pure substance, or pure Nature, Goethe called "leaf."

Johnson's letters, lined up, are a sequence of leafings. His poetic line, then, unfolds as Goethe's leaf does, and as Fenollosa insists the Chinese line does. Johnson's words "vegetate" off their root syllables in the sequential moments of reading: as Johnson conflates the "vegetation" of language change over generations and the unfolding structurality of the read grammars, the unfolding structurality of the knowledge, in the reader's network of eye and brain. At any moment, even inside a word, the branch might shoot off in another direction, as the strange neologisms that enter Johnson's work ("The voice of flame shake wild voice from the grave: down to the *remembranch* of morning" ["BEAM 20," my emphasis]) after this concrete period will constantly remind us.

In *3 Concrete Poems* we see the representation of the movement of Johnson's vegetation most explicitly in *arrows like S's* (see Figure 2.18). The first word, the first linguistic "sign," is presented with arrows indicating the kind of stasis which the word-as-unified-sign inhabits, its tensions pulling in all directions, its self-presentation balanced, a *Darstellung* which pleases aesthetically but contains a kind of error, a fault of habitual perception, a *sin,* perhaps, against the

forces obscured in the apprehension of words as independent of nature. One line in "sail" moves freely in the direction of the force, or "wind," of readerly visual tracking; the word seems to catch the force within itself, the two-dimensionality of the plane on which the word sits like a sail that could, at any moment, be lifted at an angle that would offer resistance to the seemingly seamless movement of reading. The line in "seen" that draws an arrow backward does offer this resistance to the left-to-right movement of the seeing of the word, creating an experience of re-seeing that allows the form of the word to embody and present its "seenness." Finally, the arrows of "soil" follow the vectors of the letters' lines as they would be traced if handwritten, offering again a balance of forces but this time this balance is more earthly, more bodily – grounded, perhaps, by the inclusion within its euclidian logic the centrifugal emanation of the O, which reminds the eye of other dimensions existing simultaneously with the two-dimensional representational world of the visual plane.

Johnson develops this attention to the movement of the eye along the lines of the letters in *GsAeRcDrEeNtS* (see Figure 2.19). In each of "mari-/gold/-fish," "gorse/goose/rose," "aure/ori-ole," and "dog/wood," the eye is led to run through the line suggested by the word and then to bracket out recognizeable forms. The eye must re-read "gold" in order to apprehend the goldfish; the *r* and *o* of gorse and goose must be re-read to find the rose; the movement toward rereading in the aureole and oriole creates a particularly organic structure as *o* and *au*, and *i* and *e*, are presented as modular variations on the divine and the Natural; the single red stroke in dogwood suggests a handle: suggesting both that the word dogwood, the tool of the word, is as material as its namesake, and evoking the projective woodiness of Olson's ideal poem. In any case, what is "secret" about these GARDENS is that unconscious movement of the eye, brought into self-awareness here, which itself allows the self- awareness of the mind, that plastic colorlessness, as

it extends itself along the furrows of the letter lines. The mind looks for enlightenment in its scan of the text and creates itself as it does so, epigenetically, like a plant tip looking for light.

The secret that Johnson wishes to expose is objectivation, the animate process at work in reading, and make of it a felt interactivity that usually disappears in the passive reception of information that is the ideal of an "invisible" type. In *The Spell of the Sensuous,* environmentalist and philosopher David Abram, in an argument similar to the primitivism of Fenollosa or even Mencken, describes this interactivity as a stance available, and indeed original, to us as humans in relation to our lived environment, but one from which we are deeply alienated. Abram argues that an important cause of our alienation from our lived environment is precisely the relation of perception to language that is lost to bodies cultured by print literature rather than oral tradition.

The Western world, Abram argues, now attends to the world through "a style of awareness that disparages sensorial reality" (94). Contemporary modernity is nearly synonymous with "an intellectual distance from the non-human environment" that is born, in part, from our sustained dependence on "the strange and potent technology we have come to call the alphabet" (95).

Abram recounts the development of human writing systems from their beginnings as "pictographic" writing, citing the petroglyphs of pre-Columbian North America as well as Egyptian hieroglyphics. Like Fenollosa, Abram also includes Chinese ideograms in this category of writing that "continually reminds the reading body of its inherence in a more-than-human field of meanings" (97). Abram argues that the Semitic scribes who, recognizing the syllabic quality of their language, created a system by which letters or characters stood for consonants, were the first to turn writing away from its relatively direct representational form to a form that represented a sound, in essence turning writing to a representation of a representation. Though at

first, an alphabet of only consonants assumed the living breath of the speaker would animate the language with the performance, the interpretative act, of vowelling the words. Eventually, argues Abram, the vowels too were notated and the participation of the speaker in the interpretation of the mark diminished further. The self-presentation of Natural forms to the senses, the visual, tonal and textural "speech" of Natural objects to the receptive surfaces of the human body has been silenced by the written words that we allow to name and contain the knowledge of these non-human beings.

> [A]nimism was never, in truth, left behind. The participatory proclivity of the sense was simply transferred from the depths of the surrounding life world to the visible letters of the alphabet. Only by concentrating the synaesthetic magic of the sense upon the written letters could these letters begin to come alive and speak. "Written words," says Socrates, "seem to talk to you as though they were intelligent. . ." Indeed, today it is virtually impossible for us to look at a printed word *without* seeing, or rather hearing, what "it says." (Abram 138)

Johnson's project to make letters "visible" is a project to bring attention back to these characters as forms we have been seeing, or relating, "through" rather than "with." To see things "with" the letters, rather than through them – could that be an urge to redress the loss of intimate reciprocality with the world around us that Abram correlates to the ascent of print culture?

> Johnson is the product of a tradition which makes it "the poet's business" to name the animals and plants – to impose a new, American order on these non-human forms – rather than hear the names the forms speak, or have spoken, for themselves. We have seen how when Johnson attends to his immediate world through Orphic attention, the indigenous names of the Kansa present themselves. The shamanic, or, as Abram argues, the phenomenological attention to the world (Abram, like Morton and Harman, looks to the phenomenologists to describe the kind of object-recognizing-object attention that they

> feel has potential to realize the ecological thought; though Abram looks to Merleau-Ponty where Morton and Harman look to Husserl) that might reacclimatize our print-cultured consciousness is, for Johnson and perhaps for most Anglophone modernists of his day, the responsiveness of the visionary *poet*; of his craft, his tradition and *his* genius; not the genius of his place speaking through him. The reacclimatization of consciousness through a sustained, phenomenological attention is indeed the goal, but this consciousness has been named Adamic or Orphic, not indigenous. Johnson's fascination with the materiality of consciousness means that whatever genius might be attributed to him through his poetic achievement must be constantly displaced onto a body, a biological system of eyes, ears, nerves and breath, a system also understood by Johnson as an object, that is, as physically shaped (as light shapes the cornea of the eye and corona of the flower) by its interaction with the non-human objects it encounters.

Johnson's project does not simply point to the visuality of letters as another dimension of signification to be exploited as a space in which a poet might cram extra meaning, as in the logic of the corporate logo. Johnson's work points to the experience of reading as visual, synaesthetic and dynamic. His interest in representation is an interest in re-objectivation: when he finds that the 8 1/2" x 11" page is too big, or too small, for the way he wishes to re-objectivate an ant or a barn, he searches for a poetic mode that moves beyond treating the page as a transparent vehicle for representation.

> Numerous writers from various disciplines have emphasized that in seeking to understand our own development as mental, moral and attentive beings, the manner in which we learn and keep information about ourselves is as important as the information itself. David Abram writes that "the shapes of our consciousness . . . [shift] in tandem with the

technologies that engage our senses" (115). Katherine Hayles, a professor of English and design, writes of the fact that the metaphors produced by a robot interacting with its surrounding world suggest, to a human ear, a much different sense of relatedness than is produced by a print book full of metaphors that relate word-to-word, and comments that "to change the physical form of the artifact is not merely to change the act of reading (although that too has consequences the importance of which we are only beginning to recognize) but profoundly to transform the metaphoric network structuring the relation of word to world" (23). Maryanne Wolf, a developmental psychologist and neuroscientist, believes that human beings were never born to read, and that this technology changed the very organization of man's brain and altered the intellectual evolution of the species. She writes: "We are not only what we read . . . we are how we read" (214, 220). Johnson's concrete reanimation of letters first intervenes in readerly reception, inviting the reader to understand language as objectivating forms, but as his poetics progress, he becomes more interested in using language for its objectivating potentials. After his period of experimenting in concrete broadsides and panels, Johnson settles back into a more traditional lining, having changed his understanding of how language acts on a mind.

Ronald Johnson's project to render letters and the poetic line as "branching" and "leafing" is not simply to equate the aesthetic pleasure of contemplating a flower or a tree as an aesthetic object (in a Western European tradition of aesthetics) with the new, previously unconsidered pleasure of looking at the letterform. By tying a Transcendental tradition of aethestic contemplation back to an account of phenomenological perception and naming, and to an ontology long disparaged by deconstructive criticism as naïve *Naturphilosophie*, Johnson reframes a tradition of looking at plants and writing about them, a practice that stretches back

well before the existence of modern literary and scientific textual genres, as a genealogy of systems of human signification.

Further, Johnson sets up his letters and his poetic line to be experienced as emergent phenomena, to be considered in relation to Natural forms, rather than simply as rational representations of Natural form. He sets up his subsequent poems to be read as *objects,* but not as static objects but as objects always changing, as *comings-into-being,* emergent concretions that index sense perception, rather than rational arguments *or* expressions of an integrated self. It is with this orientation to the line and letter, and the potentials for what Hayles calls the *material metaphor*, that I now turn to consider Johnson's major work, *ARK*.

Figures 2.1, 2.2, 2.3

From *Io and The Ox-Eye Daisy, POTH* 19, c1964.

Image by Sonnet L'Abbé: photograph of print material copied in typescript by Ronald Johnson, "Collected Early and Short Poems." Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.4

"A Bit of Cheeky, Déclassé West Riding Gardenage." by Jonathan Williams.From *Amen / Huzza / Selah* (1960)

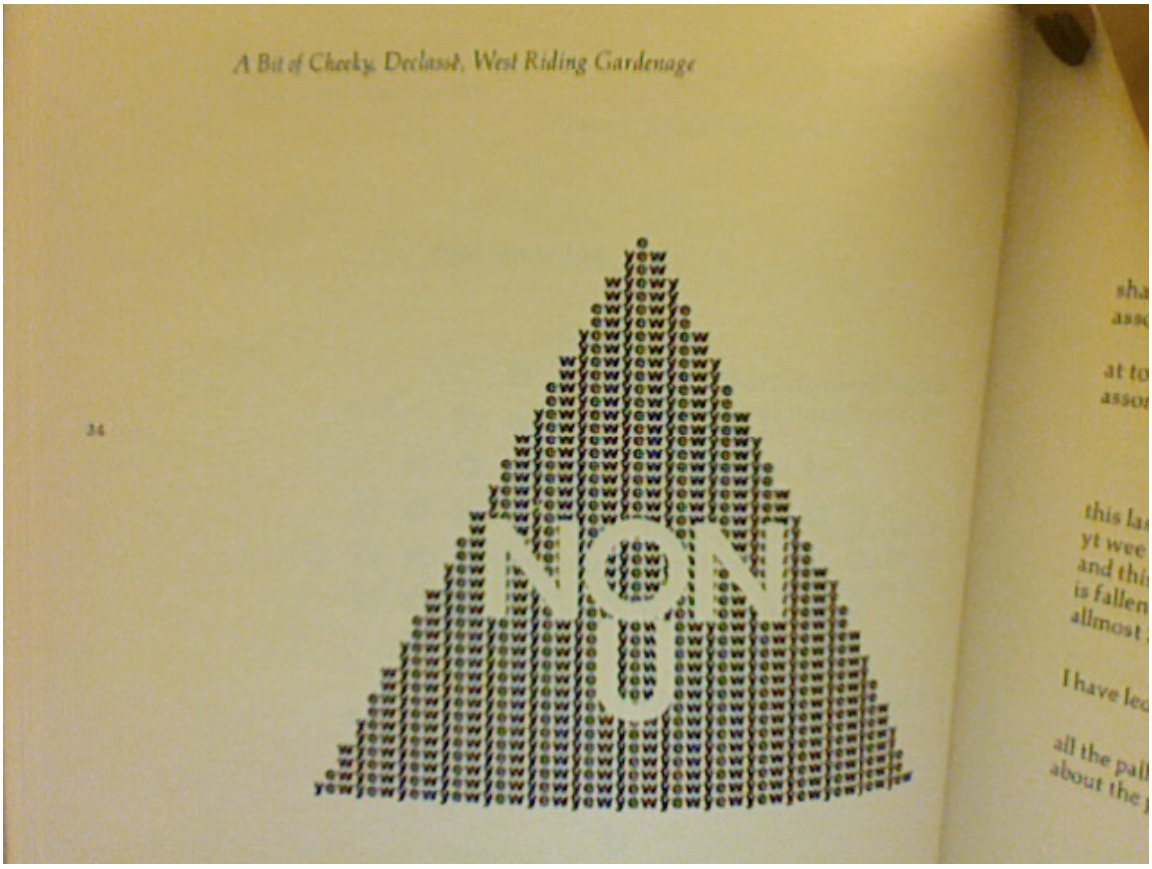


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.5

"Two Typiary Chops." by Jonathan Williams.
From *Amen / Huzza / Selah* (1960)

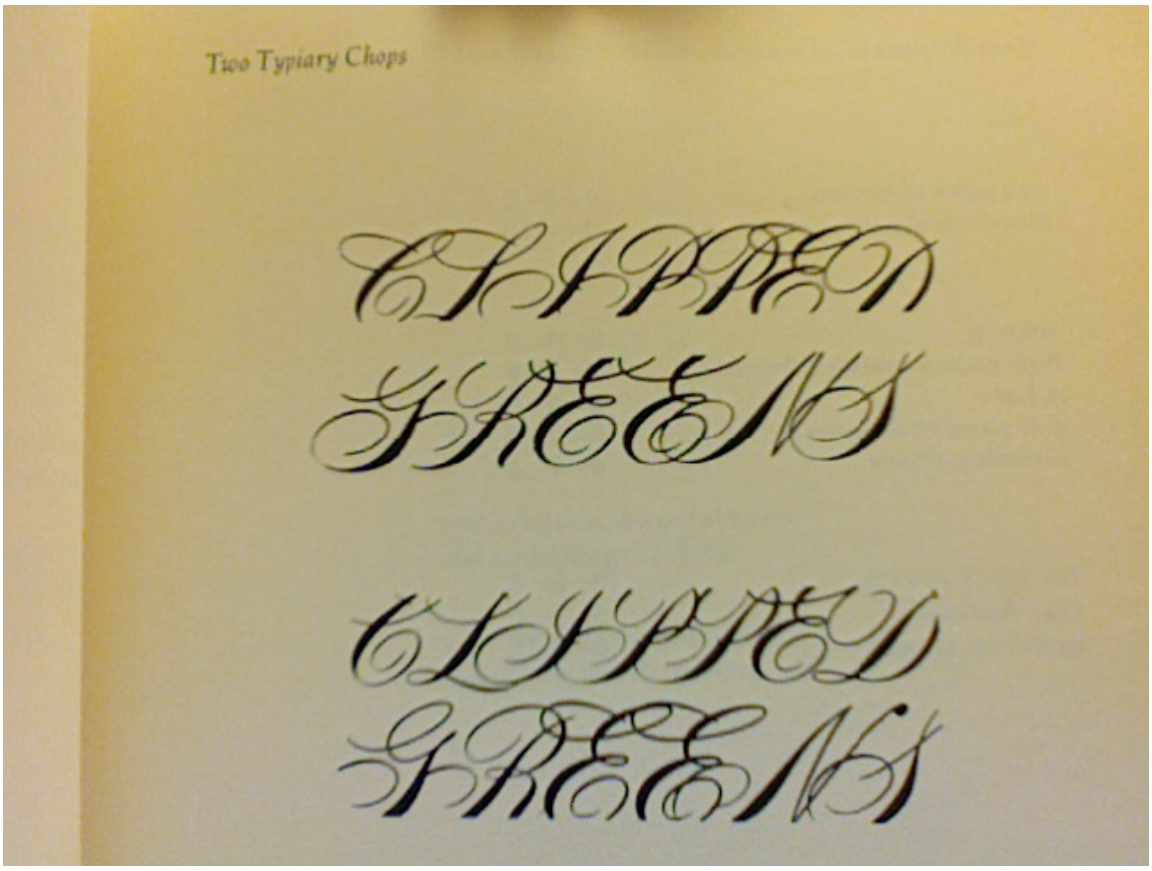


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.6

From *Gorse, Goose, Rose* (1966).
by Ronald Johnson.

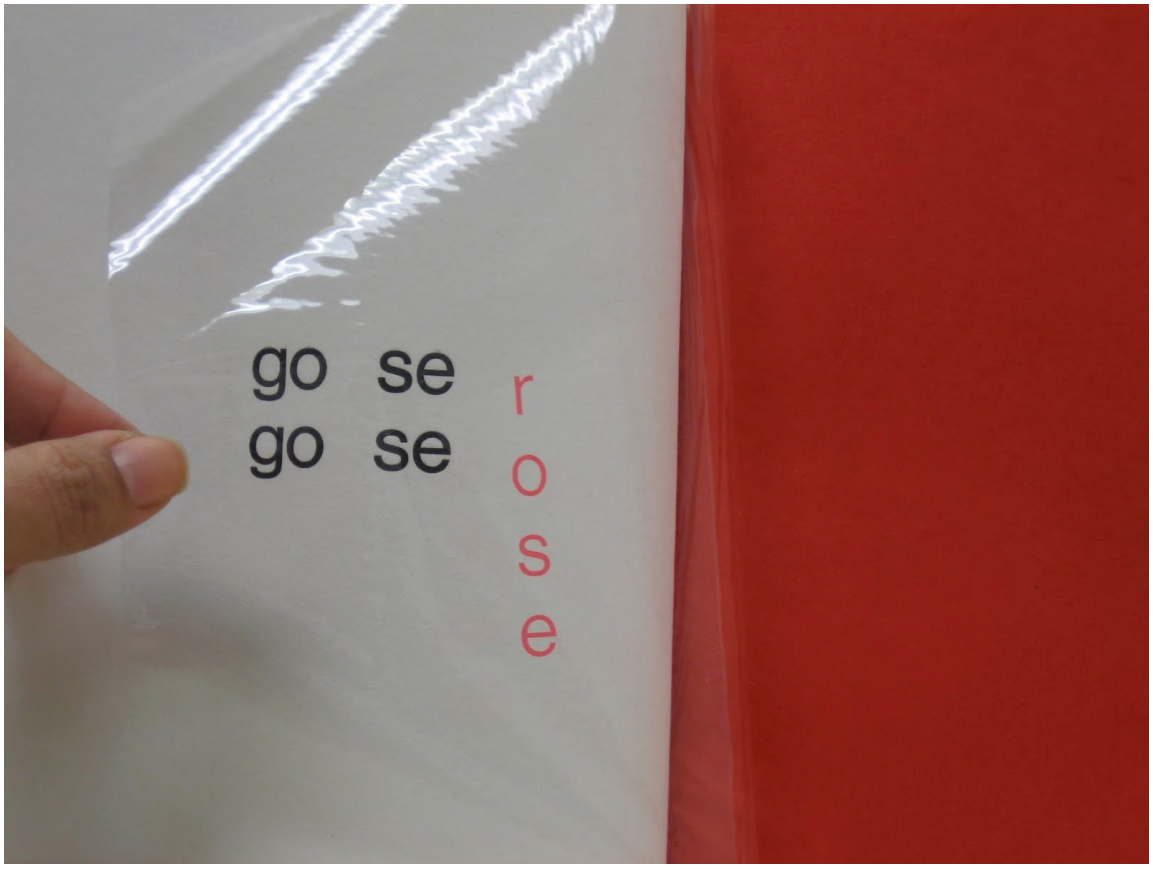


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.7

From *Gorse, Goose, Rose* (1966).
by Ronald Johnson.

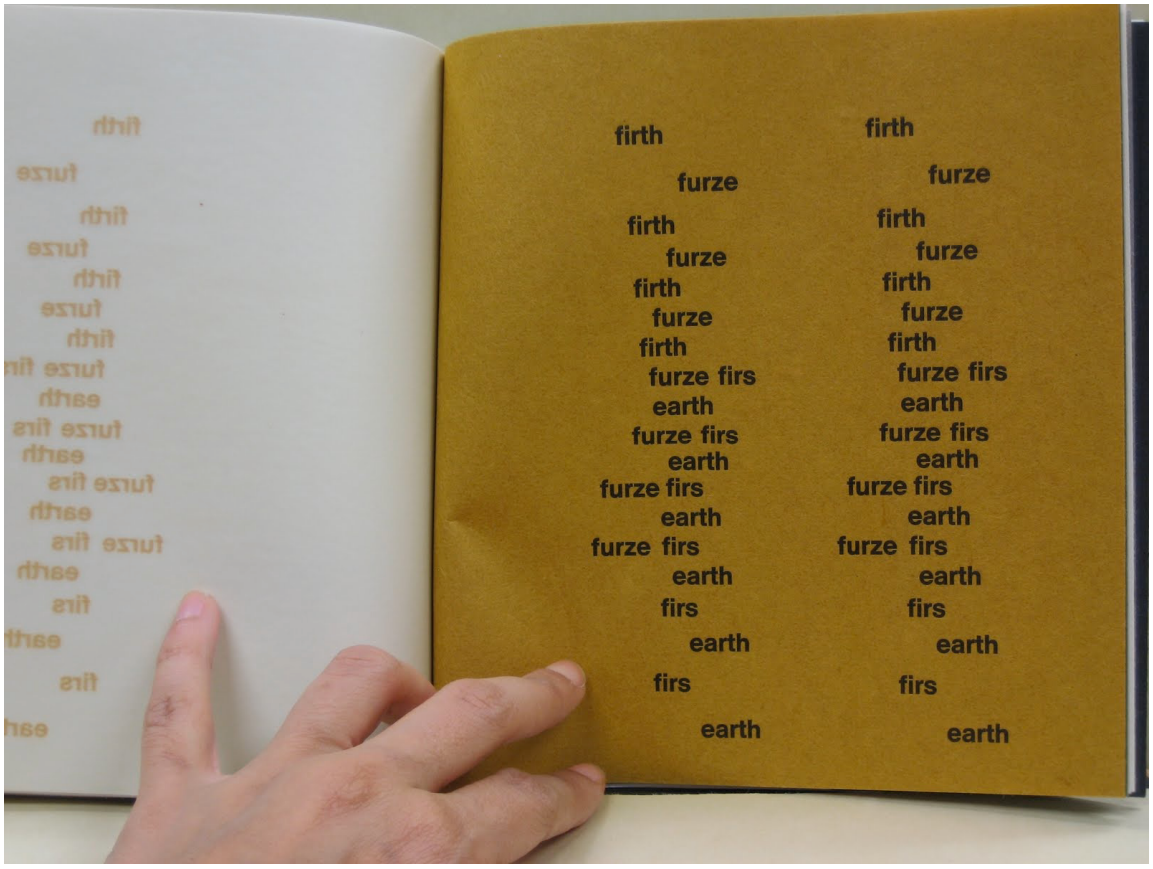


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.8

From *Gorse, Goose, Rose* (1966).
by Ronald Johnson.

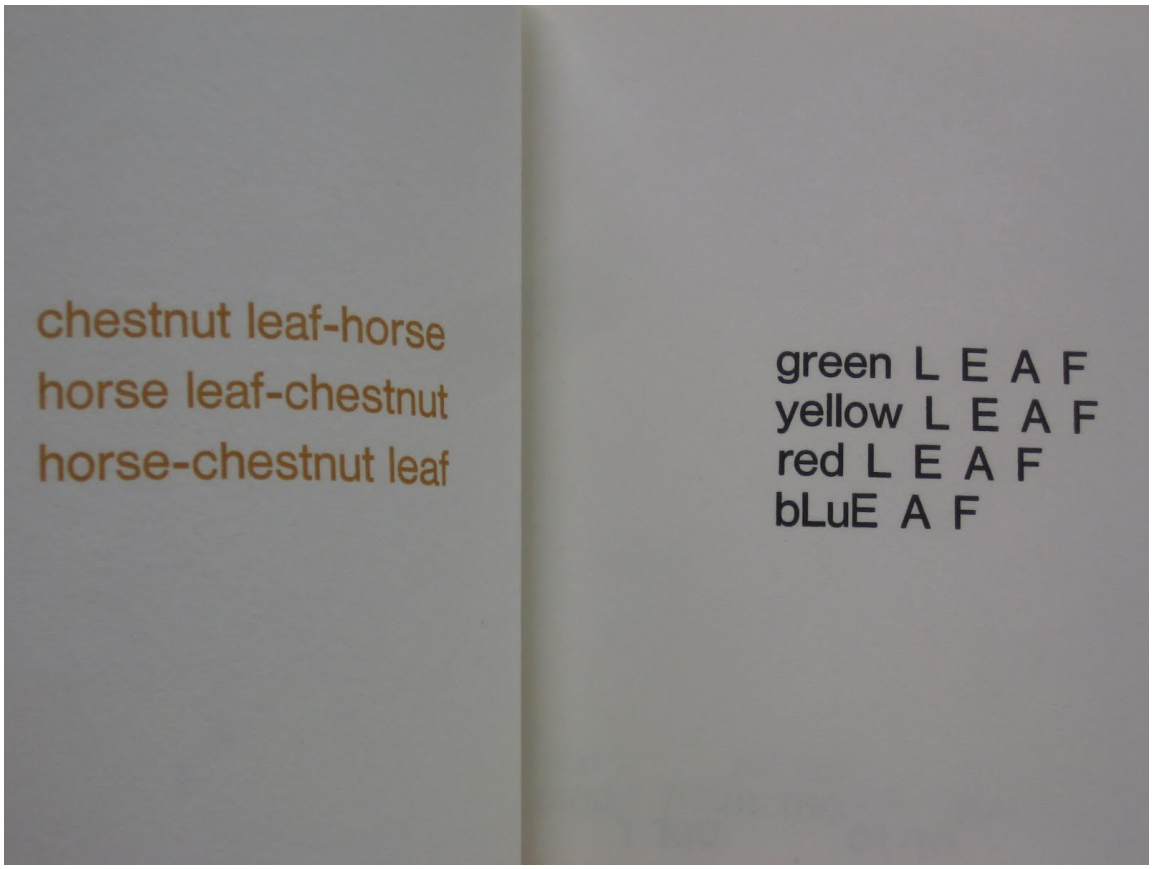


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.9

"die blume" (1966).
by Gerhard Rühm
in Mary Ellen Solt's *Concrete Poetry: A World View* (1970)

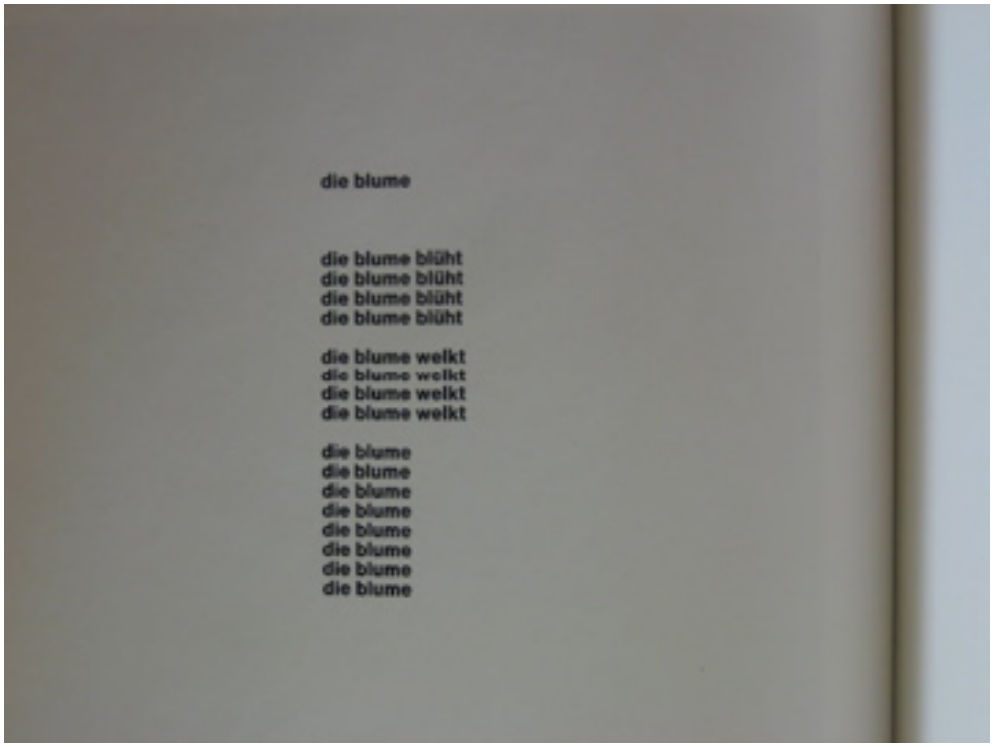


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.10

"wild cantabile" (1963)
from *Flowers in Concrete* (1966) by Mary Ellen Solt
in Mary Ellen Solt's *Concrete Poetry: A World View* (1970)

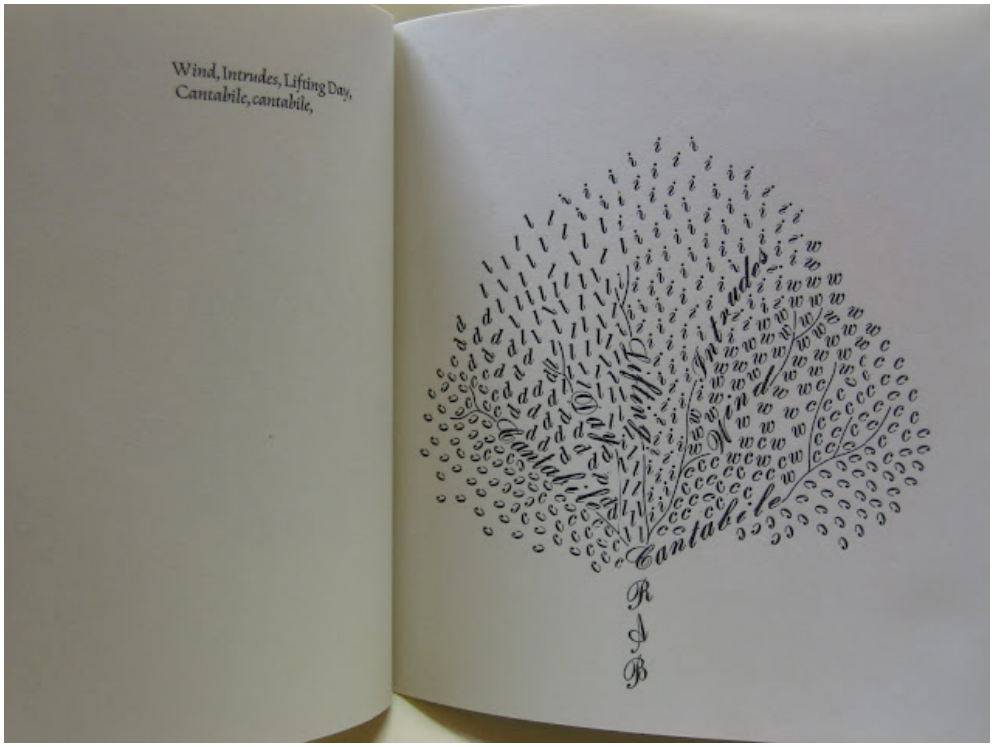


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.11

"lobelia" (1964)
from *Flowers in Concrete* (1966) by Mary Ellen Solt
in Mary Ellen Solt's *Concrete Poetry: A World View* (1970)

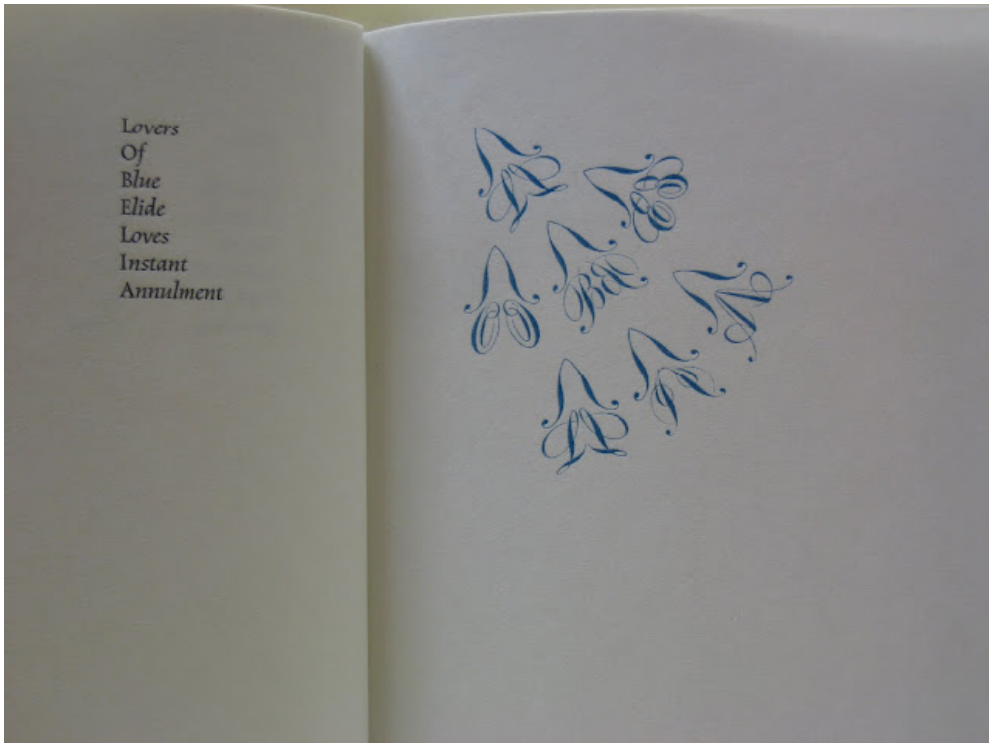


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.12

"a rose is everywhere" (1964).
by b.p. nichol
in Mary Ellen Solt's *Concrete Poetry: A World View* (1970)

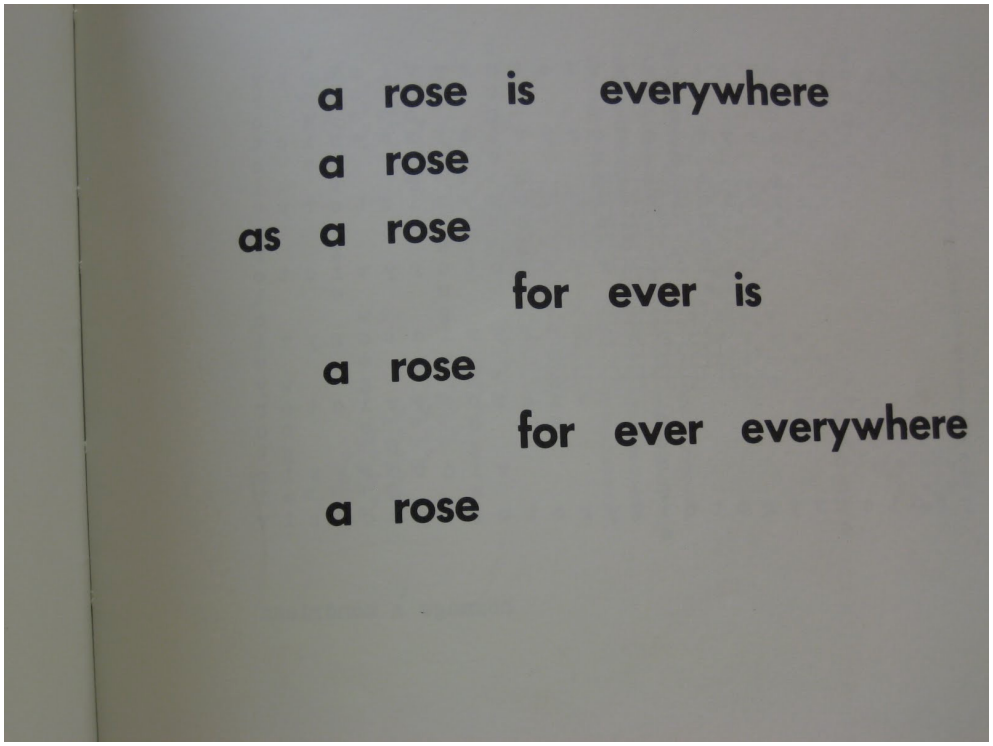
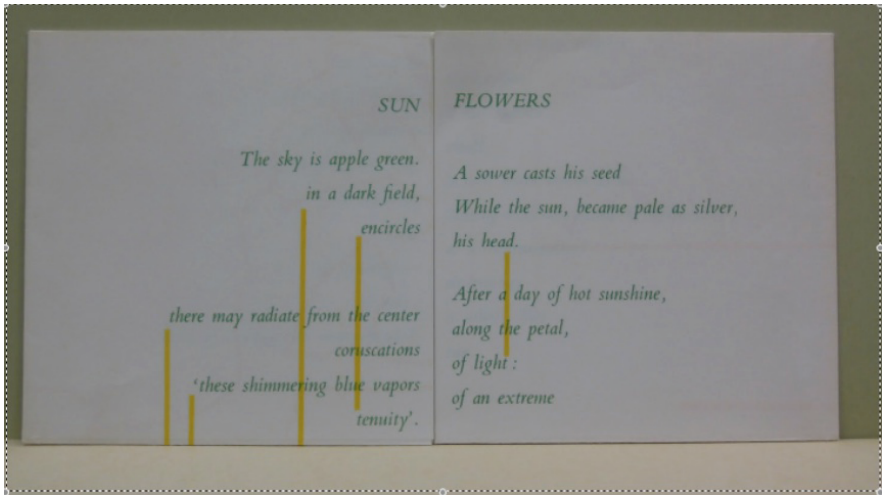


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.13

Sun Flowers by Ronald Johnson (1966).



SUN

The sky is apple green.
in a dark field,
encircles

there may radiate from the center
coruscations
'these shimmering blue vapors
tenuity'.

FLOWERS

A sower casts his seed
While the sun, became pale as silver,
his head.

After a day of hot sunshine,
along the petal,
of light :
of an extreme

Image by Sonnet L'Abbé: photograph of print material. Statement of Use: These materials are included under the fair use exemption and are restricted from further use.

Figure 2.14

Sun Flowers by Ronald Johnson (1966).

Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.15

Sun Flowers by Ronald Johnson (1966).

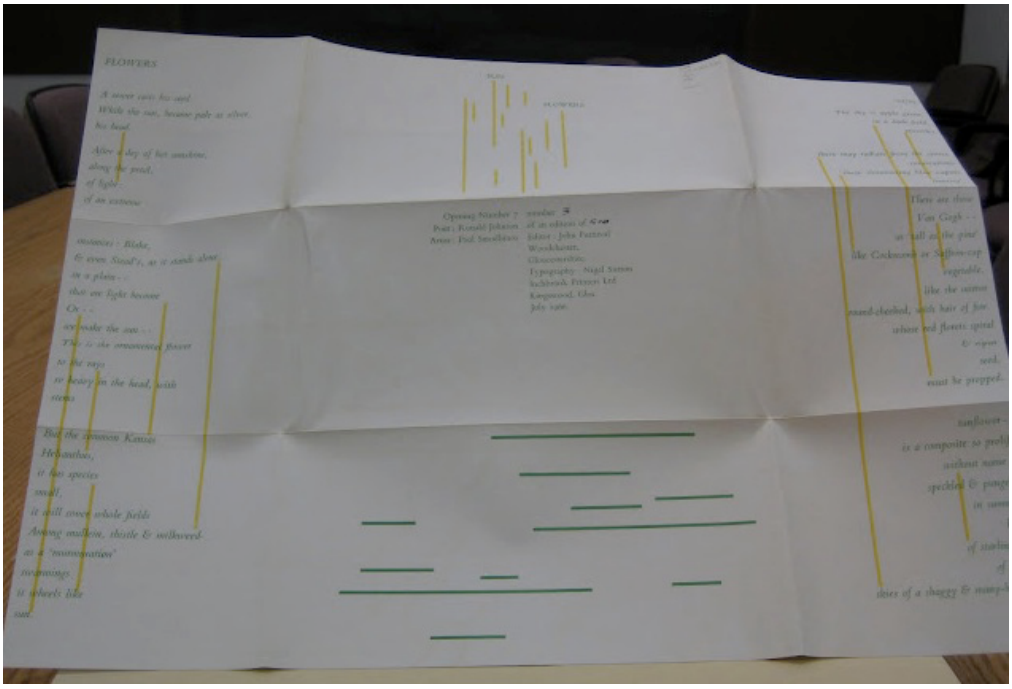


Image by Sonnet L'Abbé: photograph of print material. Statement of Use: These materials are included under the fair use exemption and are restricted from further use.

Figure 2.16

Reading 1 by Ronald Johnson (1966).

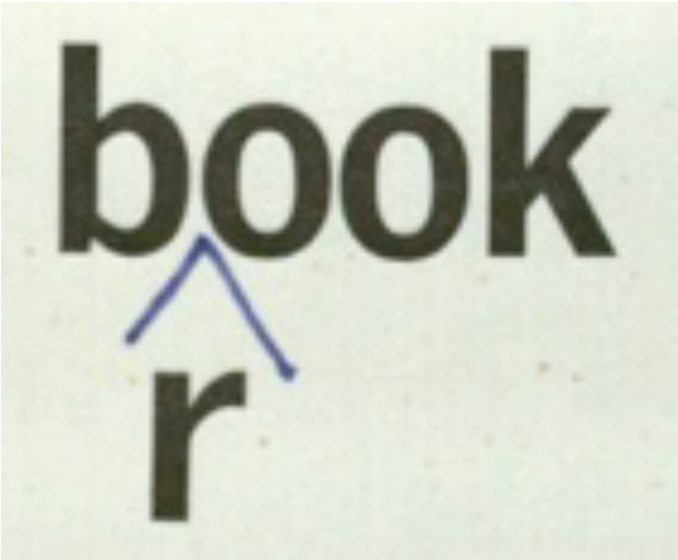


Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.17

Reading 2 by Ronald Johnson (1966).

Image by Sonnet L'Abbé: photograph of print material. Statement of Use:
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.18

““Arrows like S’s”
from *Balloons for Moonless Nights, Arrows like S's, GsAeRcDrEeNtS; 3 Concrete Poems* (1968).

Image courtesy Ronald Johnson Collection, Department of Special Collections,
Call Number: H155, Kenneth Spencer Research Library,
University of Kansas Libraries, Lawrence, Kansas, USA.
This material may be protected by copyright law (Title 17, U.S. Code).
These materials are included under the fair use exemption and are restricted from further use.

Figure 2.19

"GsAeRcDrEeNtS"
from *Balloons for Moonless Nights, Arrows like S's, GsAeRcDrEeNtS; 3 Concrete Poems* (1968).

Image courtesy Ronald Johnson Collection, Department of Special Collections,
Call Number: H155, Kenneth Spencer Research Library,
University of Kansas Libraries, Lawrence, Kansas, USA.
This material may be protected by copyright law (Title 17, U.S. Code).
These materials are included under the fair use exemption and are restricted from further use.

CHAPTER THREE
ARK: A GARDENING OF THE BRAIN

Come, eyes, see more than you see!

For the world within and the outer world

rejoice as one. The seminal brain

contains the lineaments of eternity.

. . .

For the flower of nerves and

tissue in the skull

calls, O messengers of the boundaries,

eyes of every cell, touch, touch,

complete me such a world as I contain

- *Robert Duncan, "Two Dicta of William Blake," 1961*

Introduction

In the last chapter, I argued that Johnson's poetic line, read through the lens of twentieth century concrete poetics and a collage practice that accesses a history of botanical metaphorics in various discourses, can be "read" as a biomorphic, material object. Johnson's work so far has been presented as a progressive investigation of the relation between material senses, material text and

material world. *ARK*[5] is the major statement coming out of that investigation, the magnum opus in Johnson's Orphic, quest to embody (by becoming, through his poetic practice, the voice of Nature) and to represent (by making a new object) Natural seeing itself. In *ARK,* Johnson returns to a more Zukofskian objectivist-inspired approach, which insists on the object-ness of both the poetic text and poet's body, to try to present the cosmos with the poet considering himself in it. The poet in *ARK* is not at the center of the known cosmos but is at the center of its consideration here; a cosmos where both poet and poetic speech are actively changing shape within Nature's constant metamorphosis. In this pursuit Johnson returns to the plant object as the Goethean *ur*-form of Nature, embodying both developmental change and ideational stasis, to figure *thinking* in both its ideational object forms as language, image or syntactic structure, and in its material object form as a chemically charged, neuronally networked brain.

The main metaphors that Johnson uses when speaking in published interviews to describe *ARK* are architectural and musical; critical writing on *ARK* that follows this lead and foregrounds its structurality has focused on describing the *spaces* constructed by Johnson's architectures. But one of Johnson's main tropes for his poetics is gardening, and *ARK* has yet to be read in light of it. While *ARK*'s gardening tropes are clearly engaged in a discourse of utopian vision and what Josh Corey has called an "avant-pastoralism," I am interested in how Johnson's gardening metaphors trope his understanding of the dualities of poetic language: for example, the play of spontaneity and seeming self-building of poetic creation that complements its conscious construction, or in the dual perception enacted by metaphor of differentiation and identification. I am particularly interested in parsing one of Johnson's most famous statements on his poetics, the

[5] *ARK* is an unpaginated book-length work in three 33-segment sections, with 99 sections in total. The first sections are usually titled "BEAM 1," "BEAM 2," etc. In the second section, called "Spires," each segment is titled "ARK 51," "ARK 60," and so on; the third section appends "Arches" to the titles, such that "ARK 67 is also "Arches I," continuing in this fashion until the last poem of the book, "ARK 99, Arches XXXIII." I will cite the segment title for quotations from ARK without including "n.p." each time; the sequentiality of the titles does make the quotations easy to locate in the text.

first part of which has received ample attention: "To do as Adam did . . .," focusing on its conclusion "and build a Garden of the brain" ("BEAM 30, The Garden").

In this chapter I look at Johnson's statements describing his intentions in *ARK* and attempt to reconcile his architectural metaphors for his poetics with the gardening metaphors he uses for the same project, by locating the 'ground' of each of these creative practices as the-mind-materially-seated, which involves a significant engagement with the brain as a phenomenal object. I suggest that *ARK* is the realization of an intention that Johnson resorted to at least three major statements to articulate: an intention expressed variously as a desire to build an architecture of the imagination, a desire to map the mind-in-Nature, and an Adamic quest to name the world into a new order as "to build a garden of the brain." These various expressions resolve themselves quite easily *if* one understands the brain as contemporary neuroscientists do. Once Johnson's project in *ARK* is understood in hindsight as activity aimed at a neurogenesis, it seems that his "prescience" in fact owes itself to a logic of metaphor consistent in many ways with contemporary theories of embodied cognition.

Understanding *ARK* as Orphic mapping of cosmos, mapping of mind

In *ARK,* Johnson aims to construct a singular vision of the universe, emulating forebear Emerson and older peer Robert Duncan as "dreamers of the cosmos," and Ezra Pound in his attempt to "make it [all] cohere." But undergirding his modernist aspirations to make a "big American poem" is a neo-Romantic understanding of the relation of mind to world. As Mark Scroggins puts it, "throughout [the Foundations] is the underlying theme of Wordsworth's *Prelude*, that the human sensorium is 'exquisitely fitted' to the world it inhabits, or to paraphrase Johnson, that the sensing human being is itself an integral 'mode' of the breathtaking complex system it inhabits

and senses" ("Notes" 20). Emerson's description in *Nature* of a poet as someone through whom "the currents of the Universal Being circulate" (qtd in Selinger "Important" 20), and R. A. Yoder's description of Emerson as having "discovered the reconciliation of mind and Nature in the local equilibriums that words, acting like organic clusters of matter, can achieve" (196) gives us an idea of how Johnson's *mappemunde* can also be read as a *mappe* "mind."

Burt Kimmelman has described *ARK* as a kind of poetic quest to state a grand "theory of everything," the theory that would unify Newtonian physics with the quantum, that is, reconcile the Newtonian physics of the stars and spheres and visible world with the strange behaviour of the subatomic world. He argues that Johnson's verse "can be read as a kind of mathematics that would have to be pursued in order to hold the universe in a single expression" (424). Kimmelman reads Johnson as Zukofsky, one of Johnson's most important influences for *ARK*, liked to be read: "just read the words. This activity is a kind of mathematics but more sensuous, and it has little to do with learning, it has something to do with structure" (*Prepositions* 24). When Johnson began the work, he wrote to Jonathan Williams about his plan to unite both concrete and lyric modes, and the integration of the micro and macro worlds, noting that his aim to map the universe (he uses Olson's term, *mappemunde*) is a pursuit of *structure* and is, at the same time, an exploration of the outer limits of mental apprehension:

> I have started the great opus-um — to be called WOR(L)DS. I finally got where I could put the whole shebang together: concrete, rhyme (The Imaginary Menagerie, etc.), Natchur & micromacrocosm at once. It will be the next twenty or so year's labor, as *Maximus* or *The Cantos*, but will, I suppose, turn out being nearer the Facteur Cheval. . . . You'll dig that it's about the structure of the Universe including the jumping-off places at galactic and mind's edge. A real mappemunde. Like does THE REAL really end out the window there in a clump of eucalyptus or not? It is to be the first epic without history. Wow. (Letter to Jonathan June 19).

Kimmelman notes:

> An important ancillary aspect of the grand theory problem is that it, should it ever be discovered, would have to be purely mathematical; it would reside beyond the reach of ordinary language and its attendant concepts. For Johnson, poetic mode is a reflection of the epistemology implicit in any such mathematics (424).

We have already seen Johnson use the mathematics of Natural forms to shape the form of his poetry in *Sunflowers*, where he gave his poem the same number of lines as the mature sunflower has leaves. Now Johnson proposes to unfold a structure analogous to both universe and mind, which according to Kimmelman, would necessarily be of the same conceptual frame as mathematics – of ratio, scale and the iterative generation of structure through algorithm.

In its early stage, *ARK* is called *Wor(l)ds:* Johnson suggests from the get-go that the attempt is not to discover a singular world, but a relation of multiple possibilities. The word "wor(l)d" shows up in a draft of Johnson's poem to Lorine Niedecker: "The only words are these – // the only words are those / you could put your foot through. Wor(l)ds // eye-deep in air, / and the inside of all things / clear / to the horizon. / Clear // to the core" ("Eye-deep"). Johnson later changed the line to "words and worlds."

But from a letter from Ian Hamilton Finlay found in Johnson's archive, we might get a sense of how *Wor(l)ds* is a term that prefigures both the geometric angularity, and structurality, that Johnson sees engendered by placing words together. In the letter Finlay asks for one-word poems to fill his final issue of POTH. Finlay writes: "please send me one-word poems . . . this number, which will mark the final demise of the sonnet (sun net), as well as the birth of the one-wor(l)d poem." Finlay uses the term for a variation on the concrete poem that he invents: "The rules are, that each poem will consist of one word, with a title of any length. These are to be thought of as TWO STRAIGHT LINES which, being connected (but not actually) compose a corner. The peculiarity of these corners is THAT THEY ARE OPEN ON ALL SIDES" (Letter

from Ian). Finlay gives Johnson a word for a conception of language meeting at angles, in a kind of spatio-structural relationship that is at once disconnected from any previous structurality ("open on all sides"). The word itself is an orientation, a kind of psycho-spatial scale, and the space between words is a distance that a metaphor, or the objectivation of paratactically setting of words next to one another, elides.

André Furlani's writing on Guy Davenport articulates the relation of Johnson's collage poetics (which persist in *ARK*) to structure, and the kind of structurality intuited by Johnson's work:

> The materiality of the work of art and its constructed nature are consequently emphasized by [Davenport's] use of an ideogrammatic method that allows for the grafting of particulars into a congeries of implied relations without subordination. For him writing can enter into an isomorphic relationship with nature and a cosmos which is itself conceived of as a harmonization of independent forces. . . . Davenport calls his compositional principle "architectonic form" . . . In architectonic form, meaning may be generated more in the interstices between images, citation, and passages of dialogue than in the content of these elements. "It is the conjunction, not the elements, that creates a new light," Davenport says in an essay on poet Ronald Johnson (194).

A "congeries of implied relations without subordination" and an "isomorphic relationship with nature and cosmos" could easily describe Johnson's structure and ambition in *ARK*. In a letter to Williams, Johnson described *Wor(l)ds* as "a picture of the new cosmos inside and out" (Letter to Jonathan Sept 11). Williams's response must have remarked on the abstract form such a "picture" would take, for Johnson replies: "It is difficult to define the structure of the world, known & unknown, and how we know it, and find all the dropping-off places in matter and the mind, without being somewhat abstract" (Letter to Jonathan Sept X).

Johnson's repeated suggestion that his portrait of the "new cosmos" means mapping what he calls the "jumping off" or "dropping off" places at "the edges" of matter and mind brings the

two terms matter and mind into an equivalent, or at least what seems like a metonymic, relation to one another. Johnson points to both mind and matter as limit concepts of the universe writ large, ideations where our attempts to define their contours brings us to the limit of language, and where attempts to count their constituent particulars approaches infinity. Emerson wrote that "the whole of nature is a metaphor of the human mind" – a quote which Sewell emphasizes in *The Orphic Voice* (186). Johnson would quite easily understand an attempt to map the ordered Natural world implied by the term cosmos as neo-Transcendentalist project, and the map produced would also be itself an objectivation; a single object produced by putting linguistic coordinates on the sensual object of the mind-in-Nature.

Critical writing on *ARK* has not yet dealt with it as a work engaging the structurality or metaphoricity of mind. Writing that addresses Johnson's interest in merging science and poetry often focuses on his moments of transcending bodily perception to include the microscale in his imaginative vision, and to see language as embodying the recombinant fluidity of particles. These critics argue that *ARK* poses "poetry as a 'scale model' of parallel discoveries in science" (Duplessis "Echological" 298), read Johnson's words as "seed syllables of cells, strings of genetically coded poetic material" (Biglieri 454) or suggest that "poetry . . . can create worlds . . . that, like quanta and other subatomic particles, threaten to transcend spacetime" (Kimmelman 431). Critics that focus on the architecturality of *ARK* tend to read for Johnson's stable constructions of utopian space, whether that be "the act of building places of feeling out of cultural , historical and natural materials in [an] attempt to articulate the echoing, resonant edge of being human" (Deming 473), as "an epic monument to the avant-garde" (Collis "Frayed" 143) or as "a concrete poem [which] communicates its structure as its primary content, presenting itself in the same key as architecture" that builds on "the utopian possibilities of the

constructivist posture" where the point "lies not in the idea of the finished structure into which a reader might reside, but rather in the creation of an always-incomplete structure that the reader's engagement fills in" (Corey "Avant-Pastoral" 287).

If the science-minded critics, at least, understand Johnson as a poet of the age of the electron microscope and space exploration, who "sees the flowing and metamorphosis; perceives that thought is multiform . . . [and] uses the forms which express that life" they read him as Emerson does the eighteenth-century scientist Emmanuel Swedenborg (Sewell 186). Emerson counted Swedenborg as a poet, and Sewell, in her discussion of Emerson's interest in Swedenborg, counts the latter as an Orphic voice because his writing supposes "a relationship between created things and mental forms, a correspondence between natural orders and systems of the mind" (186). Johnson inherits from Emerson's Swedenborgian Orphism this understood relationship between the perceptible "flowing and metamorphosis" and the imperceptible "systems of mind." In Johnson's wish to reveal the structurality of the flowing former lies an implicit wish to reveal a similar structure in the ineffable movements of the latter.

The Unconscious (as) Wor(l)d Structurer

"Emerson says nature 'conspires' to speak, and . . . *Wor(l)ds* is an expression of it," Johnson told Barry Alpert in 1974. "When a poet has learned his technique he somehow turns into the configuration of the whole shebang. . . .*Wor(l)ds* was meant to be a personal epic in the sense of Wordsworth's *The Prelude*, a spontaneous growth of mind" (Alpert 550). Following this logic, it is the acquisition of poetic technique that turns the poet *into* a structure of the world that allows *Nature*, rather than the poet's ego, to speak. This is a logic still dependent on a modern, mind-over-matter philosophy that could also be expressed in terms of "higher" and "lower" brain

function. Poetic technique, then, gets all that the Western subject might identify with as "self" – ego, higher brain, individual mind – out of the way so that the "lower," fleshly or more natural parts of the individual can be the generator of conscious language. Johnson uses the term "unconscious" as a layperson who had read some Jung, to refer to his understanding of those parts of cognitive function beyond conscious control. Johnson follows his image of the transmuted poet with a parallel between this model of Nature speaking and a Romantic, maturational model of mind and its unfolding stages of development, a model that itself was heavily influenced by organicist models of growth and evolution.[6] In effect Johnson provides us license to read *ARK*'s architectonic form in *Wor(l)ds/ARK* as a model of mind's development or "unfolding."

There may seem to be a tension between Johnson's conceptualization of *ARK* as a consciously-envisioned architectural *mappemunde*, and his self-concept as a poet who channels nature's expression and documents the "spontaneous growth" of his mind. But Johnson's prescient vision of *ARK* as an architecture was not the same as his knowing, prescriptively, the form this structure would take. In 1976, when Barry Alpert asked if the order of Book I of *Wor(l)ds* had "an intuitive order," Johnson replied, "I take it that all advance is intuitive. People like Einstein and Bucky Fuller intuit their orders, and Blake learned to live quite comfortably in the unconscious" (*Life and Works* 555). Johnson describes the writing he did after his major concrete work, rhymed poems "which were the beginning of *Wor(l)ds"* as "literally announced to me from the unconscious," and explains that he composed sections of *Wor(l)ds* "before [he]

---

[5] "There are in fact only two fundamental psychologies in the long Western conversations on modernity. One is Locke's emphasizing the impact of elemental units of sensory experience on the mind which somehow build up into complex ideas. The other is Descartes': ideas mainly derive from innate cognitive structures . . . a third psychology, emerging out of Descartes, Kant and the Romantic movement, emphasizes the profoundly maturational character of the mind's growth over time . . . the entire picture is one of organic evolution and unfolding stages of development. The force of inner growth tends to be the main theme of maturationalists" (Featherstone 175).

realized their place in the order" (555). Johnson compares himself not only to poetic visionary Blake but to scientific visionaries who came up with structural marvels of intuitive scientific perception, be it via the elegant mathematical expression for the relation of energy and matter or via the symmetric beauty and balance of tension and compression achieved in that icon of space-race-era architecture, the geodesic dome.

> I also saw the obvious danger inherent in a long poem, written over decades, was to be its structure — the natural change in tone, style, and of course the quest for termination. So I devised a ground plan in my mind which could encompass growth: three groups of thirty-three – The Foundations, The Spires, The Ramparts. (3)

Johnson does not need to know how his structure in *Wor(l)ds/ARK* will "grow" or manifest "natural change." As an Orphic poet, he only needs to set himself to the task of describing the cosmos, and let nature, which is the metaphor of mind, reveal itself spontaneously. "It's mostly a work of the unconscious," he told O'Leary ("Interview" 572). Even though Johnson uses the term unconscious, so loaded with psychoanalytic overtones, in his discussion of structural planning, he also employs a developmental model of mind that is Romantic in origin.

Joshua Corey writes that the late appearance in *ARK* of an autobiographical moment of Johnson recollecting his childhood "affirms Johnson's claim that the poem would serve as a personal epic along the lines of *The Prelude*" ("Avant-Pastoral" 332). But his comment arises from the assumption that a "personal epic" must necessarily document "a growth of the poet's mind" that begins in childhood or youth and reaches maturity in concert with the physical maturation process. The developmental model of mind is almost taken for granted by Corey. The "growth" metaphor for the changes in subjecthood deemed psychological rather than physical, immortalized in Jean-Jacques Rousseau's discussion of education in *Emile* ("the inner growth of our organs and faculties is the education of nature, the use we learn to make of this growth the

education of men" [n.p.]), found further entrenchment in Western culture through John Dewey and Abraham Maslow. Though it is beyond the scope of this chapter to argue the point at length, the idea of organic growth or progression certainly informs many critical understandings of writerly development and process. Writers' careers are often read as processes of change, and improvement and strategic refinement of poetics and technique, a change that because it often begins in early adulthood is not correlated to physiological maturation. Johnson likely assumed the same inevitably of change in his own craft. But importantly, he does not understand the change he predicts as occurring solely as conscious changes in poetic approach but as occurring *developmentally* and unconsciously. For Johnson, as for Duncan and Emerson, poetry is necessarily an accessing of Nature understood as that impulse of development; and like a skill, the more a poet accesses that Nature, the more efficient and intuitive his work becomes.

Johnson's expectation that over twenty years, he will produce an epic that documents "growth" is informed by the "modernist continuity" that "attached much importance to the newly discovered Freudian unconscious, to dream work, and to the use of myth and archetypal narratives as organizing structures" (Perloff "Modernism Now" n.p.) Perloff writes that Guy Davenport characterized twentieth-century modernism as a "Renaissance of the archaic" that included a critical and aesthetic revaluation of myth as archetypal knowledge of encounter with nature, and a "revival of the pre-Socratic philosophers, for whom 'science and poetry are still the same thing'" (n.p.). Johnson's *ARK* proceeds in this mode, as a modern intellectual inquiry into the conscious and unconscious mind that documents a mind's Orphic descent and return:

> What I got from *The Orphic Voice* by Elizabeth Sewell was the idea that Orpheus was a poet of nature who strummed his lyre. He caused the animals and plants, the atoms, to move in rhythm. She said that this is the poet. The poet is somebody who strums that lyre

> and he's connected to the natural world and makes things happen. . . . *ARK* is all a strumming of the lyre. (O'Leary "An Interview" 583)

"Orpheus went to the underworld, which I take to be the unconscious," Johnson tells O'Leary. For Johnson, writing has become an act of accessing that underworld/unconscious, of attending to his mind's own spontaneous objectivations, an act by which he strums the lyre, making "atoms move" and generating the material of *ARK*'s structures. For him this work is quite improvisational. "I just write a line . . . as I go along I always remember the lines before so it leads me to the next line which leads me to the next line . . . and I don't really revise much after" (565). As O'Leary observes, Johnson's method seems inspired by Olson's insistence in his projective verse manifesto on a knock-on chain of perceptions (that loudly proclaimed Edward Dahlberg's "ONE PERCEPTION MUST IMMEDIATELY AND DIRECTLY LEAD TO A FURTHER PERCEPTION" (n.p.)). Johnson's assumption that a self-imposed method of building line by line, spontaneously, is a way to make his Orphic descent to the underworld takes its impulse from the psychoanalytic technique of free association:

> Free association is an inadequate translation into English of the German term *freier Einfall* (meaning "free irruption"), which Sigmund Freud used to characterize ideas that irrupt into consciousness. . . . Freud required his patients to attend to what was being analyzed while at the same time suspending their judgment and reporting everything that came to mind. Seemingly irrelevant ideas then often forced themselves into consciousness. (Macmillan 608)

Hazel Smith, writing about the improvisatory technique of Beat and Black Mountain poets, but describing a method that she argues stayed important well into the 1980s, names Freudian psychology as well as Zen Buddhism as important influences on the era: "[P]oetry and irrationality were ways of accessing the unconscious. . . . [I]mprovisation was part of a utopian ideology of creativity, itself sometimes shrouded in mystification. While improvisation does not

guarantee unmediated 'spontaneous' access to the unconscious, it was sometimes viewed as doing so" (157).

Even where Johnson seems to make choices, there is a sense of "yielding" to the unconscious. "I believe that there is a subtle magnetism in Nature, which, if we unconsciously yield to it, will direct us aright," wrote Thoreau in "Walking." Johnson wrote: "[M]any of my poems have started with a germ of just one or two words which seem suddenly to need a setting they possibly have never had in language . . . [for the] Spires, I always look first for image or theme that can be made to rise, then let words gather around it like magnetic filings" ("Rod of Aaron" 4). Though here Johnson uses Pound's vorticist language to describe how his poems "gather," he still describes a process requiring improvisatory permissiveness to words' self-presentation, a yielding to that subtle gathering magnetism. Elsewhere Johnson calls it "trust," arguing that in good poetry "image heels upon image," and suggesting that in the pursuit of a precipitous movement from image to image he learned much from Robert Duncan's "practice of trusting the unconscious ("Hurrah" n.p.).

So at one level, Johnson wants to make an object, a structure of musical relatedness à la Zukofsky. Johnson was deeply influenced by the anti-abstraction, yet at the same time anti-narrative, strategies of Objectivist writing epitomized in Zukofsky's work, particularly in what Johnson called "my god, *'A'*" (O'Leary "An Interview" 565). Charles Alteri, arguing that Johnson must be counted among the "neo-Objectivists," writes that for these poets, "[c]onstruction, not description, would be the basic source of models for relatedness" (Altieri 31). Peter Quartermain and Rachel Blau Duplessis, for their part, write that "all writers absorbing the Objectivist example consider the praxis of the poem to be a mode of thought, cognition, investigation - even epistemology" yet that they are also "characterized by a historical, realist,

anti-mythological worldview" (3). This last characterization is the one Johnson eschews completely in his decision to write a poem "without history," embracing the mythopoetics tradition of Duncan, Olson and Pound. Johnson wants to hang on to natural form, but not necessarily to realism or narrative. He wants Zukofskyian architecture and Duncan's cosmos and mythopoetics at once.

Johnson's notebooks suggest he was looking for models of creation that could claim to generate a structure of the cosmos. Johnson typed out the following excerpt from Kandinsky:

> Abstract expressionist paintings ‘reveal an unexpected background, a hidden sense. They often turn out to be more or less exact images of nature itself, showing an astounding similarity with the molecular structure of organic and inorganic elements of nature. This is a perplexing fact. Pure abstraction has become an image of concrete nature. (Binder)

In the same notebook he is also on the lookout for models of psychic growth and the organization of myth. On another page is an excerpt of Jung, parts of which appear verbatim in "BEAM 26" and "BEAM 27" of *ARK* :

> every concrete object is always unknown in certain respects, because we cannot know the ultimate nature of matter itself. . . .Meaning and purposefulness are not the prerogatives of the mind; they operate in the whole of living nature. There is no difference in principle between organic and psychic growth. As a plant produces its flower, so the psyche creates its symbols. (Binder)

So, the project: a constructivist mode of thought, a cognition, an epistemology that was about biology and epistemology: Johnson wants to use the various poetic modes at his disposal to pursue his Orphic inquiry. When Joshua Corey wrote, "a later constructivist like Ronald Johnson could be said to try and build with nature/language in a new way, *naturata naturans*, while respecting the otherness of his objects" ("A Pleasant Visit" n.p.), he references a passage in Zukofsky's A-6:

Naturata Naturans –

Nature as creator,

Naturata Naturata

Nature as created.

He who creates

Is a mode of these inertial systems

The flower – leaf around leaf wrapped

around the center leaf ("*A*" 22-23)

Corey gives us Johnson the builder knowing himself to be both creator and created; himself both a mind and a mode of nature's Mind. In this passage from Zukofsky "the flower" stands as the image of the "inertial system" which Johnson aims to map. Zukofsky wrote to William Carlos Williams, however, that "my own poems, don't, of course, for that most part . . . depend on the unconscious at all" (Ahearn 314); Johnson aims not simply to consciously map the structure of this inertial system, but, also trusting Duncan, to "yield" to its inertia, become it, and through him let the system map itself: "leaf round leaf face inner core" he writes in "ARK 76." All this Johnson does after having worked for years on a concrete poetics that used a flowering body to figure print language as also as a mode of these inertial systems. A look at the work Johnson did in the short period between his late concrete works and the first drafts of *Wor(l)ds* shows how Johnson's poetics move from an aesthetics of sculpting to an aesthetics of building and architecture, as he works with a sense of language as three- and four-dimensional and the senses as material, and begins to investigate how poetry can illuminate the *physics* of thought. The plant

figure will remain an important figure of this process.

Sculptures in the Wor(l)d, Sculptures in the Head

On the late end of Johnson's engagement with concrete, Johnson experimented with a poetics of sculpture; the sunflower unfolder was one example of this investigation. Johnson's desire to engender a three- and four-dimensional experience of language led briefly to working with the physical shape and materials of text presentation; for Ian Hamilton Finlay these interests led to sculpture proper, to "standing poems" that were set in vases and to words chiseled in rocks inhabiting the landscape of his garden at Little Sparta. But Johnson may have decided, like fellow concrete poet bpNichol eventually did, that the poet "is not a sculptor for he is still moved by the language and sculpts with words . . ." (Dutton n.p.), for after his sunflower unfolder and *Balloons,* Johnson soon returned to the traditional book page as his field, working less with the idea of language's physical presence in the environment and more with the idea of building structures "in the head." This development from concrete to poetic sculpture, which leads to the architectonic structurality of *ARK*, can be traced in the short works that Johnson wrote in the period between his major concrete work and his epic, the short pieces in the slender booklet "Eyes and Objects" (1976) and in the unpublished "Imaginary Menagerie."

I will begin with two poems from *Eyes and Objects*. The first, called "World-Framed Page," is just that, a titled blank page with text that tags the material information of its construction (I will use the next page to illustrate, as the effect is lost when spread over a page break):

molecules on void
8 ½ x 8 ½
unfinished

Another poem, "Sculpture: Around The Metaphysical Bend," consists of only the following:

(

)

In these poems Johnson calls attention to readerly eye movement and the immanence of the blank space of the page, as well as to the molecular materiality of ink and paper; bringing three-dimensionality to the experience of reading. The poems are somewhat like Ian Hamilton's Finlay's later concrete in their attempt to use the surrounding environment of the page as a term of reference and composition. Johnson sets the parentheses as a vertical structure of balanced concaves, outward facing, open, like satellite dishes of parentheticality, searching for their objects. The wordless brackets in this “Sculpture” anticipate the empty, closed parentheses “ ( ) ” in BEAM 8 of *ARK*, which ponders the ripple-intersecting circles of perception and presence, the “wind Os” of language, and mimics the arcs of light produced in the optical phenomenon called conical refraction. In *ARK* Johnson will invert the parentheses thus:

The Definition of

Perception:

)(

(like seeing gravity throwing apples

sideways off trees)

In his early sculpture poem, the parentheses "activate" the silence, as Davenport once put it, signalling the space as an unbound potential; one can image the entire page space of *ARK* so activated. Johnson briefly described the inquiry of his early sculpture poems in a letter to Jonathan Williams:

> I thought I was first in imagining that the action in your head as you read could be 'like' the plastic arts, etc. but someone pointed out to me after the book [*Eyes and Objects*] was done that Yoko Ono of all people had already done it in her major opus GRAPEFRUIT. Oh well." (Letter to Jonathan May 11)

Ono's work, which was part of the Fluxus movement of the avant-garde, combined surrealism, poetry and performance art to make "event scores" that "were brief instructions for either mental or physical performance by the viewer." As Heather Labash explains, Ono's work highlighted a "direct experience of the here and now, and non-duality. Ono was interested in creating art as a vehicle for changes in perception. . . . The significance of Ono's pieces [lay] in the shifts in perception this work might induce" (15). We might read Johnson's work in *Eyes and Objects*, which plays heavily on the phenomenon of optical experience and illusion, as working to shift readerly perception of language from its habitual reception as pointing toward "real" objects toward the phenomenal quality of language's sequential presentation of image to the inner eye.

In Johnson's sculptural period, he is developing (as he will do until the end of his life) interests that can be traced back to his early career. He explored some of the tensions between

built spaces, mental spaces and the Natural field of perception, and between the object-status of the body and the subjectivity of perception, in a very early set of poems that were part of the draft of *A Line of Poetry, A Row of Trees,* "Sculptures (Variations On A Line By Jonathan Williams)," that reappear in *Eyes and Objects* as “A Garden Sculpture for J.W.”:

1

To be a BLOCK
of flowers in a wood.

To be fused with

the motion
of vision.

. . . . . .

3

To be a room
opening inward:

in my head.

("Sculptures: Variations ...")

Another sculptural poem from Johnson's *Eyes and Objects* makes explicit his attempt to reorient the reader's sense of the cranial dimensions of the poetic creation. "Sculpture In The Form Of A Sunflower The Exact Size Of Your Head" works with one of Johnson's favorite tropes, the light-seeking, personified heliotrope:

Faced into light –
huge eyes gone to seed.

Out of the dark,

green heart. (*Eyes & Objects* n.p.)

Here Johnson performs a move similar to the one he makes his prefatory poem to *The Book of the Green Man*, personifying the flower while at the same time framing the poem as art-object, as a mental figure, as a bodying-forth of image-of-self from the depths of cellular material. This brief poem could be haiku, except that its naming as sculpture reorients the reader toward the poem. The poem is no longer a distilled expression of epiphanic witness but a structure, "made" of language, that occurs in the space of "your [human] head." Disorientingly, the flower is deliberately "sized" to the head of the reader. The flower becomes the inside of the reader's head; her own face meets the light; her heart in the darkness of her chest is "greened."

Most important to a tracing of Johnson's sense of structurality is to notice the ways in which Johnson figures himself, and the reader who will be in the same "place" in front of the plane of the page, as a figure aware of itself in Euclidean and non-Euclidean space, and a

fascination with the spatial dimension of what words do when perceived sequentially. Johnson's grid poems in *Songs of the Earth* developed his interest in the minute shifts in perception that sequentiality and rhyme engender; in *Eyes and Objects* he lines up words that do not necessarily have morphological similarity although he still wishes to explore the spatial-referential relation between them. "Out from this floor of words / the whole / is threshold," writes Johnson in the poem "Letter Picture," "Hundreds of doors hinge under us, / in a page, / one, inside another / inside another" (n.p.); "I offer this sphere . . . it will surface in the many-sided air around you. / It is around you" he writes in another poem, evocative of Ono's event-scores.

Johnson described his unpublished "The Imaginary Menagerie" as "a long poem planned on short end-rhyme lines, [that] simply dropped its leaves after two years to mulch a yeasty *ARK*" ("Collected Early" 96). In this precursor to *ARK*, Johnson continues to explore a stance of a mind, hyper-aware of three- and four-dimensional embodiment, engaged with the phenomenality of its own place in a world of form and system of names - while pushing hard on rhyme as a prioritizing dimension for word choice. Many of the lines of "The Imaginary Menagerie" do eventually make it into *ARK*:

> What dimension
> has the swan?
> What indrawn unison,
> abyss of focus?
>
> What *press*
> made the lens
> make sense . . . ?

. . . . . .

Elliptic

at the quick

I speak

– the hide-and-seek,

the complex

neck-and-neck, the flex–

the influx:

Crux.

Johnson eventually decided that he wrote “truer in lines where both rhyme and rhythm are more a woven texture than end tag and thump,” but nonetheless describes “The Imaginary Menagerie” as coming out of a time when he was “stumped about how to grow” and as providing the ground from which *ARK* emerges ("Collected Early" 96) What this transitional work does for Johnson is deepen his sense of word-to-word relation as *harmonic*, such that a rhyme might seem a sweeter, more stable musical interval, and a more intuitive move along the scales of language, than non-rhyme. Johnson also uses visual rhyme as its own harmonics; and suggests that all these harmonics build structures, somewhat as music does, through time. In the spatial sense of words’ intervalence that Johnson develops through his experiments in sound and visual rhyme, words are ‘sounded’ in a dimensional relation to another word, as notes are set in spatial and physical relation to each other to build the structural majesty of a symphony.

Christopher Middleton had once written to Johnson and Williams, when the two were still together in 1965, that he had a quote for each of them. For Williams, he found this from Goethe:

> Conversations with Eckermann, March 23, 1829: 'I have found a paper of mine among some others,' said Goethe today, 'in which I call architecture "petrified music." Really there is something in this' And a footnote: Schelling, in *Philosophie der Kunst,* calls architecture 'frozen music.' It seems uncertain which 'said it first' . . . Goethe did seem to think he said it first. (Letter from Christopher)

To Johnson, Middleton passed along the Goethe quote that the eye must be made of sun. Both these Goethean images stayed with Johnson throughout his career. Through these unpublished experiments, Johnson develops a feeling for the inverse of the Goethe/Schelling metaphor that Middleton sent him – moving from an ink-as-sculptural synaesthetic toward a synaesthetic of musicality and harmonics *become* architectural. (I use this word, synaesthetic, to describe Johnson's aesthetics of synthesis, his interest in seeing an object produced in one traditional branch of fine art as an object that also produces the kind of aesthetic engagements traditionally associated with another branch of fine art). This feeling is the one Davenport calls *architectonic* – where "it is the conjunction, not the elements, that creates a new light." One might recall the origin of the neologism *Wor(l)ds*, and the one-word poems, that Finlay insisted should "be thought of as TWO STRAIGHT LINES which, being connected (but not actually) compose a corner. The peculiarity of these corners is THAT THEY ARE OPEN ON ALL SIDES" (Letter Aug 2). In these experiments Johnson approaches the minimalism/maximalism that he would signal with the title *Wor(l)ds;* and develops his microscopic attention to sequence, where each word he sets in line with another might be visualized as these "open corners."

A Branching Architecture

As I argued in the second chapter, Johnson had already developed a poetics where a poem's *visual* line, and the line/shape of the character, are analogous to the *Urpflanze,* acting as objects-in-ecological-process and forms of Nature-building-itself, and re-engendering literary expression as an unfolding sense of objectivation between the field of the poetic page and the mindbody of the reader. I argued that Pfau's reading of Goethe, which framed Goethe's treatise on plant morphology as a concrete example of Orphic perception rendered in language, gave us the context to understand Johnson's Orphic vision of flowering concrete letters as epigenetic self-extending forms that "unfold" through conceptual space.

In *ARK*, Johnson inhabits the overlapping space of these two modes of understanding poetics: between the interstitial, conjunction orientation of architectonics and the organicist, developmental model of his epigenetic concrete. When Davenport argues that architectonic writing enters into an "isomorphic" relationship with nature,[7] it is unclear with *which* nature the writing is to share its morphological qualities. With which form might *ARK*'s intuitively generated structure be "isomorphic"? The spherical radiance of the sun? The organized randomness of plasma? The branching dendritics of crystal or flower? One figure that can function as a concept in which the complexity of "nature," at the scale of human perception, can be reduced to basic principles of structurality is the atom. One might visualize all of nature at the atomic level as a sea of structured particles, bonded in conformity with the laws of nuclear

[7] Davenport is searching for a *word* here to indicate the same relationship, of structured language to the structures of Nature, that he argues poets must build entirely new structures to communicate. The OED gives the following definitions of isomorphism: 1. *Chem.* and *Min.* The property of crystallizing in the same or closely related forms, esp. as exhibited by substances of analogous composition. *2. Math.* (Also *Logic* and *Linguistics*.) Identity of form and of operations between two or more groups or other sets; an exact correspondence as regards the number of constituent elements and the relations between them; *spec.* a one-to-one homomorphism. 3. *Biol.* A similarity of appearance displayed by organisms having different genotypes. 4. *Psychol.* The correspondence assumed to exist between mental perception and physiological processes.

physics. Indeed, in his essay on *ARK*, Kimmelman has argued that the pun "atom/Adam . . . is the core organizing principle of the poem" (425). Mark Scroggins writes that *ARK* is "a cosmological poem, like Lucretius' *De Rarum Natura*, yet one that aims to celebrate not the Epicurean atomistic theory of the universe but the insights into the universe's fundamental unity and isomorphism gained by twentieth-century physics – and later, by chaos theory and the new science of fractals" (*Knowledge* 294).

Does that mean that *ARK*'s structure can be read as one large, complex of atoms? i.e., as a molecule? I believe *ARK* works with a greater sense of change and flux to its worldview, and to its approach to structure, than the metaphor of a single molecule facilitates. When, near the end of his career, Peter O'Leary asks Johnson: "Is ARK, then, as well as being a structure, a big body?" Johnson answers:

> I had a conversation with Guy Davenport about it. I said, you know, Blake says it's all one body. And I said, No, I think it's a tree. And Guy Davenport said, "I think you're right." I felt it as being this, as being a tree. It's one of the great structures: it's got depths and heights, it's got circulation, it goes into streams. It goes into stream patterns, which is what branches do. I think time makes things a tree" ("An Interview" 572).

Having come to the end of his twenty-year intuitive "advance," Johnson decides that the metaphor of the tree, rather than the metaphor of the body, is the one he "feels" is the structure of *ARK*. While a reading of *ARK* as ismorphic with DNA would no doubt be productive, and an argument could be made that the DNA molecule structures *ARK,* I believe that the tree crucially figures Johnson's architectural interpretation of the structure of the mind-as-universe. In a late passage that also expresses Johnson's emphasis perception as a mathematics of differentiating between terms, Johnson writes in "ARK 94":

new landscape explore

i.e. a + b = etc. . . .

Rose X Skyline

nether mown galaxy

every leaf catching the sun

(look at looking at it)

"Look at looking at it," Johnson emphasizes. While the image of a scientist bent over an electron microscope, looking at, or even reconstructing an atom, might work to suggest Johnson's Orphic project of staging a mind looking at itself in *ARK*, by suggesting that *ARK* is a tree, Johnson returns us to the vision of a poet, like Goethe, looking at the structure of a plant, looking at a plant as his *ur*-object of nature available for contemplation. Johnson thusly locates *ARK* in a progression of the poetic investigation of the plant as a figure of self-organization and self-building that has organized his entire oeuvre.

What does it mean to read *ARK* with the self-generating structure of the tree as its "core organizing principle"? Certainly a productive reading along such lines would do more than suggest that the underlying morphologies of language, for example its syntax and grammars, are branched as trees are, for Chomskyan linguistics did that in the 1950s. In part, the plant as a representative fractal form is important: Johnson signalled his sense of the elemental nature of branching structures in *Valley* when he wrote of "the atoms, cells & parsley ferns /of the universe" (25). But in part what I want to suggest is that the tree Johnson names here importantly figures the structure of *ARK* as isomorphic with a thing that grows, that can be cultured, that is

symbolic of the Garden, and that has a long history of symbolizing Knowledge (that dangerous structure in the human head).

Johnson's materialist approach to his Orphic poetics returns him constantly to the physical senses, and in *ARK* his interest turns to the brain as the physical "sense" organ of mind. *ARK*'s inquiry into the structure of the mind and universe can be read for its inquiry into the structure of the brain and the physicality of its knowing. I argue that figures of the tree (and its isomorphs, such as flowers and bushes) emerge in *ARK* as central to that inquiry. We see the beginnings of this interest in his attempts to sculpture poems "the size of your head" that are sculptures of a heliotropic flower, but arguably the fascination goes back as far as Johnson's first writing, in his "Four Orphic Poems" to Sewell, of the greening-purple cabbage, behind the forehead's wall of bone and from which writing came, that is the brain.

But before I can show how Johnson makes isomorphs of *ARK,* the tree and the brain, I want to first try to explain Johnson's insistence on *ARK* as a built object, which describes much of his approach, and his declaration that *ARK* is a tree. To do so will show also how Johnson resolves the tension between the two traditions, constructivist and mythopoetic, that he means to advance in his project. Only then will I be able to discuss Johnson's "soft architecture" in the materialist terms that allows for a close interpretation of *ARK* as a gardening of the brain.

Naif Rose Magnetics

Despite Johnson's clear self-association with naive builders like Simon Rodia and James Hampton,[8] Mark Scroggins dismisses Johnson's architectural metaphor: "The true structure of

[8] "Johnson is devoted to puns, to rhyme, and to *bricoleur*-mystics like the *Facteur* Cheval and Simon Rodia, whose *Palais Ideal* and Watts Towers are models for the collage architecture of *ARK*" (Selinger "Biography" n.p.). The self-taught artists Johnson names as inspirations for *ARK* in the note at the end of the book are Raymond Isadore, of Chartres, France; Ferdinand Cheval, who built the Palais Ideal in Hauterives; Sam Rodia, builder of the Watts Towers (southern

ARK is not based on a myth, nor is it based on an architecture," he writes. "One need only press Johnson's terms a bit to see how wobbly his architectural metaphor is: in what sort of building are the "Foundations" made out of "BEAMS" and how in the world does one pile "Arches" on top of "Spires"?" ("Notes" 12). He reads Johnson's true structure as *ARK*'s tripartite and ninety-nine section frame; and reads Johnson's self-affiliation with folk artists as a downward revision of "the modernist poetics of juxtaposition and the 'luminous detail' . . . into the realm of folk culture and bricolage" (9). He reads the formal changes in *ARK,* that move from long, irregular structures toward the tight three-line by six-stanza by three-page structure of the Arches of the last section, as Johnson's "equivalent of the five-word line that served Zukofsky . . . through the horticultural labyrinths of *80 Flowers*" (12). For Scroggins, the gardening metaphor and the architectural metaphor are only two of many structural models, including the Orpheus myth and Ives' *Unfinished Symphony*, in "a poem that looks to a variety of different formal models and thematic scaffolds" (19).

However, for Johnson the figures of Rodia, Hampton, Isidore and Cheval, untrained builders who constructed intuitively and without blueprint, were importantly models of untrained creativity. They were green whiteness; plastic minds unprimed by exposure to the work of the Masters; American Adams of architecture; untutored composers in concrete. They were "Everyman who attempts creative quest" ("A note" n.p.), isolated individuals through whom nature, if we follow Emerson's ideas on how words and forms take shape, "rises and is articulated." In their untrained quests Johnson sees models for his desire to "know nothing but a will to create, and matter at hand." Be it Cheval who tripped over an oddly-shaped stone, and then gathered more stones from the area to build his palace; Isidore who picked up broken glass

---

Los Angeles), the towers of which are on the cover of *ARK* and Washington janitor James Hampton, whose glittering garage temple he named *The Throne of the Third Heaven of the Nations Millenium General Assembly.*

from the road; Hampton who gathered discarded cigarette packaging foil; or Rodia who used rebar and ties he scrounged from alongside the local railway and shards from the nearby industrial pottery, these artists used "matter at hand" in a manner that Scroggins compares to Johnson's "line-by-line compositional methods that produce *ARK*, [and] jackdawlike accumulation of words and phrases" (*Knowledge* 296). Scroggins's bird simile for the accumulative processes of both Johnson and his everymen suggests not only an animal-like instinctiveness to their composition, but implies a kind of "natural occurrence," like nests or dams, to the structures produced.

This instinctiveness, arguably, is reflected in the irregularity of the forms they create, but conversely, their forms can be said to reflect a different kind of regularity. Rodia's Watts Towers, which appear on the cover of *ARK,* are often compared to the *Sagrada Familia* in Barcelona, a work by Antoni Gaudí, in part because Rodia's work uses a mosaic technique Gaudí is credited with developing, *trencadís*. "Hundreds of thousands of bright bits of china and glass are splayed in clumps and bunches," wrote P.J. O'Rourke about Gaudí's style, an apt description of what in Rodia's work inspired *ARK*. But both the Sagrada Familia and Watts Towers have a further resemblance: both were constructed without plans, and do "seem to pile arches on top of spires." Their forms have an organic, rather than geometric, feel and look. Gaudí, despite being a trained architect, worked without plan and found his distinctive style, "characterized by sinuous, asymmetrical lines based on plant forms," that became iconic of art nouveau (*Britannica* n.p.). O'Rourke explains:

> Gaudí considered the Gothic style imperfect, because buttresses are needed to hold up the soaring magnificence. . . . Gaudí found solutions in plant and animal forms, in hyperboloids, paraboloids, and helicoids (respectively, saddle-shaped curves, cones, and spirals). And he made use of fractals, structures that split into smaller replications of

> themselves, the way broccoli does. If a Gothic cathedral is (as some have said, misapplying their Shakespeare) a sermon in stone, then La Sagrada Família is a sermon in broccoli. (n.p.)

A commensurability between Johnson's architectural vision and his gardening metaphors appears when they are seen as terms informing a biomorphic vision of structurality; that is, that the architectures Johnson "builds" can be read as modelled after organic structures.

Further, the gathering and building logic of naive artists may have struck Johnson as examples of Pound's famous vorticist interpretation of creativity as a natural force that gathers and structures as a magnet attracts and organizes iron filings. In Pound's 74th Canto, the magnet creates the "rose in the steel dust," directing invisible natural forces to collect and assemble elements into structures of symmetry. Johnson's description of his own intuited building method echoes Pound, as he looks "for image or theme that can be made to rise, then let words gather around it like magnetic filings" ("Rod of Aaron" 4). He would also have read Hugh Kenner, who suggests an "organic" quality to the generation of naive artists' work:

> People without formal instruction in the rules they are said to be following generate without forethought (as Henry James did) very intricate utterances, grown, we are now told, out of kernel sentences, as Yggdrasil grew from its acorn. Nature's way and mind's way is rhyme; mind is the regenerative part of nature (164).

The "rising" development of these structures – be it the assemblage of Pound's "dark petals of iron" (qtd in Kenner 285), Rodia's metal scrap, or his own "fragments of phrase" – all express Thoreau's subtle magnetism of Nature. In the same paragraph where the filings image appears, Johnson writes that his poems begin with a seedlike “germ of just one or two words"; later Johnson would advise young writers that "word next to word on the page should unify everything around it, as if a chemical solution making crystal phrase. This is the process of The Muse, and thereby unwinds the poet’s maze" ("Hurrah" n.p.). Again, the "magnetic" force that

aggregrates the particles of the world into structure, is Johnson's muse, his Eurydice, the unconscious.

Johnson's horticulture, his "build[ing] a Garden of the Brain," is a constructing of poetic architecture, akin to the structure-taking of crystals, or the emergent phylogeny of roses or trees in the mind. This conceptualization of his work dovetails well with Emerson's sense of Orphic song: “Orpheus is no fable: you have only to sing, and the rocks will crystallize; sing, and the plant will organize; sing, & the animal will be born” (qtd in Yoder 174). By understanding Johnson's "building" as creating the harmonious vibration that aligns matter into natural forms, Johnson's declaration to O'Leary that *ARK* is a tree, or his line to Alpert –"I was up to ‘Wor(l)ds 50’ when I decided a few months ago I needed a large tree toward the end of Book I of *Wor(l)ds*" – can be deciphered as expressing the structurality of his work as simultaneously architectural and vegetative; as concretely built and yet isomorphic with the "tree (river, vein)" pattern that Johnson identifies.

Spire/Spirea

Evidence that Johnson worked in *ARK* with the homology of the structure of world and a plant structure abounds in drafts of *Wor(l)ds*. In one draft of what would become the first poem of *ARK*, Johnson writes of the “rose/green borealis joists" of "the outer reaches / each of us / . . . flexible stems supporting parabolic mirrors . . .” (“Wor(l)ds 1” *Wor(l)ds Book 1*); this a development of earlier sketches in which "the outer reaches" appears as "The trees' outer reaches / are branches / Dense senses" and "Galaxy, axis and axle / a system, stemmed / Immense Flow-er / past flower" (“Sound Songs”). In another worksheet he explores the etymological and morphological intersection of intersection: “node: knob on root or branch; point at which leaves

spring; intersecting point of two great circles of celestial sphere; a meeting place of lines roads, or parts . . .” (“Worksheet: Balloons”). In yet another draft, Johnson plays with the figuration of the rising-rose-magnet-spire as the entranced-mind-seeing-itself of poetry: "Art designs by examining itself, extends by shoot off truth /each buds the magnet rose of self / as if / by magic— /trans- / spiring time. /(TRANCE) / :SPIRE/RING—TIME:" (unspaced slashes Johnson’s, “Eyes in the air”).

In a long passage from an essay on process that shows, in selections of his drafts, how Johnson developed the Spire "*ARK* 44 Rod of Aaron," Johnson writes that he worked with the image of the Biblical wooden staff that miraculously "put forth buds, produced blossoms, and bore ripe almonds" (Numbers 17:8). In the drafts, one sees Johnson playing with the image of the "thrysus / dart wrapped around with ivy," the image of spica, "a word used for the upright, tapering stalk," the images of "lilac, chestnut / [in which] the primary branching is centripetal, and the secondary is centrifugal" (“Rod of Aaron” 6). Of his method, Johnson writes: "A few pages on I got 'arbor vitae' as a central image, then a little later the 'that yt / branct forth', which . . . looks like a quote but is made up out of thin air. . . . The other pages of revision here . . . show how I quickly started with the planted stake, wound the serpent in . . . and had reduced all the shrubberies to a central branch of spirea" (7). Johnson figures his own play with the homophony/homology of spirea/spica/spire, as both the building of the spire, the self-generation and the agricultural pruning of the spiraea shrub. But Johnson has been playing with the homeomorphism of his personal image of spire and branch and revealed truth for a while already, for example, in this draft of "Tree Carving" in *Eyes and Objects*:

> The limb its climb
>
> root’s limits.

~~A heart~~ A spire, the hard truth

obdurate art.

The OED reminds us that "spire" is the verb for the germination of seeds, for the rising up into a tall stem or spike, for the rising up of rocks or edifices, as well as the obsolete term for breathing gently into or breathing forth into life, as the Judeo-Christian God does to give form; and from which the later terms *inspire* and *aspire* "brancht forth." Johnson's Spires in *ARK* partake of all these inflections.

The Flower of Rhyme

ARK is, like the sunflower poems that lead up to it, a post-concrete exploration of the registers in which the physical, concrete morphologies of the natural world can be rendered in language; that is, it is a biomorphic poem. But where both "Sun Flowers" the unfolder and "Sunflowers" the biomorphically lined poem are conscious attempts to "sculpturally" represent the flower-as-consciously-perceived, *ARK* is a conscious attempt to sculpturally represent what cannot be perceived as well as what can, to present an abstraction of the instrument of perception itself. In “Sun Flowers” and “Sunflowers,” the concrete elements work somewhat independently of the semantics that populates their lines, but *ARK* is a biomorphic poem of greater complexity. In *ARK*, the "sculpture" is not only signalled in the visual arrangement of the lines on the page, but in the "junctions" made between words, a significance that comes into progressively clearer focus in each section of the book.

Where it is perhaps difficult to see this "junctionality" is when Johnson uses the language of "brick" or "trouvaille" to describe the quotes from other sources that he "cements" into his

structure. The metaphor of collage itself is two-dimensional, not architectural; and Johnson's language in this respect is more evocative of the *trencadis* along the walls and benches of Simon Rodia's concrete garden, than the segments of rebar he welded together to make his spires and arches. Johnson uses "worked and knitted and sawn or welded in" ("Rod of Aaron" 2) to describe his method of composition; but also offers the following anecdote about two sections of the early *Wor(l)ds*:

> . . . both were suggested by the way Duncan uses "The Structure of Rhyme" [sic] to interlock his books. They somehow gave me a scaffold to join other towers to. It is curious but I already had in mind to make three books of thirty-three and one of one before I looked at an onion the way Agassiz recommended and found it had thirty-three radial lines. If things yet don't yet *cohere* as Pound found, they at least all intersect. And I found after I wrote them that quite a few of the sections of the book make spirals like DNA. (Alpert 555)

Another comment of Johnson's makes a similar move between construction and revelation:

> I thought perhaps it would be possible to make something out of the Psalms like I had with Paradise Lost. Again there was a false start with the first six, then I became completely consumed by them for about a month, and when finished they had become not only the trunk and branches of the tree but also the whole Orphic myth. . . . it resolved itself into ten snowflakestars and ten strings in the end . . . And it comes to me at the moment I'm writing this it just might be the Tree of Knowledge. (559)

In these passages, Johnson's intuited structure emerges "curiously," through his application of conscious scaffolding, to eventually resolve – at least, according to Johnson – into the physiological structures of the onion and a tree and of DNA – again suggesting that while construction metaphors articulate the conscious methodology behind *ARK*, models of biological structures, mappable in the resulting work, are the evidence and product of the successful engagement of the unconscious, and hence of nature, in the project of "seeing itself" through

poetry.

But how does *Johnson* discern this "intersection"? What structure emerges from his own collage technique, that Johnson is only later able to "find" resembles DNA? "What of the Structure of Rime?" Duncan asks himself in *The Opening of the Field*: "*An absolute scale of resemblance and disresemblance establishes measures that are music in the actual world"* (14). The frozen music, or architecture, of Johnson's poetry is a structured set of resemblances in which one traces a connection, or junction, in the scale of resemblance between words set in paratactic relation to each other. One can "find" the tree in *ARK* the same way Johnson "found" the natural proportion of sunflowers and onions in his own thirty-three-part framework, that is, by looking for morphological resemblance on a scale that posits exact resemblance as identity, as two points at the same coordinates on the scale. In such a logic, sunflower = sunflower. Sunflower [does not equal] Rose, but there is a proximity in the taxonomic orders we have inherited, orders based on morphology, that classify each as flowers - they are both flowers of the taxonomic branch "flower." Sunflower also does not *equal* crystal or star, but *metaphor* suggests a morphological similarity that cuts across taxonomies and speaks to their sensual appearance as forms – they are, as Hugh Kenner put it, *homeomorphic* (33).

Kenner's discussion of Imagism's debt to Symbolism gives us a sense of the structure Johnson feels he maps:

> The words so raised by prosody to attention assert themselves *as words,* and make a numinous claim on our attention, from which visual, tactile and mythic associations radiate. Words set free in new structures, that was the Symbolist formula. As we move through the poem, word by word, we participate as the new structure achieves itself. (187)

And yet, Kenner continues, when these words are "set free for chemical interaction," free from the structures that make words act "as schoolteachers assert words normally act, naming

things, making comparisons, completing rational squares . . . we do not discern nonsense. We locate each such detail in a structure of another kind, a structure of words, where the words exchange dynamisms in the ecology of language" (126).

This "ecology of language" is Duncan's structure "of rime," where homeomorphism is the key term implying a spatial proximity and strong association. Davenport, who had praised early galleys of *The Pound Era* to Johnson, could appreciate what Johnson was intuitively doing in *ARK*: “As a poet you are already, and always have been, a structuralist. . . . The essence of Structuralism is that images constitute a grammar quite apart from linguistic syntax. You’ve known this since you were in rompers” (“25 V 1979”). Davenport's "grammar apart from linguistic syntax," which he recognizes in Johnson, restates Kenner's sense of "the ecology of language." Yet, while Davenport understood *ARK* as a structure "achieving itself," Davenport had a further intuition that Johnson was advancing the structuralism that Kenner reads in Pound and that Duncan explores in the "Structure of Rime" (*Opening* 14). Davenport calls *Wor(l)ds* “a real metamorphosis of imagery. . . . I was about to write ‘imagism’ but that’s not right. No name as yet for what you’re doing. Ecstatic post-Imagist cubism. Helical post-modernist topology” (“12 I 1980”).

What Johnson is doing, I argue, occurs because Johnson's object-oriented, Orphic vision sees the homeomorphism in the structures of the sensual objects of his free-association architecture, and the ecology of language, and the real plant object as a basic figure of observed structurality and fractal geometry. I have already argued that Johnson conceptualizes movement "through the poem, word by word, [where] we participate as the new structure achieves itself" as analogous to Goethe's observation of the material self-generation of plant differentiation. In *ARK*, where the word-by-word unfolding of the poem documents an associative mental process

that Johnson calls making a structure "rise," Johnson suggests that the self-achieving structurality of the poetic act, the revelation of the structure of mind, and the fractal unfurling of the fern leaf or branching of the tree are, in Davenport's terms, "isomorphic," or in Kenner's terms, homeomorphic.

A Garden of the Brain

Having shown that Johnson's Spires "spire" as much as they are "built," and having argued that Johnson's structure is built of Johnson's flowering concrete, a flowering structure-of-rhyme achieving itself word by word, “petal by petal / – as we know it – / of impending meaning" (“Wor(l)ds 43 The Naked Eye”) it is easier to visualize the utopian place of *ARK* in the landscape- architectural terms that Johnson also often used for his project. “I always wanted to make a garden of some kind," he told O'Leary, "and that’s how I imagine *ARK*” (O'Leary "Interview" 570). Johnson's recurring paralleling of his poetics to a kind of gardening, through and of the sense apparatus of the human body, is prefigured even in Johnson's earliest poems, appearing in *Valley of the Many Colored Grasses*, in which Johnson insists of the poetic page: "This is the garden, where all is a poet’s / topiary. Where even the trees / shall have tongues, green aviaries, / to rustle at his will" (17).

While architecture and monumentality remained Johnson's most deployed metaphors for *ARK*, in *ARK* Johnson still develops his career-long inclination to figure poetry "as a kind of cultivation, as the careful imposition of the gardener on the natural growth of the world" (O'Leary, *To Do* xi). Eric Selinger reads *ARK* as a Garden of Revelation, modelled after the folk art "visionary environments" discussed earlier. For Selinger, the goal of those builders and Johnson is to "call into our minds a world in its Edenic totality" ("*ARK* as a Garden" 339).

O'Leary reads Johnson's gardening metaphors as one of four "Adamic notions" in Johnson's work as a whole. But while Johnson told him that "Beam 30, The Garden" was *ARK*'s centrepiece, O'Leary writes that Johnson's was "a vision not of Eden itself but what is done there" (xii) and concludes that "to read Johnson' is to feel the pleasure of Adam naming things" (x). O'Leary signals the importance of "BEAM 30" by naming his edition of Johnson's selected poems for the declaration in that section that Johnson wishes "To do as Adam did . . . and build a Garden of the brain."

The Adamic framing of Johnson's project as utopian in vision is a productive one that illuminates the contiguities between his gardening and building poetics and places him within the tradition of the American Adam. Some critics read Johnson's urge to build a garden as a kind of garden-seeking, a utopian impulse in keeping with the Judeo-Christian symbology that links a first and ideal Man to his ideal environment – fully known, nourishing, free of suffering and conflict. Selinger articulates the normative reading when he writes of Johnson's work, that "it repeatedly returns to the effort to, as he himself puts it, make a special place – a garden of some kind – which was a surrogate for that imaginary land: an Oz where anything is possible and in which the imagination lives" ("Biography" n.p.). Norman Finkelstein reads Johnson's wish to build a garden of the brain as echoing Robert Duncan's theosophist "heroic desire for cosmic restoration," writing that "the return to the Garden is simultaneously a return to the universal body of the unfallen or redeemed Adam Kadmon" ("Exploring" 52). Barbara Cole writes that Johnson's pose as "Gardener-Creator . . . evokes Eden's tree of knowledge of good and evil" (127), but ultimately Johnson subverts the Edenic demand for conformity in order to enjoy its pleasure and protection in favour of "a democratic garden where all are invited to enter freely and participate in tilling the literary soil, tasting the poetic fruit, and seeking out liberating

knowledge" (126). Ross Hair argues that Johnson's poetics of innocence invite us to "reengage with the phenomenal world – to reconsider our relation, identity, and interdependence with it – and care about it" (*Modernist Collage* 203). These readings do connect Johnson's tropes of poetry-production-as-cultivation with his tropes of material-of-poetry-as-arborescent-growth, but by reading each set of tropes through the iconicity of the Judeo-Christian garden and tree, Johnson's materialist visionary poetics are read and understood as a desire for a return to an Eden of the senses, and of pursuing, or interrogating, a primary human capacity for innocence of perception.

I read "the Garden of the Brain" metaphor in Johnson's work as an important figuring of the scientific dimension of his Orphic project and the materialist trajectory of Johnson's inquiry into the relationship of mind and nature. Johnson's work to this point has demonstrated a preoccupation with the biological organs of perception and with the vistas of new form that technological extensions of human perception have afforded. In *ARK* Johnson presents "the brain" not simply as a synonym for mind, but as the most complex material form on the planet. That vernacular synonymity of brain and mind is exactly what Johnson, the concrete and materialist poet, wants to both tease apart and, as he puts it in a draft of *Wor(l)ds* 23, to "all art compose / :photo & synthesis / 'toputtogetherinthelight'" ("Wor(l)ds 23 [3]"). He will do this by using each of these terms in a poetic context that is a constant theorizing of form and resemblance, and of the materiality and language-mediated structurality of conceptualization.

Johnson wrote in an draft of an essay: "Ian Finlay and I were the only two to come through into a wider realm using the essential visual tools of concrete poetry. I admire him immensely and feel there is a connection of sorts with his gardens and park works and the architecture of ARK" ("Up to Now" 19). Michael Basinksi, who has convincingly argued that "the differences

between Finlay and Johnson are many and hardly subtle," and that Johnson "rejected Finlay's silent concrete and still and stiff concretions," also argues that it is mainly Johnson's ability to bring excerpts of other concrete poems into his architecture, like building blocks, that is the lasting contribution of the two artists' intellectual exchange. I see another proposal in Finlay's concrete, the problem that took Finlay into presenting words within an environment. As Alec Finlay described Finlay's progression:

> Finlay invented the genre of the one-word poem in the 1960s, adding, typically, a corollary: the one-word poem consists of one word and a title of any length, meaning being created by the relation between these two. In the garden, he [IHF] discovered that he could use the materials of nature as his second term, creating poems from a solitary word placed within a composed landscape." (127)

The question Finlay stages by bringing textual language "out of doors"/off the page, that is, the shaping power of concept and the linearity of narrative history within and among "the materials of nature," remains a problem for Johnson, who stages the same question of materiality but keeps language "indoors", that is, sounded in the interiority of the body, the space of the mind, which materially, must be – according to what Johnson knows of physiology – in the brain. But where Finlay isolates the word in stone, and sets it "in" a composed natural environment to suggest the word's always-already-withinness to the natural world, Johnson wishes to build "natural" structures *of* words, as if planting, growing and trimming the boxwoods for topiary, "in" us; doing so in order to highlight the natural world having already sculpted or structured itself as innumerable associations of image "inside" our heads.

"Johnson recognizes the brain and universe as mirror images: astrophysics is horticulture, scientific perception is gardening," Peter O'Leary argues (*To Do* x). But O'Leary leaves the brain reference at that. For many readers Johnson's "brain" and "mind" would be received as interchangeable nouns – O'Leary writes, for example, that for Johnson, "the mind is a labyrinth,

in which both consciousness and the unconscious "collect," because, as the inscription on a wall of the church of St. Savino, in Piacenza, reads: 'This labyrinth reveals the structure of the world,' just as the brain does. 'Convoluted of sun and dust, shut dark in a skull, the labyrinth is its own clue'" ("Gilding" 604-605). But if we don't assume that the brain and mind are exactly the same thing, but that one term indexes the other in an architecture of relationship as yet unarticulated, then when Johnson poses "the brain and the universe are mirror images of one another" (*To Do* x) then his aim to build a *mappemunde*, an architecture of the cosmos, is not an ethereal metaphor of the abstract concept of mind, but a sculptural exteriorization of "what goes on in the head." It is also an exploration of the probability that how one sees the universe is structurally dependent on the organ of perception; that is, that the structure of "mind" and the structures of all its perceptions are, for Johnson, strummings of the lyre, or rather, patterns of activation in the uncharted structure of "the brain."

A Linnaean Garden

I hesitate to suggest that Johnson's project, which indeed invites a reengagement with the world of objects and a reconsideration of our identity within it, exhorts the reader to care about or to steward Nature in the terms of the emerging environmental activism of his day (though Johnson did subscribe to the “Friends of Loren Eisley” newsletter). I read Johnson's references to the Garden not so much as indicating utopian longing for the innocence and an "unfallen" state of dwelling in Eden, but as a trope for the ambition to an exhaustive, territorial knowledge of the dynamics of Nature. Johnson's will is to "see as the sun sees," to know as God knows; and he expresses this desire not as wanting to dwell in the Garden but as wanting to *be* the Gardener. "Now the Lord God had formed out of the ground all the wild animals and all the birds in the

sky. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name," is the account in Genesis 2:19 – forms first had to be shaped out of the earth before they were nameable by man. Johnson's cosmological vision would like to bring all the forms of nature up to poetic consciousness to be named. But Johnson is only as blasphemous as the scientists: "A complete catalog of life on Earth ranks near the top of biologists' all-time wish lists" (Miller 1038), writes one of the editors of *Science* magazine in 2005.

Johnson, throughout his career, treats Judeo-Christian imagery as archetypal trope and seeks to refract the discursive realms of the mythic (Johnson) and the scientific through one another; his horticultural poetics must also be read as working in both discourses. While Johnson has already given us William Bartram and Thoreau as poet-namers and botanists; in *ARK* Johnson bows to a gardener and namer of an entirely new order. "I wrote in an early poem 'Let us call it Arden and live in it'," Johnson wrote in a draft letter. He continues, "And I continue to believe the poet's function is Adamite, that he must name everything anew and bring objects out of chaos into his own, or their own, order. Linnaeus was a poet as well as today's scientist who 'sees' through electron microscopes toward infintessimal quasars" ("I can add little"). Early references in letters to the progression of Foundations also cite Linnaeus as a major influence – Johnson made a note that "my dedication to *ARK: The Foundations 1-33* now includes, with Webster, Linnaeus, and Blake: Simon Rodia" ("Coversheet to 'Beam 4'"). An early draft of the note to end the finished *ARK* read "NOTE: / This is the substructure of a monument for *Bison bison bison* (Lord Linnaeus was a poet), now being erected on the prairies outside Ashland, Kansas" ("slowly swirling ..."). The opening lines to BEAM 8, "Line eye us. / Web stir us," pun on the names of two of the most renowned systematizers of the modern world; Linnaeus, the

"father of taxonomy," and Noah Webster, the "father of American Scholarship and Education" to begin a meditation on perception that asserts that "language torques focus."

Linnaeus, who devised a binomial system of nomenclature "epitomized by the introduction of binomial names for plant species," in *Species Plantarum* (1753) meant to give all the species of the known world a stable and universally applicable name, a project which "allowed for the integration of the results of prior accounts of non-European flora and provided the model for subsequent inventories of colonial flora" (Müller-White 34). By the first half of the nineteenth century, "Linnaean nomenclature had become institutionalized to the degree that no botanist could claim to produce scientific knowledge who did not follow its rules" (34). For Johnson, Linnaeus, Webster and "today's scientist" (the term "quasar," that Johnson uses above, was coined in 1964) are poets not only because they are Emersonian namers, but also because of the orders into which they bring these names, orders which make all the knowledge contained in the name intelligible, memorizable and retrievable. David Quammen, writing about Linnaeus for *National Geographic*, argues that to understand the "lasting significance" of Linnaeus, "you need to recognize that Carl Linnaeus wasn't simply a great botanist and a prolific deviser and memorizer of names. He was something more modern: an information architect" (73). Linneaus' appetite, Quammen argues, wasn't for gathering the information – he enlisted other young botanists to travel to the tropics for specimens – it was for systemizating, and the "centre of that net, that vast web of scientific silk" was the university in Uppsala and its "splendid botanical garden" where Linneaus could observe, cultivate and organize his plants.

The imperialist and colonialist overtones of a project of *mappemunde* are obvious; the terms of space exploration that permeate *ARK* extend those tones; I read the same impulses in Johnson's desire to build his Linnean garden. Johnson's childhood dream of making a garden

where things might grow on the dusty plain is the image of a boy fantasizing power over his surroundings, and his mature poetic dream of making it *all* cohere within a big American poem is the dream, modelled by his forebears, of extending the cartography of the human imagination. For Johnson, this is a project of identifying, grouping or classifying, words (worlds) and then cross-fertilizing these into "new forms" (those he told O'Leary he had made) or, as Johnson might have otherwise said, new "ratios." Can we not read Johnson's garden-making urge as not only to create new metaphor from existing forms, but also as an urge to systematize the names of forms through those metaphors? Perhaps Johnson wishes not just to create blocks of language but to arrange them (as he did to a different effect in ""Blocks to Be Arranged in a Pyramid: In Memoriam AIDS"). We might read him, finally, as an architect of information. Might his garden not reflect, as Linnaeus' did, a theoretical space not only for the reorganization of his "cuttings" and "snippets" of others' writings, but also for their classification into orders and the systematic experiments of attempting, as Derrida might have phrased it, new grafts?[9] Londa Schiebinger and Claudia Swan have described botanical gardens as "the laboratories of colonial botany" (11); if in *ARK* Johnson wishes to build a garden of the brain, his cerebral Eden may well be a botanical garden *à la Linné* – the space, sterilized of histories, that he calls his "Elaboratory" ("ARK 72"), where Johnson can "propagate new symmetries, new // hinges, new edges" (*Valley* 92).

The Foundations: Trees in the Head

Johnson says *ARK* is a tree; he says it is a garden; he says it is an architecture: I have

9 Derrida on the graft: "[B]y virtue of its essential iterability, a written syntagm can always be detached from the chain in which it is inserted or given without causing it to lose all possibility of functioning, if not all possibility of 'communicating,' precisely. One can perhaps come to recognize other possibilities in it by inscribing it or grafting it onto other chains. No context can entirely enclose it" (*Limited Inc* 9).

argued that it is possible to read Johnson's seemingly contradictory metaphors as commensurate and have shown evidence that Johnson sees himself building a botanical-architecture; assembling, as a conduit of natural organizing force, a flowering structure. One can envision Johnson's kaleidoscopic shifts in metaphors for his poetics in *ARK* as a movement between the separate, only slightly differing images of an object that must be placed side by side in the stereoscopic viewer, and viewed simultaneously, in order to perceive the effect of that object being presented in three dimensions. Johnson holds the burgeoning *ARK* up at a slightly different angle in a letter to Williams when he writes:

> WOR(L)DS is finally getting there . . . — but it has taken months to find out what the hell epic it's going to be, and to understand what I had written in the first section. As it stands now its going to be a Man/Tree form . . . rooting from the inner world, to outer, to find what are all the edges of what we know. Wow. Now. The first space age epic by gum. . . . I've finally got something which can, I think, encompass everything. (Letter to Jonathan Sept 8)

Johnson's vision of the structure seems to shift endlessly, but perhaps this passage, suggesting a Man/Tree form, can be read as suggesting "the Brain" as the site of Johnson's wor(l)d-building. His structure, he says, "roots" from the "inner world." Johnson's Garden metaphors simultaneously suggest the shaping of many forms, and the architecture of just one; we have already seen Johnson experimenting with poetry as a sculptural event that occurs in the material space of the head. In *ARK*, we again see trees in the head, occurring where Johnson tries to establish the "foundations" of his project, and figure the material event of perception.

In *ARK*, Johnson wants to break new ground by not simply seeing things anew, but also by hearing and understanding things anew, attending to what Pound called the "three essential elements" of poetry: "*thanopoeia*, *melopoeia*, and *logopoeia* – the play of image, music and meaning" (Bernstein n.p.) He wrote that *ARK* is "Based on trinities, its cornerstones the eye, the

ear and the mind, its three books consist of The Foundations . . . The Spires . . . [and] the Ramparts" (A Note, n.p.). Johnson shifts focus from Pound's trinity of poetic elements to a trinity of human instruments of attention. He again writes of the interface of eye and environment, and extends his interest in environmental interface to the ear and to the mind. As befits a poem that he has hinted can be read as a large concrete work, Johnson establishes some of the Foundations of *ARK* by attending to the physicality of each of these three instruments of human attention, dedicating one prose-like BEAM ("BEAM 4," "BEAM 7," and "BEAM 12") to each. The first two meditations are straightforward enough; each considers how the structure of the organ is adapted to its function (Goethe's eye made of sun reappears in "BEAM 4").

Each mini-essay paraphrases the work of science writers, and each describes the material aspects, the “physics” of the sense organ in a narrative of developmental change that spans timescales. The first two essays, attending to the physical forms of optic and auditory nerves, suggest that sense information moves into a branched form as it is processed by the brain. In "BEAM 4," the human eye is "a sphere of waters and tissue . . . [that] may be said to be sun in other form." Sight "is an intricately precise tip of branched energy . . . it is possible that all universe is of a similar form." In "BEAM 7" Johnson explains the structure of the ear and the pressure needed to sound the eardrum – "equal to the intensity of light and heat received from a 50 watt electric bulb at the distance of 3,000 miles" – and details the resonances of spiral-shaped membranes in the inner ear. "Matter delights in music, and became Bach" Johnson declares. Sound, whether it is the strike of the tuning fork or the Fourth Symphony, is heard by matter, Johnson insists, "heard by perturbations of molecules . . . in spiral ricochet, to charged branches treeing a brain."

In "BEAM 12" Johnson turns to the mind as he has to the eye and the ear, presenting it as

an intricate interaction of molecules structured in the human form and the moving molecules and photons in the environment, where the interaction, despite the outward shape of the organ as "wrinkled lobes of flesh," ultimately takes on a branched, energaeic form. Johnson begins: "O is the symbol for Sun . . . Its outward manifestation is life, just as mind itself seems to unfold some answering chrysanthemum." After Johnson briefly picks up this mind-as-flower image, he returns to another of his key metaphors for mind: the labyrinth.

> Beneath a maze pattern on a wall of the church . . . the inscription reads: THIS LABYRINTH REVEALS THE STRUCTURE OF THE WORLD. Convoluted of sun and dust, shut dark in a skull, the labyrinth is its own clue. ("BEAM 12")

If we recall passages of "Spring" from *The Book of The Green Man*, we find that Johnson's use of the maze metaphor for the mind does not take us too far from his plant images for the same. In *Green Man* Johnson wrote of becoming able to enter the world of the growing grass, into "its Maze" (22) which led him through the "architecture of bees," the "scrolls of leaves" and the "intricate webbing" of spiders, to finally, "even more complexity – the interweavings of man with earth," travelling until he finds that "this, where I began, was the center / of the Maze" (24). Sewell called the Labyrinth a "post-Baconian metaphor for Nature" (246), and though Johnson is clearly picking up on this resonance, and setting himself at the centre of it, his maze, like many of the images in *ARK*, is one that Johnson has been working with over the course of his oeuvre (Jena Osman calls the travel and mutation of these images over the course of Johnson's work "paronomastic migrations" [227]). Johnson's maze is "greened" by virtue of its multiple appearances as a topiary maze. "Now, the obelisks are toppled, / labyrinth & maze are uprooted to pasture," Johnson writes of the topiary Pope parodied (*Green Man* 73). Jonathan Williams revealed that his own "impetus [to write concrete] had come from visiting the ancient topiary and maze gardens of Levens Hall, near Kendal," a visit he'd

made with Johnson (Solt *Concrete Poetry* 85). One of Johnson's concrete works, which arguably participates in "making letters visible as a row of trees," was a simple presentation of three words: MAZE/MANE/WANE. But Johnson makes the connection most explicit in "Four Orphic Poems" where he writes: "Nebula, whirlpool, mist & cloud; knotted, asymmetrical branchings / formed like a labyrinth / – are form, even as a sphere, crystal / & flower" (*Valley* 29).

The labyrinth, a figure that poses chaos and order as entirely a matter of the observer's perspective, covers off the mystery of singular nature's many "convolutions" of form. So Johnson uses the resonances of nature-as-maze to figure his own deployment of a labyrinth-as-mind, mediating the relationship of mind to cosmos through this figure; but if the labyrinth is also "shut dark in a skull," then Johnson also ultimately poses, in his architecture of cosmos, the labyrinthine *brain* as the mediating instrument between mind and nature. It is easy to quickly become lost in the labyrinth: for the brain is both mind and nature, and it is the brain (or is it the mind?) that through language, creates the distinction. In "BEAM 12" Johnson returns to branching, often vegetative, forms to articulate the mystery of how the brain's physiology is the apparatus by which the cosmos, and man's place within it, is interpreted:

> Right auricle, right ventricle, lungs: left auricle, left ventricle, aorta: aorta means 'to lift' or 'heave' and is the great trunk of perception. Branches, from the top of its arch, network the light in our heads . . . What footprint is left in the snow of flesh by an event? Thinking about thinking moves atoms . . . as in a rainbow the architecture of light is revealed, mind is a revelation of matter. . . . The first anatomists likened the brain, pulp and rind, to an orange. Its beginnings are a mulberry of cells, and all desire and despair are seeded in its un- and in-foldings.

Modernist mindflowers

Like the sunflower "unfolder" that unfolds like a sunflower and yet speaks of the sunflower as its subject, the garden that Johnson wishes to build "of" the brain – the phrase implies the end project, in this epic of the growth of a poet's mind, is a gardened brain – has direct references to the brain within it. In fact, to read *ARK* as an opus of Johnson's concrete poetics we might look at the work like a larger-scale version of Johnson's unfolder: a poem that mimics in its form the metamorphosing/developing object that is its subject; or, following Johnson's post-concrete sculptural aesthetic, as a book-scale sculpture that takes place in the head.

But where does the image of the branched brain originate, before its appearance on loose sheets in folders of the Johnsonian archives? Does it matter? Is the image simply one of Johnson's "trouvailles" that he welds, like a concrete fragment, into the structure of *ARK*, or is the figure itself one of the "new symmetries" that Johnson is propagating, like a new cross-breed, in his garden? One could speculate that a moment's brief reflection on the branching shape of blood vessels, which must feed the brain, and a sense of nerves as similarly vascular, would have been enough for Johnson to generate what might seem like a rather obvious metaphor. However, when compared to the ubiquity a trope like "bloom" applied to feminine sexuality,[10] Johnson's branched brain feels still quite fresh. Perhaps he has "made it new"?

An immediate precedent for the literality of Johnson's branched brain trope appears in Duncan's "flower of nerves and tissue in the skull" in *Roots and Branches* (50) that I have used as the epigraph for this chapter. And Johnson's essay on Davenport's *Flowers and Leaves* quotes the following passage, full of floral-organs, comparing it to the "tree of life" in Pavel

[10] See King, Amy M. *Bloom: The Botanical Vernacular in the English Novel,* Oxford: Oxford UP, 2003.

Tchelitchew's most famous painting, *Hide and Seek,* in which Tchelitchew "show[ed] plant and human forms to be similar in their physical structures and purposes" (Prokopoff n.p.):

> Nucula glans purple rose
> Or rosebud in orchid pelvis
> Forest light and water light
> Where leaf fists curl
> Phyllodactyl, April faces
> Pyroculus in mercury light,
>
> Willow bones, root arteries
> Cynaide blue, scarlet cobwebs,
> September polaroid of brow,
> Helix and antihelix, moon-hour dew
> Weltknaben, polyps, wicker-
> Knit and aeromorph in foliage,
>
> Thistledown for hair, muscadine
> Pulp for lungs, sepal eyelids. . . .” (“The Italics”)

Davenport's sepal-eyelidded, leaf-fisted figure evokes Johnson's Archimboldo-Green Man somewhat more than it does a cerebrum and capillaries, but Jonathan Williams gives readers a particularly heady, veiny, sensate cabbage (that may have inspired Johnson's cabbage-brains in *A Line of Poetry* and *Valley*) in one of Johnson's favorite poems of his, from “Two Pastorals”:

I cannot put my hand into

a cabbage to turn

on the light, but

the moon moves over

the field of dark cabbage and an

exchange fills

all veins.

The cabbage is also a globe

of light, the two globes

now two eyes in

my saturated

head. ("Jonathan Williams in the Valley")

In "The Poet," Emerson traces an analog of the branching brain trope back to Plato's Timaeus. Emerson writes that Plato "affirms that the plants also are animals; or affirms a man to be a heavenly tree, growing with his root, which is his head, upward; and, as George Chapman, following him [in 1818], writes, 'So in our tree of man, whose nervie root / Springs in his top' " (*Essays* 462). Michael Jonik has argued that "[t]he figure of the leaf-bud bursting into flower becomes a central, if not the central metaphor of Emerson's thought. Metamorphosis underwrites

Emerson's organic notion of mental structure, and leads him to posit intellect as actively constructing and imaginatively classifying the world" (28). Elsewhere, Jonik writes, "Goethe's 'simple theory of metamorphosis' provides Emerson with confirmation of a 'pure plastic Idea' of nature and, in turn, becomes a mobile analogy for the *exfoliating movement* of Emerson's own thought" (italics mine, n.p.), a movement that Johnson suggests in *ARK* when he writes that "man alone / exfoliate felicities" ("ARK 81") or that the poet must "exfoliate unfailingly / rhyme as mortar" ("ARK 82").

It is perhaps the Buddhist trope of the flowering mind, rather than the tree-ing brain, that William Carlos' Williams picks up on when he refers to that "enormous wedged flower, my mind" ("Details for Paterson," *Collected Poems* 24). Williams appears often enough in Johnson's mentions of his literary influences, that Johnson's branching brain could possibly be a reappearance of the mind-flower in a more positivist frame. When Emerson wrote that "[t]he poet knows that he speaks adequately then only when he speaks somewhat wildly, or, 'with the flower of the mind,' not with the intellect used as an organ" (238) he was referencing the second-century AD Chaldæan Oracles of Zoroaster. And even if Johnson was not familiar with Eastern philosophy's figuration of the top chakra opening like a lotus at the top of the head, Carl Jung was, and Johnson had encountered the figure in *Man and His Symbols.* "Jung had a patient who painted a series of mandalas and the second had a lightning bolt breaking up the rock core. Then later it becomes a lotus," Johnson told Alpert, adding, "I've come to think it's necessary to look at the outside world a long time, like Thoreau and Emerson, before entering the mind" (Alpert 550-551). Again, we might remember that Johnson had typed out from Jung: "As a plant produces its flower, so the psyche creates its symbols" (Binder).

Metaphors of mind-as-plant, that could arguably suggest a branchy braininess, inform the

writing of Rousseau, with whom Paul De Man called the "affinity of later poets . . . a valid definition of a romanticism as a whole" (10). Rousseau, whose *Emile* informed ideas about the educability of children and the developmental nature of mind for the next century, wrote:

> Plants are shaped by cultivation, man by education. . . . Nature, we are told, is only habit. What does that mean? Are there not habits contracted only by force which never do stifle nature? Such, for example, are the habit of the plants whose vertical direction is interfered with. The plant, set free, keeps the inclination it was forced to take. But the sap has not changed its original direction, its new growth the plant resumes the vertical direction. The case is the same with men's inclinations. So long as one remains in the same condition, the inclinations which result from habit and are the least natural can be kept, but as soon as the situation changes, habit ceases and the natural returns." (38)

M.H. Abrams sees the same ideas of development in Coleridge's essays: "The action of the faculty of reason Coleridge compares in detail to the development, assimilation, and respiration of a plant - thus equating knowing with growing," writes Abrams. "Indeed, it is astonishing how much of Coleridge's critical writing is couched in terms that are metaphorical for art and literal for a plant" (*Mirror* 169-70).

Whenever Johnson references William Blake it is almost always in terms of his prophetic cosmological vision. As mentioned in Chapter Two, for Blake, the human senses, "the Optic vegetative Nerves"; "the vegetated mortal Nerves" are the product of natural, rather than spiritual, generation, and "the Chaotic Voids outside of the Stars are measured by The Stars, which are the boundaries of Kingdoms, Provinces And Empires of Chaos [are] invisible to the Vegetable Man" (138). Despite the "sorrowful" earthly picture Blake paints of the "Vegetable Body," Blake participates nonetheless in a vitalist conception of the physical nerves and senses that figures them as germinating or developing as vegetable matter does.

Pound speculated somewhat infamously that "the brain itself, is, in origin and

development, only a sort of great clot of genital fluid held in suspense or reserve; at first over the cervical ganglion, or, earlier or in other species, held in several clots over the scattered chief nerve centres; and augmenting in varying speeds and quantities into medulla oblongata, cerebellum and cerebrum." Pound, deciding that "the power of the spermatozoid is precisely the power of exteriorizing a form," proposes that “the mind is an up-spurt of sperm":

> "Thought is a vegetable," says a modern hermetic, whom I have often contradicted, but whom I do not wish to contradict at this point. Thought is a "chemical process" in relation to the organ, the brain; creative thought is an act like fecundation, like the male cast of the human seed, but given that cast, that ejaculation, I am perfectly willing to grant that the thought once born, separated, in regard to itself, not in relation to the brain that begat it, does lead an independent life much like a member of the vegetable kingdom, blowing seeds, ideas from the paradisial garden at the summit of *Dante's Purgatory,* capable of lodging and sprouting where they fall. (*Pavannes* 209-14)

Pound concludes that "individual genius [can be understood] as the man in whom the new access, the new superfluity of spermatozoic pressure (quantitative and qualitative) upshoots into the brain, alluvial Nile-flood, bringing new crops, new invention" (214). While Johnson does know this passage of Pound’s, making reference to it in an essay in *Vort* (44), and even alluding to it in *ARK* (“Brain teemed Sperm,” "ARK 81"), Pound gives us enough context to read the plant and seed metaphor back into the comparison of thought to “human seed” that I don’t read the sperm-brain as a *competing* morphology in Johnson’s modernist legacy, but a complementary, even precedent model of trying to think through the circulation of ideas in language “in relation to the organ,” that nonetheless turns to vegetable language to figure what Pound calls the “independent” movement of ideas between individuals.

The Brain: A Poet's Topiary

Johnson's own tree-mind figures are not entirely fanciful; Johnson researched the physiological structures of the brain during and after the composition of "The Imaginary Menagerie" and during the early writing of the cornerstones of Wor(l)ds. Johnson does not write as easily of the physiology of the brain and its relation to environmental phenomena as he can the eye's lenses refracting light or the ear's timpanum physically resonating with sound waves. As he wrote in a letter to Williams:

> I've been busy getting the (epic?) on its feet. Now nine 'cantos' or whatnot are done it has some form other can—I trust—see. Also I've been working on THE MIND, to go with EAR & EYE. It is more difficult since no one seems to know much about it, and even the brain has its Encantadas—its physiology more a series of twitching of monkeys and mazed rats than keys to the labyrinth. . . . What Ronnie Ted Johnson is doing trying to make it all cohere when Pound & Olson, finally, couldn't, I don't ask. But it keeps coming, which is all one needs to know somehow. (Letter to Jonathan Williams and Tom Meyer, Dec 12)

In the Mind section of his tryptich, Johnson seems unable to make the same connection of perception as a physical contact with an exterior phenomenon translated to a "branched energy" or "charged branches" that he does with sight and hearing. He has a sense that "branches . . . network the light in our heads" but when he turns to scientific writing in the early 1970s, he finds behavioural neurophysiology to provide little solid information, at least in terms of providing a material understanding of human mental function, as researchers in this area were only just discovering which areas of rat, rabbit and primate brains responded to visual stimulation.

A tiny, undated clipping that slips out from one of the twenty-three still uncatalogued

holograph notebooks in Johnson's archive reads: “If you want some hint of what we are learning about the human brain, read Marilyn Ferguson’s exciting survey of recent brain research in her “The Brain Revolution” (Taplinger). And to round it out, read Nigel Calder’s “The Mind of Man” (Viking Compass)” (Binder). The quote is from a December 1973 article by Max Lerner, a writer for the Los Angeles Times whose column was syndicated throughout the U.S., and appears in the context of Lerner's passionate argument against correlating IQ tests to the gender or ethnicities of subjects. Lerner's humanist argument moves from a declaration of diverse subjects' "common human frame" to a defense of the unconscious and of human aggression as sources of creativity. He argues against suggestions to develop pills that will allow the higher "intellectual" brain to subdue and "stablilize" the limbic, reptilian and paranoid and destructive "lower" brain. Lerner's characterization of the wonder of the brain offers a sense of the brain as the material ground for humanist wonder and self-regard, and, as the title of his article suggests, as the material "essence of the human." Lerner's writing also itemizes some of the major metaphors at play in contemporary journalistic writing around neurophysiology:

> . . . this soft three pound mass of billions of cells, neurons and synapses; of ions and nucleic acids and bioelectric potentials; this clearinghouse of perception; this computerized storehouse of memory; . . . the stronghold of consciousness; this pathway across the world of the senses to the world beyond, which is also the world within us . . . The human brain carries the cosmos within it, and is part of that cosmos. (4A)

So Johnson is not esoteric in his materialist inquiry into an avant-garde suggestion that writers are the "astronauts of inner space." He is completely of his time, an American during the age of the space race that saw the exploration of the brain as a pursuit of knowledge on par exploration of extra-terrestrial space. If Johnson consulted the two works Lerner suggests, in his search for "keys to the labryinth," he would have encountered in Nigel Calder's book a persistent comparison of space exploration to brain research that becomes one of the organizing tropes of

the book. One of Calder's later chapters, on the potential of the conscious mind to control bodily function, is titled, "An Inward Spaceflight," another chapter compares the lab cage of an anesthetized cat to a spacecraft, and near the conclusion, he writes:

> Astronomers have now reached out to an edge beyond which the universe is observable in principle – their equivalent of Gödel – so that discovery in astronomy may peter out . . . The mind of man, though bounded by a nutshell, is king of a conceptual space more truly infinite than the material universe. (263)

Calder's reference to mathematician Kurt Gödel is to the latter's theorem that "a mathematical system cannot be completely self-descriptive; all the rules necessary for describing the system cannot be stated within the system. The human brain is a system presumably conforming with mathematical law; therefore, the argument goes, it can never contain a complete account of itself" (263). The passage harkens back to Calder's introduction, entitled "Nature Becomes Self-Conscious": both of these passages could be lifted straight out of Sewell's *Orphic Voice*.

Johnson's interest in the materiality of mind is perhaps his own form of Calder's "defiance of the old convention that mind is what the psychologists deal with, in contrast with the material brain that the surgeons and physiologists handle" (10). But if Johnson is looking to Calder for a detailed schematic of the circuitry of brain as an "electrical machine" or "chemical machine" (14) he would find only that: “This great mass of cells is bewildering for those who try to trace its organisation and connections, but it is certainly not without pattern. The cells are neatly arranged in layers, which fact plainly has something to say about how the brain operates” (13). Or that: “This lump of tissue . . . is a machine millions of times more complex than the mightiest computers now built” (12).

"Lump" and "mass" are used to describe overall brain physiology, yet when it comes to

describing the structure and sequence of cerebral functions about which something *is* known, the metaphorics are, in 1973, still profoundly mechanical. One chapter discusses the brain's "master switches" and attention as "the bit of machinery which decides from moment to moment what it is we're going to notice" (28); and though the chapter on cell organization does take a moment to compare the structure of neurons to the structure of a tree (138), the neural cell is compared to the polarized battery cell, and their connection is referred to internal circuitry and the junctions of synapses as "wiring." Calder writes: "Without saying the brain is necessarily like a computer, we can allow that the neurons are comparable with the transistors and other working components of an electronic machine" (135).

Marilyn Ferguson's 1973 book uses similar rhetorical strategies. In her introduction, she writes:

> A computer sophisticated enough to handle the functions of a single brain's ten billion cells would more than cover the face of the earth. More mysterious than Mars, harder to plumb than the Mindanao deeps, the brain has only tentatively been charted. Like the early explorers of the New World, our most brilliant brain researchers have barely made out the peaks and coastal regions. (17)

Ferguson covers the latest advances in mental control over bodily function and pain, the effects of LSD, meditation and trance studies, new understandings of schizophrenia, and the charting of EEG patterns during sleep and dreaming, but when it comes to structure, Ferguson's treatment is minimal: "Life on the molecular level is so alien to our daily concepts that the brain boggles at its own unseen transactions" (19). Rather than move toward a comparison of brains and computers (while still insisting that the human brain will always be superior to a man-made machine), as Calder does, Ferguson moves toward speculating on the mind's evolution and the

possibility of "supra-consciousness." She raises questions about the "consciousness" of a nerve cell that can find its way back to its correct position if implanted in another section of a frog's brain. She writes that while Roger Sperry (who would later win a Nobel prize for his split-brain experiments) has suggested that "consciousness is an emergent phenomenon in the brain . . . Sperry agreed that he had not concretely defined the exact organizational features of the neural process responsible for conscious effects" (307). Ferguson concludes:

> Sooner or later, the brain sciences bump up against a Gibraltar of a problem . . . No one knows what consciousness is, what mind is. . . . Sorting mental events from physiological becomes tantamount to isolating the waters of the Atlantic from the Pacific. And there is a very real possibility that such manmade labels as mind and matter are as irrelevant and arbitrary as the naming of the oceans. (308)

Ferguson's language, which intimates that a new scientific modernity or frontier of knowledge is to be found at the suturing of mind and matter, of physiological and psychological, must have seemed to Johnson an opportunity to renew, in his own time, the age-old Orphic quest and become "that order of writer" Sewell wrote about. Johnson stages his own material self-awareness in his personification of the particle in "both tuning fork and Fourth are heard by perturbations of molecules" ("BEAM 7") and "atoms memorize the firefly's wing" ("BEAMS 21, 22, 23"), and in his attempts to describe the physics of sense apprehension in the sections on the eye and the ear. Ferguson writes that "[p]icturing the body's dynamics at the cellular levels gives one a firmer grasp on how the brain can maintain its almost omnipotent control over the physiological processes" (21); Johnson does this in *ARK.* He meditates on the cell, and if we read the graphic images of the stages of cell division in "BEAM 25" as Eric Selinger does, Johnson constructs cell meiosis as a visual metaphor for the progress of nature as a teleology of animal

evolution that culminates in the human brain, with the first stage looking like "a sunrise, [and] end[ing] with twin cells pressed against each other like two hemipheres of the brain" ("Important" 27). In order to understand the mind, Johnson sees the human body at another scale, as one physicist in Ferguson's narrative suggests we do, seeing ourselves as "standing in a sea of radition: sonic, gravitational, electromagnetic. And in each of us is a microcosm of that sea, a shifting, exploding, decaying universe" (21). In numerous moments in *ARK* Johnson materializes the thinking body: be it in the early description of the singing body as "meat in praise" and the consequent declaration "matter: writer" ("BEAMS 21, 22, 23"), or in the late verse that declares: "in terrors of energy, elect / sing Body Electric / who trailblaze the mind" ("ARK 98").

Johnson takes up the question of the materiality of mind again in another prose passage in "BEAM 31". He begins with an unidentified quote; ". . . the perpetual rustling of a windswept system" then adds: "And that we know as much about it as we know about the without." The it is the "within"; an early draft of the passage, still titled Wor(l)ds 31, identifies it as the unconscious ("Wor(l)ds 31, The Naked Eye"). In the final version, Johnson meditates on stars, on the dual motions of radiation and focus, on the proportion and order of the solar system also found in the "bloom" of the atom. He points, perhaps, to the futility of pursuing a grasp of it all, reminding us that "our brains use two percent of circuitry – the sun, .00000000000000000002." But he will not let go of wanting to find the correct expression of the relationship between physiological and psychological, and ends with the declaration:

> ITEM: Phsysics [sic] = Psychics. Space is our compass; and conflux with time makes a tree (vein, river) form twixt trinities through opposed spirals: vortex to vortex: in without: burning bush. ("BEAM 31")

In the earlier draft, Johnson has not yet arrived at this equation; he identifies Einstein and

Jung as two who "saw labyrinth at dance" and suggests that "perhaps Plato's cave of shadows – the shape of mind we were taught – was more an egg or seed of millioned imagining suspended in a plenum of brilliance" ("Wor(l)ds 31, Days"). Though the more explicit traces of his pursuit do not survive the rewrite, Johnson is nonetheless after the *shape* of mind. He marries the metaphorics of space exploration and the brain as a complex machinery in the final passage of "Wor(l)ds 31": ". . . we put our arms blindly through the curious perspective of The Garden . . . on the way between The Ear Divided, and Adam: Spaceship Cerebrum" ("Wor(l)ds 31, The Naked Eye").

So though Johnson never explicitly connects his declaration that *ARK* is "literally an architecture" to his attempt to garden a brain, the two are the same pursuit. Johnson maintained that *ARK* was a work of the unconscious – the gradual and procedural unfolding, ungoverned by narrative, of *ARK*'s architecture is an attempt to let nature dictate a structure, with the understanding that nature is always trying to see itself, and that the human brain is nature's most highly evolved vehicle for such self-seeking. In one draft, Johnson's cerebrum is the sophisticated modern technology of the spaceship; in another, the physics of the psyche make a burning bush, "a tree (vein, river)," a similar form to the "twigged, branchy writing" of the universe that Johnson has been attempting to "read" since his early poems. Like Calder, Johnson shies away from imagining the brain as a computer: his project, ultimately, is a celebration of the human and sings "O / Chorus us Homo Sapiens / in a major key!" ("ARK 99"). Like Lerner, Johnson participates in a narrative that materializes the "essence of the human" and the teleology of evolution in the human brain, not in artificial intelligences. Though he relies on his era's most modern human technology to invoke the modernity of his vision, his insistence on seeing the brain as *nature's* invention and his tutelage in Goethean observation compels him to see the

shape of the mind as "branches," or as in this instance in “ARK 31” and echoed again in “ARK 82,” as "burning inner bush."

Brain Gardening

Like Goethe meditating on how the structure of the eye must relate to light, Johnson struggled with how the structure of the brain related to phenomena extrinsic to the human form, and how poetry phenomenalized that relationship. Having decided for himself on the primacy of the branched structure of the mind, Johnson wrote to Williams from Seattle: I have been wrestling Van Gogh’s cypresses, meself, a student now of trees in the head (not that you’ve seen one boxwood peacock you’ve seen em all, rather the mind has stranger clippers, and Levins [sic – referring to the topiary garden at Levens Hall], perhaps, is ancestor to all the lusters in the row (Letter to Dear Dr.). His sentence is unwieldy, but here Johnson compares topiary gardening not simply to the poet's art as he did in *Valley* but to the working of the mind in general. "Trees in the head" echoes Johnson's poem-sculpture of the sunflower the size of one's head, but if we look further back in Johnson's thinking we see flashes of this figure as morphologically quite literal. In a draft of "The Garden" as it appears in *Valley*, where Andrew Marvell's brain ultimately appears as made of petals, Johnson writes:

> It is a design. Traced in the
> branching of a brain,
> the movement of the mind that is Nature —
> the movement of the wind in leaves
> that is Nature—
> the patterns of a garden.

And an undated loose draft of a poem, "Apparition," shows Johnson working with the tree figure to visualize the practice of holding two concepts in the mind at once:

> My head til now
> balanced its thoughts like branched islands
>
> Till now my head balanced thought
> like branched islands
>
> Till now my head weighed thought
> like island branches,
> not hammered spikes of shade.
> not hammered twigs of shade.
>
> Till now my head weighed thought
> like summer branches,
> not hammered twigs of shade. (“Dense Senses”)

Thought itself, the movement of the mind, moves in branched *patterns* that Johnson equates with the patterns of the Garden. This is Johnson’s gardening of the brain: the tree in the head, the form of "charged branches treeing a brain" that appears in "BEAM 8," is cultivated into spirings of thought, and pruned with the mind's "clippers."

These meditations on the materiality of the thinking cerebrum resonate with work on biological language that Sewell picks up when she asserts that “an idea [is] the perception, by the

body-mind of the individual, of a correlation between a structure it has itself invented or received and a structure perceived in the universe of which it is a part" (29). While Sewell herself does not suggest these structures of perception are branched, she emphasizes that whatever associative functions occur during perception, these are functions of the mind-as-physical-body. In a footnote Sewell quotes Aubrey Lewis: "Perception was accounted for until fairly recently in terms of sensation and association, but now perceptions are viewed as organized mental structures selectively taken from the unstructured stimulus field." (24).

If Johnson is the architect of mental structures, he does so as the spirer of wind into the branchings of the brain. Or, as he writes in yet another draft of *Wor(l)ds*:

> The imagination, or focused fantasy,
> is the convection of the universe and vice versa.
>
> Invention is connection
> all ice & fire at once as out looped nothingness
> we tree
> what seems. ("Wor(l)ds 23 [2]")

A structure, a form in the garden, an idea given a name: the concept comes into being as connections are made between the branched "islands" of thought; our outer reaches, the tree's branches, are our dense senses. Johnson's branch and tree figures organize the ineffable activity of thought in the featureless space of "in the head," in its immaterial dimension, just as the tree figure organizes the Chomskyan logic of sentence construction and the Darwinian logic of identifying heritable traits; but also in its material dimension as the tree stands in for the

branching nerves which fire and connect as they imagine and invent. “We tree what seems”: a careful locution that can be read as a "we" making sense of what once only "seemed," organizing it into tree structures of syntax or knowledge, or as treeing simply being what we do, because it is the structure of our brains, inventing connections out of seeming resemblances.

Poetree: Energetic Phyllotaxis

Johnson's theorization of a line of poetry, once it is "visible as a line of trees," as an exfoliating form, appropriates Goethean thinking about morphogenesis, applying the logic of plant development to the reading encounter, just as Rousseau did to the learning process. By pursuing these questions within the frame of a post-concrete poetics, where the reading encounter is posed not simply as an ethereal event in or of the mind but as a physical encounter of art object and bodily senses, Johnson necessarily is posing the mental event of his poetic creation and its encounter as physical events. If Johnson were writing today, the homophony between his plant-like letters and lines and the plant-like structures and axonal lineations of the active cortex may have generated different forms in *ARK*. But as he said, the structure of *ARK* "root[s] from the inner world, to outer, to find what are all the edges of what we know" and during the period of *ARK*'s creation, writing about synaptogenesis (the formation – the genesis and growth – of synapses on nerve cells) was such an edge, a place of documented observation and theorization that, like a species name falling outside of Linnaeus' binomial system, did not count as what "we" knew.

Perhaps if Johnson had more information about the leaps in understanding of the plasticity of brain dendrites he may have kept some of the early drafts of *ARK* in which he investigates the similarities between the creation of metaphor and the forces that create balance in the structured

form of the plant body. In a draft of *Wor(l)ds* 22, titled "Charles Ives: Two Eyes, Two Ears" Johnson explores one of his favorite phenomena, bilateral symmetry – in this case the bilateral symmetry of the human (two eyes, two ears) and the centripetal symmetry of the flower – in a meditation on counterpoint and the placing of one music against another that was a feature of Ives' work, and which for Johnson, was a metaphor for the juxtaposition enacted by metaphor itself. In the piece Johnson counterpoints long quotes from Ives, Webster, Thoreau and Ruskin; juxtaposing Ives's description of his having given "a musical piece two parts, but both played at the same time" with Webster's definition of a node ("a knot, or swelling. The joint of a stem, the points where leaves arise. The intersecting points of two great circles of celestial sphere") and with Ruskin's long comment (from *Proserpina)* on the orderliness of plant phyllotaxy:

> One of the most remarkable characters of natural leafage is the constancy with which, while the leaves are arranged on the spray with exquisite regularity, that regularity is modified in their actual effect. For as in every group of leaves, some are seen sideways, forming merely long lines, some foreshortened, some crossing each other, every one differently turned and placed from all the others, the forms of the leaves, though in themselves similar, give rise to a thousand strange and differing forms in the group; and the shadows of some, passing over the others, still farther disguise and confuse the mass, until the eye can distinguish nothing but a graceful and flexible disorder of innumerable forms. ("Wor(l)ds 22 Charles Ives")

Johnson closes his set of counterpoints with a passage from Thoreau: "In music are the centripetal and centrifugal forces." From the poem that would have followed, "Wor(l)ds 23," we have the passage "From the flow-er comes the world, and its flowers sprout out our eyes" which informed my readings of *Green Man* and Johnson's concrete. In "Wor(l)ds 24," a piece dedicated to Robert Duncan which eventually became "BEAM 17," Johnson wrote the following long passage within the body of the poem (I trust the relevance of the full passage will be evident):

'Meta' means to change beyond, and 'morphe' is form. 'Phor' is a germinating, combining form, from the greek 'to bear' . . .

The words all have roots, thus syntax is best seen in the leaf. (To-arrange-in-an-order). F.G. Gregory says in his Form in Plants "The appearance of symmetry is an invariable characteristic of growth whether it be of a living or non-living system". And:

"The leaves are arranged on the stem in a spiral and generally are separated by internodes. In plants of rosette habit in which the stem is much compressed the leaves are crowded together, and in such plants a number of spirals are apparent running round the centre of symmetry in opposite directions. Such spiral lines are also very evident in crowded inflorescences such as the sunflower, and in the scales of pine cones. The number of intersecting spiral lines running in the two directions generally conform with the two adjacent members of the series 1, 1, 2, 3, 5, 8, 13 . . . the so-called Fibonnaci [sic] series in which each member is the sum of the two previous members". Italics mine. [Johnson's italics and comment.]

"In the apical bud of the stem, in which the rudiments of the leaves (primordia) are being formed, cut transversely the geometrical centers of the leaves in section again lie upon two sets of spirals running in opposite directions and conforming numerically with the Fibonacci series. This geometric arrangement of leaves is called phyllotaxy" -- Poetry.

poet

tree

("Wor(l)ds 24, for Robert")

In the final version of this piece in *ARK,* most of this writing structurally mimicking counterpoint, centrepetal and centrifugal pattern, and phyllotaxy is cut. Amidst what remains is a new comment that "clockwise, counterclockwise, as blue bindweed to honeysuckle, the cosmos is an organism spirally closed on itself," and, surviving from the phyllotaxy draft, one of the statements that Johnson scholars have picked up as one of Johnson's key declarations of poetics: "That the action of the universe is metamorphosis – its articulation, metaphor" ("BEAM 17").

Johnson conflates the pattern that occurs in the arrangement of rosette leaves or sunflower florets as a pattern of intersecting spiral lines running in *two* directions with the intersection of words, suggesting that metaphor creates the same contrapuntal overlap, or node of intersecting waves, as occurs in music and in natural structures. The word "hinge" appears in the final draft of BEAM 17, suggesting metaphors are "the hinges of Heaven" and recalls the "new symmetries, new hinges" that Johnson means to propagate in his garden. In the early drafts the "spray" of leaves, the arrangement of their juncture with the stem, is a natural regularity that has only the appearance of disorder, and read against the compositional strategy of Ives, suggests that Johnson's architecture of frozen music, his free association of forms, will produce a structure where metaphor arranges itself into a contrapuntal rhythm that from one angle, "an exquisite regularity" might be discernable, but from another angle may seem merely "graceful and flexible disorder of innumerable forms."

When I recall that that *ARK* was first conceived as *Wor(l)ds*, and that "wor(l)d" was Finlay's term for a word-to-word junction, I begin to see the words in *ARK* as a series of world-creating junctions. If I then further consider Johnson's declaration that metaphor articulates the action of the universe, and that *ARK* is meant to map the structure of mind and universe; I read the word-to-word binary constructions of metaphor in *ARK* as the crotches of Johnson poet-tree;

as the hinges of his woodsy architecture. Metaphor is Johnson's "germinating, combining form," and it is new metaphor that Johnson means to propagate in his architectonic garden; "conjunction, not the elements, makes the new light" (Davenport “Introduction” 12).

Of course, effective and startling new metaphor, "freshness" of metaphor, has been one of the measures of poetic achievement since Aristotle declared that mastery of metaphor is a sign of genius. Johnson's poetics, however, suggest that new metaphor is a new objectivation, a new activation of the material architecture of thought.

Johnson: Amateur neurophysiologist?

Johnson actively tries to answer the question of how the brain encodes memory ("What is the impression left in the flesh by an event? What electric footprint? Who went there first that the molecules themselves remember?") in the same space as he insists that we "dream the root to leaf the now" (“BEAM 12”) and writes that "plants think perpendicular thoughts – but man weaves himself, auricle to ventricle, in a maze" (“Wor(l)ds 38”). Johnson wants to know how we tree what seems so that he might do his own careful topiary of that treeing.

Johnson insists on the physicality of perception, "perception is physic's intrinsic Its knit / & / / / or" and sings the "Matrix of Harmonies / orders, opening back, beyond, and within, Laocoön of cocoon / splint crystal, *glaux* [a flowering plant], grey matter spun" ("BEAM 14"). Johnson indicates the primacy of the metaphor as a kind of joint in cellular matter in "BEAM 25," which opens "prosper / O / cell" and includes the meiosis diagram, where under another graphic, a mandala-like circle within circles and arrows indicating the circle's counterclockwise movement, Johnson proposes: ":the mind become its own subject matter: / bent ambient / (all meaning is an angle) /. . ./ Ratio is all." The next page features a comparison of the eccleastical and biological

definitions of cell, the house of gods versus the elementary "structural unit of both plant and animal," setting the two "at primal duel"; setting next to one another "cells of a battery, / brain." This antagonism of biology and theology, and framing the homonym of cell so as evoke the brain as carrying a polarized charge, leads into this comment from Jung that could well describe the science of neurophysiology in general:

> There are unconscious aspects of our perception of reality. The first is the fact that even when our senses react to real phenomena, sights, and sounds, they are somehow translated from the real of reality into that of the mind. Within the mind they become psychic events, whose ultimate
>
> nature is
>
> ("BEAM 26")

Johnson ends "BEAM 26" there, carrying over Jung's last word, "unknowable," to begin "BEAM 27," leaving the "nature is" to stand on its own as the phrase that in fact encapsulates the phenomenality of, and yet impenetrable unfathomability of, objectivation, the translation of the physical or chemical interaction of perception into what we know as thought or knowledge.

In "BEAM 30, The Garden," where Johnson declares his goal is to do as Adam did and build a Garden of the brain, he writes that in this garden are "Internetted eternities, interspersed with cypresses . . . *Phospheros* [sic] *arborescens* / they sing / sense's / struck crystal clarities . . . The Lord is a delicate hammerer. / Gold hive upon gray matter / He taps synapse ('carrying to') ('carrying away') / an immense bronze pinecone / . . . / a vaulting of arteries / beating their heads against the dark." This place, of bright tree-like forms and a pinecone order (a phyllotaxy) of

synapse, is where Johnson's Gardener sets up his architecture of word-to-word ratio, where he "plant[s] Shadow illuminating The Field of Glittering Opposites" and "attempt[s] a temple as if hierarchies of music" ("BEAM 30, The Garden").

A Neuronal Architecture

What I have attempted to do thus far is read the overlap amongst Johnson's structural metaphors and his gardening metaphors, his development of a concrete poetics that sees a line unfold meaning "petal by petal," his remarks that suggest he is creating a "tree" or "man/tree" as much as an imaginary place, and his remarks that suggest his epic poem tracks the development of a mind. In this overlap I see Johnson's branched-brain metaphors reframing a Western tradition of figuring the maturing mind as flowering or growing in concrete terms, by placing them in the context of the brain as the active physical space of this flowering. Johnson's language uncannily anticipates recent research in neurophysiology that now widely accepts that experiences and learning creates the budding and growth of new dendrites in parts of the brain, i.e. that learning new tasks, including new reading or speaking tasks, involves neurogenesis.

Johnson's poetics, which suggest poetry as a material, cerebral event that "builds" a structure with a degree of permanency in an invisible, seemingly dimensionless place hidden in the skull, that is, in the "brain [that] is wider than the sky" (Dickinson, epigraph to the second section of *ARK*, "The Spires"), combined with the branching morphology he attributes to both brain and poetic line, seems to intuitively advance a vision of brain function that coincides with long-neglected scientific observations, validated within the past twenty years, that argued for the existence of neuroplasticity – that is, that even in the mature adult brain, certain neurons are indeed "plastic" and can change in response to new demands for functionality.

The observation that the brain can grow new connections and cells in response to new learning tasks has changed the accepted paradigm of brain functions as permanently localized, or "hard-wired," in certain sections of the physical brain. "Learning a wide range of skills, from sports, computer games, music, and reading, to abstract intellectual learning, including classroom study, is associated with structural changes in appropriate cortical regions or fiber tracts," writes neuroscientist R. Douglas Fields in 2011 (185). So while Johnson's goal, to "make an architecture" and to "build a garden of the brain," can arguably be achieved by *any* literary work, because any reading task will activate neural structures and potentiate their growth, and while the poetics or stated literary goals of many writers could be read as articulating their intention to literally *change* minds, Johnson is the one poet who was actively trying to use the structuralism of Zukofskyian objectivism and Jungian mythopoetics in concert with a neo-Romantic aim of envisioning "how exquisitely the individual Mind / (And the progressive powers perhaps no less / Of the whole species) to the external World / Is fitted" (198). Because Johnson sees poetry as a documentation of the mind's self-awareness of its own he development, when he uses poetic theory as his visionary instrument to chart the workings of the mind in environmental awareness, he brings these into conversation with paradigms of his own contemporary science of mind. In constructing a new paradigm of poetic process that the physical scientists would only be beginning to validate as Johnson finished his late "Arches," Johnson makes a major argument for the research potential of poetic thinking. Where some and for continuing to read poetry as a discourse of psychological auto-ethnography.

In 1894, Spanish scientist Santiago Ramón y Cajal delivered the Croonian Lecture to the Royal Society of London in which he "not only set forth the connectionist approach to central neural processing, but also proposed mechanisms of functional nervous plasticity that were

forerunners of recent views" (Jones 190). Cajal's views would be eclipsed by findings by Broca and Wernicke that established a model of localized brain function as the most widely accepted paradigm for nearly the next century; the plasticity theory fell into particular disgrace "when [Karl] Lashley's ideas about mass action and functional equipotentiality of the cortex tended to outmode models of the brain based on orthodox neural circuitry" (Berlucchi 307). In the 1940's Donald Hebb argued for the plasticity theory of learning; in the 1960's Paul Bach-y-Rita's work on brain rehabilitation with blind patients began to provide the evidence that would begin to open the door to today's acceptance of activity-dependent brain plasticity. Compare Johnson's poetics with Cajal's description of activity-dependent synaptogenesis:

> Nearing the conclusion of his lecture, Ramon Y Cajal remarked that 'The organ of thought, is, within certain limits, malleable and capable of perfection, above all during its period of development, by well-directed mental gymnastics . . . the cerebral cortex is similar to a garden filled with trees, the pyramidal cells, which, thanks to an intelligent culture, can multiply their branches, sending their roots deeper and producing more and more varied and exquisite flowers and fruits.' (Jones 192)

The tree metaphor for the neuron does not refer only to its ability to grow but to the morphology of the cell. Both cortical and hippocampal pyramidal cells vary enormously in terms of morphology and biochemical potential, and pyramidal cells are only one of many kinds of neuron which include Purkinje cells, stellate cells, double bouquet cells, and bitufted cells. But all neurons have *dendrites*, the branched protrusions of the cell that as a bunched group form the *dendritic arbor.* The dendrites of certain classes of cells like the cortical neurons have small further branches or projections on them called spines (too bad it wasn't spires!) that help transmit electrical impulses between neurons; it is at the level of these spines that learning increases or decreases the "spininess," "spikiness" or "bushiness" of the dendrite, and hence increase the contact space between neurons, the connectivity amongst them and density of the material

"architecture" of the active cortex.

Bryan Kolb, explaining brain plasticity to a community of behaviour psychologists, uses plant metaphors to illustrate the morphology of the synaptic system:

> In the late 1800s, Camillo Golgi invented a technique for staining a random subset of neurons so that the cell bodies and the dendritic trees of individual cells can be visualized. *The dendrites of a cell function as the scaffolding for synapses, much as tree branches provide a location for leaves to grow and be exposed to sunlight.* The usefulness of Golgi's technique can be understood by pursuing this arboreal metaphor. There are a number of ways one could estimate how many leaves are on a tree without counting every leaf. Thus, one could measure the total length of the tree's branches as well as the density of the leaves on a representative branch. Then, by simply multiplying branch length by leaf density, one could estimate total leafage. A similar procedure is used to estimate synapse number. About 95% of a cell's synapses are on its dendrites (the neuron's branches). Furthermore, there is a roughly linear relationship between the space available for synapses (dendritic surface) and the number of synapses, so researchers can presume that increases or decreases in dendritic surface reflect changes in synaptic organization. (italics mine, 1)

And "the structure of each brain neuron and the networks they create," the interconnections of these "tree-like" polar cells, and the billions of contacts between the synapses at the tips of their dendritic branches, is referred to within the neuroscientific community, as in the essay by Simon Xuan Chen and Kurt Haas, on the dependence of neuronic form on the neuron's function, as the *neuronal architecture* (2). So, it's fair to say that the "intelligent culture" of Johnson's synaptic gardening indeed might produce new leafage, new "junctions" that are only imaginable, yet nonetheless would constitute a new architecture.

Johnson's Anticipation of *Brain and Language*

In one way, Johnson, despite the lack of hero in *ARK*, is doing what poets since Wordsworth had understood as their job – writing understood as exteriorizing the perception and understanding of an interior mind – on the other hand, Johnson eschews personal narrative, and "conceiv[es] the long poem as 'structure' rather than diatribe, artifact rather than argument" (*ARK* "A Note"). What action of mind is being represented by this structure; a structure that blends the American modernist rhetoric of Adamic seeing with a Romantic understanding of poetic vision? What Johnson ultimately elides in his description of his own work is the assumption that the structure he presents, perhaps because it doesn't make use of obvious rhetorical strategies, is not an argument. Johnson sees his architecture as made of "music," of harmonies between forms, registered as spatial arrangments and rhymes of words.

In 1984, he made the following notes in his notebook:

BRAIN

memory abode stem

were epileptics know [sic]
as genius because
that storm in the head
realigned all synapse. This *is*
creation

activity

Bucky: partition fired partition

fraction ^wave through fraction

reaction solve reaction.

actXity! (a Bucky

Fullerword)

contour. (qtd. in Nathan Brown 220-21)

In his notebook from the following year, when Johnson was drafting his essay on compositional principles, he wrote the following:

Everything means also

something else

(as part of 'rhyme'

look up Bucky Fuller's

synergetics, etc. (qtd. in N. Brown 220)

These notes inform a later passage of "ARK 77":

actXity sunder brainstem,

storm in the head

contour everything believable

"fraction wave through fraction,

reaction solve reaction"

in Verse salvation

Johnson relates the structural dynamics expounded by Fuller in *Synergetics: Explorations in the Geometry of Thinking* to rhyme and to shared meaning; collapsing the distinction between rhyme and metaphor, by seeing the resemblance in "hearing resemblance" and "seeing resemblance." Rhyme is Johnson's metaphor for metaphor; for him, metaphor is a kind of morphological rhyme that suggests semantic interdependence.

And in another late passage, "ARK 82," he states explicitly that for "all the years it takes / . . . exfoliate unfailingly / rhyme as mortar." Johnson has from Kenner (who wrote Fuller's biography *Bucky*) that "rhyme is nature's way," from Fuller he takes that creativity is a realigning of synapse, a partition 'firing' partition, a connection that is at the same time potentially a sundering, or disruption, at the brainstem, the very support structure of memory, and the level at which we perceive even "below" consciousness. As Johnson wrote in "BEAM 12," that no matter how evolved our consciousness: "Still, beneath the frontal lobes, at the stem of consciousness, is that reptilian speechless gaze" which in his draft he specifies as "beneath the cerebellum, at the brain-stem, is a place – a place <u>of the breath</u> and <u>of the articulation of speech and song</u>" ("Wor(l)ds 38").

The relevant passage from *Synergetics* is helpful in understanding Johnson's idea of the co-incidence his *exfoliation* and his building, as well as the idea of the word as an object that objectivates, a "packaged concept":

> The human brain is a physical mechanism for storing, retrieving, and re-storing again, each special-case experience. The experience is often a packaged concept. Such packages consist of complexedly interrelated and not as-yet differentially analyzed phenomena which, as initially unit cognitions, are potentially re-experienceable. A rose, for instance, grows, has thorns, blossoms, and fragrance, but often is stored in the brain only under the single word – rose. (n.p.)

Johnson's "memory abode stem" is filled, if we follow Fuller, with a structure of words in want of further differentiation and reassociation. Johnson will "realign synapse" by rhyming new words with each other, by recontouring the world in a manner similar to the recontouring he experimented with in *The Book of the Green Man* when he deliberately "saw" green men on the English landscape. Johnson will make new hybrids, new symmetries, with his rhymes.

The "packaged concept" of rhyme is to set two like-sounding words together for the pleasure of their shared note; there is little conceptually new about, say, the rhyme of "Art alone translates the fear — Transmutes an ear, transcends the near," as Johnson does in an unpublished passage ("Lullaby"). For Johnson, rhyme motivated by formal exigence, like the ballad's or the sonnet's "end tag and thump," produces the unsuccessful harmonics of *The Imaginary Menagerie.* To "write true" Johnson allows rhyme to proceed "nature's way," which for him is to allow rhyme to structure his free-association. For Johnson, there is an equivalency of "radiance," of nodal distance between words, of the word-association suggested by rhyme as those suggested by structures of myth or structures of natural order. As Eric Selinger puts it, Johnson is "devoted to puns and rhyme as linguistic versions of the fractal puns and rhymes that shape the physical universe" ("Garden" 325). For Johnson, the dendritic *tree*, *river*, and *vein* or astral *aster*, *asterisk*, *crystal*, and *flower*, are rhymes as much as *oriole* and *aureole* – only they rhyme visually, and spatially, not aurally. His work in *ARK* proceeds with the logic we saw in GsAeRcDrEeNtS, that overlapped *oriole* and *aureole* in the same graphic space, even sharing at points the same

characters. In Johnson's architecture, a fountain is a firework is flowering rod – because each of these shares the dynamic shape of upward pillar rising into radiant burst, there simply is no word to "single-tag" the categorical thing of unfolding matter to which Johnson might re-store these forms in his new taxonomical garden.

Johnson's privileging of morphological rhyme, not just as the object of his attention as in early works, but as a logic of composition in a project that means to rearrange synapses, means that even if he means no argument or "diatribe," his architecture aims to queer a normative, stable mode of perception – perception previously conditioned by, say, Linnaeus and Webster. If in *The Book of the Green Man*, Johnson looked at how we are primed to see, staging "a constant refocussing of eyes: mine, others, mine through other, on and on," ("Rod of Aaron" 1), then in *ARK* Johnson investigates how we are primed to order and organize, and proposes his own order of nature. This order may not be an argument, but it is a proposal, a chart, that raises the question of what questions motivates the creation of orders. Like his vision inspired by other visions, Johnson's order is inspired by the "self-taught, self-discovered mathematical thinking" of Fuller that Amy Edmondson argues presaged the new ideas of how "nature organizes herself" that "new [twenty-first century] ideas in fractals, self-similarity, chaos theory, complexity theory, cellular automata, emergent properties, self-organizing systems and scale-free networks are suggesting" (xxii).

The sequentiality, the chain-reaction-like yet palindromic dynamic Johnson constructs in the phrases "partition-fired-partition" and "reaction solve reaction," and labels "activity" under banner of "BRAIN," echoes the "cell trigger cell" and "arcade cadence arcade" locutions in "ARK 94" and "ARK 95" by which he might "matrix pale infinity" as well as the "rhyme twine / mirror rim mirror" locution in "ARK 61." These mirror locutions, which in Johnson's

architecture are "self-same" rhymes, also appear in "BEAM 30," The Garden where the "grey matter . . . synapse [is a] "('carrying to')('carrying away') . . . Literally, a flowing: form-take-hand / -with-form / (That Which Fasteneth Us) / pillar to pillar / the great dance arch itself." "Fire" is the common verb for a neuron emitting an action potential, the impulse which "triggers" other impulses in adjacent neural cells; Johnson not only demonstrates awareness of brain activity as cells firing off electrical potentials (as he indicates in "BEAM 26"), but in the line "that which fasteneth us" seems to also be familiar with the synaptic property known as Hebb's Law, famously paraphrased as "Cells [neurons] that fire together, wire together." Hebb's *The Organization of Behavior* (1949), in which he suggested that "the growth of synaptic knobs [is] a plausible conception" (63) is now considered one of the early intuitive descriptions of neuroplasticity. The flow of information through cells forms new paths between them, not as a rivulet makes runnels in soft earth, but as a branch extending towards light, produces growth in itself in the direction of the energy exchange. As cell triggers cell, the great dance of grey matter "arches itself," "pillar to pillar," organizing and reorganizing its own architecture. It is this cellular self-organization that is indexed by Johnson's duality of metaphors, the architecturally constructive and biological epigenetic, for *ARK*'s systematicity.

And for Johnson, music – the physical perception of harmonies, of Duncan's "*absolute scale of resemblance and disresemblance establishes measures that are music in the actual world"* – is a key, constructive movement across the gap between cells: "arcade cadence arcade." Johnson would likely not have heard of "mirror neurons," about which scientists began writing in the 1990s; when they hypothesized that "observation of an action activates the same neural circuitry required to perform that action" (Théoret and Pascual-Leone 736). But recent research suggests that even hearing certain words activates the neural circuitry involved in

pronouncing those words and that "the mirror cell system [is] multi-modal [i.e. not only visual] and critical for language acquisition" (736). Johnson suggests that the tonal or morphological perception "mirrored" in his rhymes is a kind of equivalence of forms in his synergetic mathematics. Through his parallel construction of phrases in "cell trigger cell" or the brain's "reaction solve reaction," he intuitively suggests the analogy of performing this mirror-like poetic move as analogous the basic neural activity of perception, posing literary rhyme or metaphor as a biologically-founded mirroring. Johnson's work poses his work as biomimetic in ways similar to those Deborah Jenson and Marco Iacoboni in their 2011 discussion of "literature, and related theories of mimesis" in the light of all mirror neuron theory suggests about the developmental primacy of imitation:

> . . . even before Plato, mimesis referred to categories as distinct as visual resemblance, behavioral emulation, impersonation, poetic or musical expression, and metaphysical conformity between natural and immaterial realms. . . . In the mirror neuron paradigm, mimesis is a developmental intercorporeal synergy. Imitation need not have an external or performative dimension, like mimicry, or a material product, like a painting: even without physical miming or linguistic or artistic representation, one imitates the behavior of others on a neurological level, and one's ontological being is inseparable from that motor apprehension. . . . Mirror neurons suggest a kind of ontological priority of representation. Representation is internal, it is physiological. As such, literature itself is reframed as a kind of biomimesis, so ancient that it now appears to us completely aligned with culture rather than nature: an imitation of neurobiological technologies of executory representation and motor intersubjectivity. (n.p.)

Branché (Fr. *connected, engaged, plugged in*) : This Is Your Brain On Rhyme

I have argued that Johnson's focus on homology, on creating a new taxonomy even though ultimately things are ever only described in terms of another, sees the homology between the

cerebral nerves that carry the mental events of perception (in the "branched" brain) and the sequential, unfolding line of language in time. To do so develops Johnson's conception of the object of "narrative" or "sequential" concrete poetry. His conception of the line as a visual or acoustic event that moves into the head becomes a vision of the soft circuitry of the nervous system itself as the location for the event of readerly visualization.

This is an Orphic experiment, a question posed by and as the mind seeing itself engaged in language, that investigates the structure created by an attempt to describe the cosmos with a tool (language) that Johnson experiences much as post-structuralists posit: as an ever-shifting set of relationships, in which each thing is only describable in terms of another, yet that Johnson also understands as nonetheless following a kind of onomatopoeic logic, where homonymity often indexes morphological identity. For Johnson, language embodies the same paradoxical flux and stasis as evolving natural forms. The universe is in constant movement, constant change, yet objects do exist. Nature exists as innumerable expressions of form. Words seem stable, but change in relation to one another in different contexts or over time. Language orients its millions of speakers in infinite relations that from many standpoints seem chaotic, but that between users functionally creates order, signification and working knowledge; in the universe what seems like chaos to the human observer may always potentially be revealed to be layer upon layer of forces finding equilibrium.

Of the "visual, tactile and mythic associations [that] radiate," that Kenner argued derive from words, Johnson privileges the visual and aural. For Johnson, homophony and homonymity – in other words, aural and visual rhyme – are a key organizing principle in the construction of his line. Duncan told Johnson that he was "the only one to make it an architecture" (O'Leary "An Interview" 565), where "it," I argue, is that syntax of images Davenport spoke of, Duncan's

"structure of rime." Whereas Johnson's peers *mine* the structure, mobilize it, Johnson *maps* it. Johnson however maps an archetypal syntax onto his harmonics of matter – where, for example, "Christ" might stand for the known universe ("BEAM 29"); "angels" might describe the motion of electric impulses in cells ("BEAM 17"); and where the Tree of Knowledge rhymes morphologically with Pound's rose of iron filings and with the lilac bushes of Johnson's childhood memory ("BEAM 25"). As Darwin made a tree of the harmonics of species morphology in Linnean taxonomy, Johnson makes visible the "musical" harmonics of the information architecture of his own historically specific American English language. *ARK* "doesn't have a hero," remarks Peter O'Leary. Johnson adds: "And it doesn't have a story. It doesn't have a history. It just lists a few things," ("An Interview" 577). *ARK* can be conceived as non-narrative, yet sequential in the manner of his sequential concrete. *ARK* is a great data visualization, where words are alpha-graphic data, that Johnson sets out "to-arrange-in-an-order," to find the phyllotaxy of its natural leafage on the page, and emerges as Johnson's spiraling "chart" of word-to-word relationship.

Conclusion

Buckminster Fuller offers the following "Author's Note on the Rationale for Repetition in This Work" in *Synergetics*:

> It is the writer's experience that new degrees of comprehension are always and only consequent to ever-renewed review of the spontaneously rearranged inventory of significant factors. This awareness of the processes leading to new degrees of comprehension spontaneously motivates the writer to describe over and over again what-to the careless listener or reader-might seem to be tiresome repetition, but to the successful explorer is known to be essential mustering of operational strategies from which alone new thrusts of comprehension can be successfully accomplished.

> To the careless reader seeking only entertainment the repetition will bring about swift disconnect. Those experienced with the writer and motivated by personal experience with mental discoveries-co-experiencing comprehensive breakthroughs with the writer – are not dismayed by the seeming necessity to start all over again inventorying the now seemingly most lucidly relevant.
>
> Universe factors intuitively integrating to attain new perspective and effectively demonstrated logic of new degrees of comprehension that's the point. I have not forgotten that I have talked about these things before. It is part of the personal discipline, no matter how formidable the re-inventorying may seem, to commit myself to that task when inspired by intuitive glimpses of important new relationships-inspired overpoweringly because of the realized human potential of progressive escape from ignorance. (n.p.)

The "spontaneously rearranged inventory of significant factors" that are "inspired by intuitive glimpses of important new relationships": these phrases, here used in Fuller's “Author’s Note” could as easily describe Johnson's ninety-nine repetitions of the same attempt to Orphically re-inventory the world and make a new sensual object of that process. Whether it be in the didactic prose and concrete images of “The Foundations,” the free-associative, accretive, rising structures of the Spires, or the tiny balanced mirrorings across a centred axis in the three- and four-word lines of the Ramparts, Johnson is always doing the same thing. Over and over again, he "integrates universe factors" intuitively to pursue "new thrusts of comprehension" and "mental discoveries co-experienced with the writer."

Fuller's work has been described as "the product of the mind as comfortable with mathematical precision as with the intuitive leaps associated with visual and spatial conceptualizing" (Edmonson 1). Johnson, a poet, is trained in a history of intuitive leaps and in his own way sets out to articulate a "poetics to be a myth and physics of the large and small, [for

which] a new cosmos." One conceptual leap that Johnson has always wanted to bridge is the bi-directional metamorphosis, at atomic and galactic scales, between non-sentient nature and the "labyrinthine intricacy" of human sentience, acknowledging that "since the mind must study itself with itself, we wrestle in schizophrenia" ("Wor(l)ds 38"). Whether it be the "looking at looking at it" of nature observation that he stages in *The Book of the Green Man*; or making language visible as trees in his concrete; or trying to visualize the "answering chrysanthemum" of mind/universe, Johnson's work is an "ever renewed review" of the information about growth, self-organization, and "unconscious" responsiveness to external stimuli that nature presents to the human mind in the forms of the plant world.

In every section of *ARK*, Johnson invents new formulations that again and again articulate a intuited relationship between the structures (orders) of nerve systems, the haptic communication of physical resonances or sequential "firings," and plant bodies. These new conjunctions of elements form new sensual objects that propose embodied mind in contempoary terms, in effect producing Johnson's own twentieth-century objects, made of text, that function like modern Green Men. In the Foundations:

Linkings, inklings
around the stem & branches of the nervetree –
shudder and shutterings, sensings.

SENSE sings.

("BEAM 8")

In the Spires:

'temenos' (that which altars itself)

fashioned as wired combustions of the Incombobulus

stumping those salt bushes, rose tangles, this yucca clump

intonation

so built . . .

cements relationship . . .

tier on trellis tier

what music makes its way through us, which

scarlet trumpet vine . . .

. . . feed new senses

gardening that otherwise

sheer lilac piled blood shed land . . .

. . . how Sordello a spire, of such dark luster in varied burning hurry to

spur head about

compelled who to change a world by song alone . . .

("ARK 39, *The Roswell Spire*")

And again threaded through another Spire:

nested cycles

receding as apple blossom . . .

jardin d'hiver . . .

bedrock

lone furrower

soul, soil . . .

cell tackle

creed

– Thistle Electric . . .

new window

cavern

oldest brain . . .

great

white stars

of hemlock flower . . .

thus spoke

threefold arranged

treed angels

(vow wood viols)

("ARK 62, *Fireworks III*")

And finally in more condensed shapes in the Ramparts:

globe consuming itself, say

brain by spinal Chord

to pierce new universe thrice on

Pulse, thumb plucked upon

time strung celestial circuitry

inset eternal nerve

meddle new bearings

prescription for sentience

each cell array galactic vertebrae

Dream: homestead bound gothic

grafts archt cherry, plum and peartree

leaved to periphery

("ARK 73, *Arches VII*")

These are some of the longer progressions; but sections of three or four lines that connect two of the three broad terms (structural, energaeic connection of similars, sense, plants) abound amid Johnson's constructions that use other elements of the Universe – spirals of DNA, the Milky Way, angels, to name a few. I am not arguing that no other shapes can be found in *ARK*, I am arguing that Johnson "sets free" these broad terms from their usual discourses for the new interaction Kenner spoke of, and "we do not discern nonsense." In Johnson's reiterative "listing" is an intuited order that sees the electric firing of neurons, the mirroring logic of music, and the phyllotactic structure of plants as productively drawn together in the Orphic quest of the mindbody to (de)construct itself.

CHAPTER FOUR

POETRY AS NEUROGENESIS AND
THE FALL FROM EDEN IN *RADI OS* AS HUMAN NEUROPRUNING

Rose of arrested impulses
self-pruned
of the primordial attributes
a tepid heart inhibiting

with tactful terrorism
the Blossom Populous

Mina Loy, *The Last Lunar Baedeker* (116)

Most beautiful! The red-flowering eucalyptus
the madrone, the yew
Is he. . . . . .

At the root of the neck

the clavicle, for the neck is the stem of the great artery
upward into his head that is beautiful . . .

At the root of the groin

the pubic hair, for the torso is the stem in which the man
flowers forth and leads to the stamen of flesh in which
his seed rises

Robert Duncan, *Bending the Bow,* 1968 (64)

In the last chapter I argued that, extending the poetics that Johnson developed in his concrete,

ARK 's textual material is as plant-like as much as it is aggregate and cement. The structure Johnson "mortars" together word-to-word reveals to us a set of relations of forms, invisible to us only because a more normative set of relations is assumed to structure our attention. In those normative relations, words "act as schoolteachers assert words normally act" (Kenner 125), that is, functionally naming things and participating in normative grammars.

The structure Johnson means to make visible is, I have argued, a system of noticing "morphological rhyme" where forms of the cosmos, across the divide of organic and inorganic form, are taxonomized according to their appearance to the senses. In this system, Pound's inorganic "rose of iron filings" and the vortex meets Zukofsky's organic "flower and man, both modes of these inertial systems;" in the information architecture of *ARK*, where one of the rhymes made visible is the homeomorphism of Johnson's unfolding plant forms and learning brain. This is a kind of "natural grammar" that maps a kind of resonant harmonics of form in that the senses, the body and the cerebral organ that organizes the information we call perception, are themselves biological forms that can only perceive as much as their own form is shaped by nature to detect. Whether it be the shape of a "Rose x Landscape," or the shape of letters on a page, what can be perceived can only be "a landscape of Simulars / where shape sort inked shape" ("ARK 91").

Johnson's system of morphological resonance produces an insistence on the rhyme of branch and brain, not only in shape but in its plasticity, in its gesture of unfolding. As the provisional list of sources for this image suggests, this is a knowledge, however intuited, that poets and philosophers going back to Plato have expressed in metaphor, and a dynamic disciplinary science would intuit again and again, but that would only be observed via experimentation years later. What sensory experience is traceable in this figure that has been

generated over numerous variable historical conditions? What claims can be made about Johnson's method? Even if my argument for his prescience is persuasive, can any claim other than for Johnson's random and uncanny intuition be made about the engagement of his poetics with his perception?

I'd like to explore the possibility that Johnson is making explicit, and systematic, a "way of knowing" that mainstream literary criticism could only began to take seriously in recent decades, after the turn to the body instigated by Judith Butler's work moved beyond feminist and gender studies and the affective turn allowed somatic experience back into critical conversation.[11] Even today, the structuralism inherent in the architectonic aesthetics of Johnson and his peers might be read as unenlightened to participants in a literary discourse that in the seventies and eighties decidedly displaced the author and characterized language as a free-floating system of signs. It is outside the scope of this dissertation to give nuance to all the shifts in understanding of the systematics of language that took place in what we call the poststructuralist turn. But to sketch the frame of paradigms within my own field within which my reading of Johnson's systematics may meet with skepticism, I use George Lakoff and Mark Johnson's characterization, in *Philosophy of the Flesh* (1999), of "the four claims about the nature of language" on which, they argue, poststructuralist philosophy rests. These claims, as Lakoff and Johnson understand them, are:

1. The complete arbitrariness of the sign; that is, the utter arbitrariness of the pairing between signifiers (signs) and signifieds (concepts)
2. The locus of meaning in systems of binary opposition among free-floating signifiers (différance)
3. The purely historical contingency of meaning

[11] I also believe the knowledge of the 'charged' relationship of language to the body that I mean to explore here has arguably has always been present in discourses of subaltern subjectivity. This project, in some ways, is my working out of a model of this relationship articulated through unmarked subjectivity, that will give me a model with which, in later scholarship, I might bring discourses of marginality and alterity into conversation.

4. The strong relativity of concepts (464)

The strong influence of this poststructuralist paradigm has produced a critical climate that now, nearly fifteen years later, is described in the following passage:

> Poetics has far more often addressed the 'how' of a text than its 'what' -- how work is produced, how it is disseminated, and how it is consumed. Roland Barthes remarks: "[poetics] can never be a science of content, but only of the conditions of content. Its aim is to "know how meaning is possible, at what cost and by what means." (n.p.)

This declaration comes from the framing statement of the "Convergence on Poetics" at the University of Washington Bothell. To set the stage for the questions that would be addressed at the 2012 event, the organizers continue:

> But while Barthes' statement of poetics remains an important vantage on poetics, our own time yields a different set of questions and tensions that can be loosely grouped through the category of "what." The poet Robert Creeley once remarked, "Form is never more than an extension of content." By this comment, Creeley did not seek to undermine the importance of poetic form, but rather to suggest that form and content exist in a dynamic relationship. The conference asks how the synergistic relations between "the what" and "the how" of the texts, art objects, and performances might be brought into sharper focus.

They use the word "synergistic," slantly rhyming Bucky Fuller's term *synergetic.* While I don't, at the time of this writing, want to use Fuller's term to map the dynamic relationship of form and content that Johnson develops over the course of his oeuvre, I do think that Johnson is positing a dynamism between language and natural forms that a critical frame attentive to the "conditions of content" might dismiss, particularly given Johnson's unabashed patriotism and his posing of his vision as being "without history."

For my purposes, the main observation I want to make about the poststructuralist, deconstructive approach to language that held sway in the later years of Johnson's writing is that the body as a biological organism was generally left unconsidered as an agent in the production

of meaning. To be fair, this elision results from a pragmatic logic that would presume that discussions of piano concertos need not concern themselves with noting that musicians have ten fingers and a piano is shaped to accommodate able-fingered bodies. Language's dependence on the shape of the mouth, the movement of the tongue, etc. is left to the domain of linguistics. When the body is discussed in post-structuralist frames, "subjects" are bodies upon which language is understood to be always already at work.[12] In this logic, *il n'y a pas de hors texte,* and language is the system in which all thought occurs; what is outside language is outside thought; and only language that constructs the possibilities of identity and shapes bodies' conceptions of themselves as selves and agents.

But noting that musicians have fingers, or more precisely, that poets have organs through which perception and thought occur, is at the heart of Johnson's work. Within the deep concept of Johnson's project there is always a material perceiving subject/object: in his early work, it is more consciously that "the eye [is] a kind of scanner for the sun . . . an idea with glimpse of God in it" (Davenport "An Afterword" n.p.); in *ARK* he explores the sentient flesh more broadly, returning again and again to "the flesh as is / and am, in sempervivum helices" ("Wor(l)ds 27, Days"), particularly questioning the quality of flesh that perceives and that worships, how "rose wrapped red within thorn / flesh map Sun" ("ARK 57"); how "poised in flesh" the "core of the universe /(so rings redwood of eons) / gospel sentience" ("ARK 99"). It is as if, on his own, Johnson is posing a kind of "philosophy in the flesh." He models a basic, yet plastic structure of relations through a logic of morphological rhyme, and his work suggests that higher language operations are founded on initial mimetic perception ("Language is fossil poetry," said Emerson; and Johnson's wordless handprint in "BEAM 18" is, like the "writing" of the leaves on the rock,

[12] I want to immediately note that disability studies, feminist studies and anti-racist work will have already done much to turn poststructuralist understandings back toward the body. I hope to contribute to that work by theorizing embodied subjectivity outside conversations around identity/performance.

a sign of our pre-linguistic trace). He then posits this plastic network of traces of perception, language, the language of of both myth and science, as occurring in an evolved, material organ ("the least belief /proud sprout pry ancient any brain" ("ARK 50"). These ideas share much with the "integrated theory of primary metaphors" articulated in Lakoff and Johnson's book about "the embodied mind and its challenge to Western thought" (*Philosophy* 46).

Linguists, who for a period moved away from studying language as a form related to the mouth and breath to theorizing abstracted syntactical structures, now consider the communicating mind's regulation of mouth and breath through the sensorimotor system as language activity within their domain of study. The route of linguists toward "cognitive linguistics" is not the short leap Johnson makes from linking the physical eye and ear (and mouth and breath) through the nerves to the physical brain. Rather, the field of cognitive linguistics "grew out of the work of a number of researchers active in the 1970s who were interested in the relation of language and mind, and who did not follow the prevailing tendency to explain linguistic patterns by means of appeals to structural properties internal to and specific to language" (Kemmer n.p.). These researchers directly opposed the Chomskyian privileging of syntax as the primary object of linguistic interest. While Chomskyists assumed that syntax was driven by principles independent of the meaning intended by speakers, cognitive linguists believed that "linguistic structures serve the function of expressing meanings and hence the mappings between meaning and form are a prime subject of linguistic analysis" (n.p.). These linguists also opposed Chomsky's assertion of linguistic capacity as an "innate capacity" that saw language acquisition as "logical problem," not a developmental or learning task. All of the early currents of cognitive linguistics, in any case, held "that language is best studied and described with reference to its cognitive, experiential, and social contexts, which go far beyond the

linguistic system proper" (n.p.).

George Lakoff was one of the pioneers of cognitive linguistics. An early student of Chomsky's, he "stumbled" on "hundreds of counterexamples" to Chomsky's assumption of a structure of language autonomous from meaning and communication. Lakoff brought formal logic to bear on semantics, and worked with the early cognitive science community at Berkeley. He "became convinced that Linguistics had to be based on the nature of cognition." His major idea was that "Language is just one aspect of human cognition, using general cognitive mechanisms. Linguistics is both constrained by discoveries in other branches of the cognitive sciences, and can contribute to them" (Lakoff "Academic" n.p.). Working with existing research done by Charles Fillmore, Gilles Fauconnier, Len Talmy and Ron Langacker, Eleanor Rosch, and Paul Kay and Chad McDaniel, Lakoff "discovered the basic mechanism of metaphorical thought — frame-to-frame mappings across conceptual domains" (n.p.). Lakoff worked out the early details of the cognitive theory of metaphor with philosopher Mark Johnson in their groundbreaking book, *Metaphors We Live By* (1984). "What brought all these discoveries together," writes Lakoff, "was the realization that the semantics of language is embodied — that the body contributes, and places constraints on, the human conceptual system" ("Academic" n.p.). Or, as Ronald Johnson might say, "'from going to and fro / in the earth, and from walking / up and down on it' / . . . speech arc Simulacrum, O / chorus us Homo Sapiens" ("ARK 99").

As we have seen in Chapter Two, Johnson's position is like Emerson's, is that thought precedes articulation, that "whatever can be thought can be spoken, and still rises for utterance, though to rude and stammering organs. If they cannot compass it, it waits and works, until, at last, it moulds them to its perfect will, and is articulated" (*Valley* 49). This view dovetails with that of the anti-Chomskyian linguists: form follows the working of the "it" that decides the shape

of the articulation. De Man decided that this "it" was the pure intentionality of the author that could be presumed, and hence the author's person and biography could be discarded as an object of critical inquiry; in Emerson, and for Johnson, "it" – the colourless, formless whiteness signified by the green stuff in *The Book of the Green Man* – is Nature itself.[13] Where for Emerson this "it" can be traced to various strands of high Enlightenment and early Romantic vitalism exemplified in Goethe's and William Blake's writing; Johnson writes post-Freud and post-Jung, and merges his vitalist, epigenetic sense of the force-which-evolves-a-form with theories of the human unconscious as mediating space between conscious experience and the raw force of Nature. For cognitive linguists, the "it" that waits and works is quite simply the body, which relies on the brain, when necessary, to convert experience into language.

In later work, Lakoff "became convinced through his research with Mark Johnson on embodiment that it was vital to understand how the brain could yield embodied conceptual systems and complex linguistic systems" ("Academic" n.p.) He developed with his computer scientist colleagues, at first using models of parallel distributed processing, then using Jerry Feldman's account of neural computation, a "Neural Theory of Language" (NTL):

> The revolutionary idea behind NTL research is basic to neuroscience:
>
> Thought and language are physical, structured and given meaning by embodied experience, and carried out by brain circuitry at the level of neuronal groups, or "nodes." Neural computation models what the circuitry does. The notation for cognitive linguistics

[13] The last part of Johnson's "BEAM 30: *The Garden,*" the poem in which we find Johnson's famous quotes "to do as Adam did" and "build a Garden of the brain," and so many of the major tropes discussed in this essay, ends with the following: "(Signed) THE GARDENER / P.S. / 'I have refracted it with Prismes [sic], and reflected it with Bodies which in Daylight were of other colours; I have intercepted it with the coloured film of Air interceding two compressed plates of glass; transmitted it through coloured Mediums, and through Mediums irradiated with other sorts of Rays, and diversly terminated it; and yet could never produce any new colour out of it. But the most surprising, and wonderful composition was that // of *Whiteness.*'" (emphasis and capitalization Johnson's).

> characterizes the conceptual and linguistic functions carried out by the neural circuitry. (n.p.)

Lakoff and Johnson later worked out what they felt this theory meant for philosophy. In *Philosophy in the Flesh* (1999), they write that "there is no fully autonomous faculty of reason separate from and independent of bodily capacities such as perception and movement" (17) and present evidence for the view that reason is "fundamentally embodied":

> The findings of cognitive science are profoundly disquieting in two respects. First, they tell us that human reason is a form of animal reason, a reason inextricably tied to our bodies, brains and interactions with our environment. Second, these results tell us that our bodies, brains, and interactions with our environment provide the mostly unconscious basis for our everyday metaphysics, that is, our sense of what is real. . . . Our sense of what is real begins with and depends on our bodies, especially our sensorymotor apparatus . . . and the detailed structures of our brains. (17)

Though I have barely touched the implications and claims of cognitive linguistics, I believe even this brief sketch of one researcher's trajectory makes clear why Johnson's attempt to model "spaceship cerebrum" might be seen as analogous to the cognitive linguistic project.[14] The locus, to me, of particular overlap is in the primacy that Johnson and Lakoff both give to the "large system of primary metaphors [we acquire] automatically and unconsciously simply by functioning in the most ordinary of ways in the everyday world from our earliest years" (47):

> If you are a normal human being, you inevitably acquire an enormous range of primary metaphors just by going about the world constantly moving and perceiving. Whenever a domain of subjective experience or judgment is coactivated regularly with a sensorimotor domain, permanent neural connections are established via synaptic weight changes. . . .

[14] The one critic I have seen bring Johnson's work into conversation with cognitive linguistics is ecocritic Jonathan Skinner. In a note on Johnson's birdsong:poetry ratio he writes: "Johnson's poetry thus deconstructs the phonological 'parallel transmission' Reuven Tsur describes: '[W]e have a speech mode and a nonspeech mode of listening, which follow different paths in the neural system. We seem to be tuned, normally, to the non-speech mode; bt as soon as the incoming stream of sounds gives the slightest indication that it may be carrying linguistic information, we automatically switch to the speech mode; we attend away *from* the acoustic signal *to* the combination of muscular acts that seem to have produced it" (Skinner 419). Reuven Tsur "has developed a theory of Cognitive Poetics, and applied it to rhyme, sound symbolism, poetic rhythm, metaphor, poetry and altered states of consciousness, period style, genre, archetypal patterns, translation theory, the implied critic's decision style, and critical competence" (from Tsur's website, http://www.tau.ac.il/~tsurxx/).

> Our enormous metaphoric conceptual system is thus built up by a process of neural selection. . . . Those metaphors are realized in our brains *physically* and are mostly beyond our control. (57-59)

I have argued that Johnson's poetics pose the bodymind-to-environment mediation of the brain as one that works by rhyme and that his poetic architecture mirrors the brain as itself an apparatus that "mirrors," echoes, or "rhymes" the natural forms it encounters. I've argued that his poetics are consistent with the present-day understanding of the brain as indeed having neurons that "mirror" in its own sensory-motor system the apprehended gestures, events and spatial concepts (whether encountered visually or aurally or affectively) of the world around it. Lakoff and Johnson give weight to Johnson's image of "trees in the head" (Letter to Dear Dr.) as representative not only of the brain as a morphological tree, but of the "tree of knowledge" as a physical structure that undergoes synaptic weight (and morphological) changes: regular coactivation of one domain with another makes our "dense senses" denser; the regular activation of a "fresh metaphor" makes neurons that fire together wire together so strongly that the figure of speech becomes "dead," or rather routine, in the sense that the neural route that was once "freshly born" is now established.

bare record of the word
umbilical, a fellow carpentree
stand but in my head

(“ARK 77”)

In one loose draft in his archive Johnson has typed out a passage from Agnes Arber’s book *The Mind & The Eye,* which he describes as a “handbook for biologists - and poets [in which] she states: “A symptom of the craving of the mind to mould sense impressions into a form consonant

with itself, is the pleasure which mankind takes in symmetry'" (Binder). Johnson understands the pleasure of harmonics and rhyme, an almost onomatopoeic logic of correspondence, to have a basis in the biological. Language itself is understood to arise out of this logic; it is an artifact *of* sense impressions registered as correspondences. As rhyme intuitively pleases the language-learning child's ear, poetry synaesthetically pleases the mind more fully acquired of language and of the system of primary metaphors.

Poetry which pleases with more sophisticated or culturally specific harmonies is "consonant" not just with the fundamentally branched and stemmed brain "foundations," but with the individually-gardened architecture of the more mature, uniquely experienced brain, which in that poem finds an image of, or resonance, with itself. If that brain is aware of the mirroring being staged by reading, that self-reflexive awareness of "the mind become its own subject matter" ("BEAM 25") is an Orphic (if not Lacanian) delight:

that this is paradise
odd words in legion
beating around the veritable bush
years shape and illuminate
("ARK 50")

In Johnson's value system there is no greater pleasure than to fully inhabit the awareness of the mind's integrated presence in the cosmos, to understand how physics = psychics. In this logic it should come as no surprise to discover that so many of *ARK*'s metaphors, and its overall structural analogy, poses mind as a Garden of "internetted eternities, interspersed / with

cypresses" and phosphorescent trees ("BEAM 30, The Garden") or as a "radioactive / Garden of Forking Paths" ("ARK 93"), is symmetrical with the language neuroscientists have used to try to visualize the dynamically plastic structure of neural "circuitry" in what is now being called "the connectome."[15] Both neuroscientists and Orphic poets know well the sense that "the mingled frame of mind /of man is celebration" ("BEAM 30").

The connectome "may be defined as the complete, point-to-point spatial connectivity of neural pathways in the brain" and what is now called *human connectomics* "explores the structural and functional organization and properties of these neural connections to define the architecture of the brain" (Toga et al 1). "The elemental beauty of this system was elegantly described in the work of Ramón y Cajal," writes Toga and since then researchers have been trying to fill in the blanks. Currently, neuroscientists do not have a comprehensive map of the complete network connectivity structure of the brain of any species. The quest to map the complicated, interconnected brain systems is its own quest for a *mappemunde*. In some ways, Johnson's project in *ARK* could be read as a subjective connectomics. Although "[f]or the foreseeable future, a comprehensive description of the complete connectome of even a single human brain might be viewed as unattainable" (1), the pursuit nonetheless proceeds:

> the systematic characterization of brain connectedness and the resulting functional aspects of such connectivity will not only realize the work of Ramón y Cajal and others, but will also greatly expand our understanding of the brain, the mind, and what it is to be truly human. (Toga 5)

In Johnson's *mappemunde*, the Garden is that unattainable place (though the pursuit proceeds)

---

[15] As the structural plasticity of tree-shaped neurons becomes a commonplace in neuroscientific discourse, tree-related references to the functional organization of groups of neurons read as less metaphorical: "But the knowledge as to its [the individual fibre in the neurosystem] real orientation to other fibers is scanty and misleading . . . we must use mixed methods of staining in which we get as much information concerning the trees or the forest as we do by pure methods, but in which we get much more information, partial though it may be, concerning the relation between the trees and the forest" (Robert Weiner, *Cybernetics of the Nervous System, Progess in Brain Research* [1963] 402). "A finite element model of the cerebral cortex enables a structured visualization of its gross anatomy and provides access to the neuronal databases associated with each finite element of tissue. Partitioned by finite elements, the distributed, web-based microstructure database serves as a tool for organizing neurons and neuronal forests, and for modeling local cortical microstructure by wiring up the forests." (Koh and McCormick, "Distributed, web-based microstructure database for brain tissue" *Neurocomputing* June 2000. 1065)

where one *can* describe the unfathomability of what takes place in the (poet's) connectome. There exists no in-depth cognitive poetic analysis of the primary metaphors at work in the meaningfulness of gardens in cultures around the world (say, something like PLEASURE IS ORDER; or VEGETATIVE ABUNDANCE IS PARADISE), but the abiding resonances of the Garden as a literary trope in English literature seem so obvious that they hardly bear mentioning. Writers on literary archetype have described the Judeo-Christian story of Genesis that involves the expulsion of the first humans from the garden of Eden as "a parable of the emergence of ego-consciousness, and the replacement of harmonious unity with the conflicts born of awareness of opposing categories of experience" (Stevens 94). Shelley Saguaro, in her book *Garden Plots: The Politics and Poetics of Gardens*, writes that "[g]ardens are a prevalent literary theme and trope throughout English literature, a literature which is also informed, of course, by that of Greek and Roman and other Indo-European literatures. . . . The garden, then, is a familiar, diachronic and multi-determined trope used variously. On the one hand, gardens can signify a pre-lapsarian and harmonic bliss; on the other, a failure and Fall" (x). Saguaro continues, "analogies with aspects of gardening, with terms such as 'cultivation,' 'nature,' 'growth,' 'flowering,' and 'fruition' are commonplace [in English literature] and are . . . familiarly extended to aspects of development of selfhood. The Romantic poets, for instance, in the early nineteenth century, extolled 'organicism' in terms of both the imagination and literary form" (x). Barbara Tomlinson has identified "gardening" as a common metaphor that professional writers, including Jerome Rothenberg and Gary Snyder, use to describe writing as a process both active and passive (70).

Johnson's use of the gardening metaphor for his own poetic draws on this multiplicity of discourses, drawing together inflections from Judeo-Christian mythos, twentieth-century archetypal theory, structuralist cultural anthropology, Romantic organicism, and Anglo-

American poetry in his figure. Johnson's particular figure for writing as a gardening of the brain, however, brings deep cultural tropes of ego-consciousness and self-cultivation into conversation with late-twentieth- and early twenty-first century discourses that would read those tropes as emerging within a system of primary metaphor based in physically-acquired synaptic connections. Ramon y Cajal was likely not gesturing to any Judeo-Christian framework when he suggested that "the cerebral cortex is similar to a garden filled with trees," structured of pyramidal cells that can be shaped by intelligent culture. It is Johnson, with his desire to make a garden of the brain, who superposes Cajal's garden onto this archetypal space of paradise and loss. It is in light of this new symmetry of Eden/cerebrum that Johnson propagates in *ARK* that I now turn to Johnson's 1977 book *Radi Os.*[16]

In a panel of poets at the 2011 Vancouver Poetry Conference, American poet Matthea Harvey read from her latest book, *Of Lamb,* in which she retells the story of Mary and her little lamb through the words that remained after Harvey used whiteout on most of the text from David Cecil's biography *A Portrait of Charles Lamb.* Harvey's work is part of a contemporary North American trend of "erasure poetics," of which Jen Bervin's *Nets* (2004), Yedda Morrison's *Darkness* (2009), Janet Holmes's *The Ms of My Kin* (2009) and Jonathan Safron Foer's *Tree of Codes* (2010) are recent examples. *Poetry* magazine devoted a full issue to erasures in May 2011, and Zapruder has named his dog Ronald Johnson. Harvey agrees with poet Matthew Zapruder that this popular trend owes a great debt to *Radi Os* as one of the earliest examples of its kind. The surge of recent literary production using this "de-composition"or white-out method has fostered a kind of cult popularity for *Radi Os,* the sparse but book-length poem Johnson

[16] *Radi Os* is also unpaginated. References to the books of Milton's *Paradise Lost* Johnson excises (I to IV, corresponding to respective sections of *Radi Os*) should help the reader locate quoted passages.

"wrote" by excising text from the first four books of John Milton's *Paradise Lost,* a cult popularity that claims Johnson as an early procedural poet. But even before the erasure poetics craze (or perhaps helping to precipitate it), Ron Silliman wrote on his blog that *Radi Os* is "one of those 'must-have' volumes for any contemporary poetry collection" ("Reissue" n.p.). It is in this critical context that Peter O'Leary can call Johnson's *Radi Os* "arguably his most enduringly popular and innovative work" ("Talking" n.p.).

In his interview with Barry Alpert, Johnson describes the genesis of *Radi Os* as follows:

> . . . one night a friend played me Lukas Foss' *Baroque Variations.* The first variation was a peice of Handel's where Foss simply cuts holes, as he says, in the text. . . . I just said very blithely I'll rewrite *Paradise Lost* [like Foss did Handel] without realizing what I was getting into. By the time I got to the third book, I realized it was very serious and that I was saying something which was central to my whole work. . . . This again was an instinctual process. *Wor(l)ds* is a structure of the universe and mind, and when I got into the *Paradise Lost* which when marked out is ~~Paradise Lost~~, I realized that of course Blake had done somewhat the same with Milton. . . .
>
> So I went back to find out enough about Blake to be able to read his *Milton* . . . If we investigate the mind as physicists do the outer world, Blake perhaps told us more about what goes on inside there better than even someone like Carl Jung. . . . So in that book suddenly what happened was I was taken over by Blake, but with my vision of the physical universe . . . instead of being a rather flippant work of just simply putting lines and cutting out words, it is a cosmology of the mind and sort of Blakean exploration of the imagination (547)

"Prune the shrubberies!" Johnson urged O'Leary before he died, asking him to edit down the "great shaggy manuscript" of his last poems. "[I] reduced all the shrubberies to a central branch of spirea," Johnson wrote of his revision process to the rising "Spires" of *ARK*. Eric Selinger writes of Johnson's work that "at each point, Johnson has pruned his chosen texts to eliminate

conflict, sadness, and historical pain" ("Garden" 332), to which Josh Corey adds, "this 'pruning' is literal with respect to *Radi Os*" ("Avant-Pastoral" 296). Pruning is of course a fairly common writerly metaphor for the editing down of one's early drafts (Marjorie Perloff, for example, credits Hank Lazer with "pruning and rearranging" individual items in her manuscript of *Differentials* [xxxiv]). But in the context of Johnson's early assertions that poetry is topiary, and his rather constant figuring of a spirea-like bushy materiality to his poetic line, a line I have argued is analogous to the bushy dendrites of the neural architecture, the poetics of careful excision so explicit in *Radi Os* deserve a reading *as* pruning; for arguably there is no clearer example of Johnson enacting a poetics of the topiary gardener than in *Radi Os.*

Though *The Shrubberies* "come after" *ARK* in a chronology of composition, *Radi Os* for a long time was meant to succeed *ARK* as the 100th and last section following the 99 sections in the original text: the "rewriting of Paradise Lost by excision (the first 4 sections published in 1977 as *RADI OS*) . . . when complete will mark ARK 100 - conceived as kind of Dymaxion Dome over the whole," wrote Johnson in *ARK 50* (qtd. in Stratton 28-29). Johnson has already unwittingly paraphrased Cajal's description of the cortex in his "garden of the brain"; in posing that his excision of Milton's *Paradise Lost* is a "dymaxion dome," he again suggests that *this* text shares structural similarities with human tissues, particularly with the dome-shaped architecture of the human cortex. *Radi Os* then, contemplated as a module of *ARK*, read through the dual frames of architecture and garden that govern *ARK*'s interpretation, can be read as another intution of neurostructure and biological dynamics. In *Radi Os,* Johnson "investigates the mind as physicists [do] the outer world," offering a "cosmology of the mind . . . but with [his] vision of the physical universe" (Alpert 547). I read *Radi Os* as indeed "saying something central to [Johnson's] work," (556) as to me his excision-poetics is applied as much to the parable of

human origin that for the writer in his Anglo-American tradition, is always-already there, as it to Milton's monument. Reading Johnson's Garden-dome as brain-structure, *Radi Os* reenacts the Fall as material subject formation. As I will explain, the excision poetics of *Radi Os* formally mirror the neurostructural "loss" that informs the development of every human brain, yet that is central to the establishment of foundational connectivities between neuronal forests, and perhaps, to the establishment of that first, unavoidable "network of primary metaphors" that Lakoff theorizes.

Let's look at the garden Johnson prunes. In the last chapter I argued that Johnson's vision sees a branching, flowering quality to print generally, one that he sought to make visible at a microscale in his concrete poetry, and one whose "unconscious" broader structure he sought to unfold in *ARK*. By this logic Milton's *Paradise Lost* is a great clipped hedge of language; a dense thicket of phrase, at which Johnson clips away:

> Of Mans First Disobedience, and the Fruit
> Of that Forbidden Tree, whose mortal taste
> Brought Death into the World, and all our woe,
> With loss of EDEN, till one greater Man
> Restore us, and regain the blissful Seat,
> Sing Heav'nly Muse, that on the secret top
> Of OREB, or of SINAI, didst inspire
> That Shepherd, who first taught the chosen Seed,
> In the Beginning how the Heav'ns and Earth

Rose out of Chaos: Or if SION Hill

Delight thee more, and Siloa's Brook that flow'd

Fast by the Oracle of God; I thence

Invoke thy aid to my adventrous song,

That with no middle flight intends to soar (I:1-14)

O

tree

into the World

Man

the chosen

Rose of Chaos:

song

Johnson uses the same language of cosmos and mind that he used to describe his project

Wor(l)ds as he does to explain the project of *Radi Os*. Mark Scroggins argues of this opening passage:

> Much of *Radi os* (and of the in-progress *ARK*) is encapsulated in this first picture-page: The "tree," a complex instrument for transmuting the sun's energy and the nutrients of the soil in which it is rooted into a complex, ramifying structure that reaches towards the sun (perhaps represented by the large "O"); the complex interrelationships of plant life ("tree") and humanity ("Man"), the only terrestrial inhabitant capable of consciously recognizing its place in this complex ecosystem ("the chosen"), within "the World"; the "Rose" (which as so many words in *Radi os* can be taken as both noun and verb), a perennial symbol of beauty and order, evoking both the Rose of the Blessed at the climax of the Paradiso and Pound's "rose in the steel dust"; and how all of this rose — and continues to rise — "out of Chaos," this will be the burden of Johnson's "song." (Scroggins "Marrow" 440)

Scroggins suggests that Johnson's aims to map the mind in *Radi Os* can be read as coincident with those of *ARK*. If *ARK* seeks to reveal the 'structure of rhyme,' one can read *Radi Os* as sharing that goal. If in *ARK* Johnson sees this structure as materially cerebral, sharing much with Lakoff's network of primary metaphor, perhaps we can attribute this vision to *Radi Os* as well. Scroggins's argument acknowledges that the complex image of man/Tree/rose "encapsulates" much of what Johnson is up to in both books.

What principles then guide Johnson's pruning of Milton? One straightforward reading is that to Johnson's architectonic sensibility, Milton's work in its abundance hangs heavy and full on the "structure of rhyme." The work then is to cut back the branch at the node to reveal that structure (we can recall Johnson's note to himself: "node: knob on root or branch; point at which

leaves spring; intersecting point of two great circles of celestial sphere; a meeting place of lines roads, or parts . . .” [“Worksheet, Balloons...”]). Pruning is, of course, despite its appearance of destructiveness, a practice dedicated to the maintenance and reinvigoration of the woody plant. To read Johnson as pruning the woody line of Milton, then, is to map Johnson's identification of branches or limbs best suited to sprout new growth. Pruning also stimulates growth by allowing more light to penetrate the canopy of the plant; Johnson here lets light into "circling Canopie / Of Nights extended shade" (Milton 556). Pruning, when done well, is attentive to the "natural shape" of the plant; G.L. Wade and Robert R. Westerfield write that when "misused," certain cuts "can destroy the natural shape of plants because they stimulate regrowth" in imbalanced ways (n.p.). Johnson was careful to insist that he was not intending irreverence, or at least not destructiveness, to Milton's work: "Everybody thinks this is a great ‘destruction’ or whatever. And they’re so surprised to find out that I made another poem. I really created rather than destroyed" (O’Leary “An Interview” 575). Whether one reads *Radi Os* as Milton's epic reduced to lopped limbs, or thinned to renewed vivacity, depends, I think, on the structure Johnson has revealed.

Milton's epic is not just any proliferation of language. It is not the dense growth of, say, *Odysseus* or *The Iliad,* or even of *The Seasons* or *The Prelude* that Johnson chooses to pare back. It is a form of cosmology, "the story of all things" as Northrop Frye says (37). Harold Bloom called it "the most radical instance I know of the work in a writer, of the influence of an exemplary mind upon itself" (1). If Johnson's initial choice of book after hearing Lukas Foss was flippant, the shared concerns of his own cosmological project in *Wor(l)ds* with Milton's monist take on the Biblical myth must have become quickly apparent, prompting his realization that "you don't tamper with Milton to be funny" and that what he was doing was in fact "very

serious" (O'Leary "An Interview" 574).

William Kerrigan insists that despite Milton's playing fast and loose with the meter of the Homeric epic, "for Milton, as for Sir Philip Sydney before him, literary genres were divinely authorized modes of mimesis, corresponding to the Creator's arrangement of reality. Compared with any individual poem, genre was the more real thing, and indeed 'the first thing the reader needs to know about *Paradise Lost*,' according to C.S. Lewis" (268). Yet Kerrigan also argues that in choosing the story of the Fall, Milton's chooses a story, that at least in a Christian culture, would be read as "common to all mankind. . . . Not simply the greatest story ever told, it is every story ever told: Milton's 'Adam and Eve are all men and women inclusively,' as Coleridge observed (240)" (xxxii). If genres for Milton were divinely authorized modes of mimesis, then he must have decided that epic, at least in the incarnation he makes of it, is the authorized mode of "every story ever told." By engaging *Paradise Lost*, Johnson engages, as Blake and Wordsworth did, with an epic Romantic-descended writers considered the *ur*-form of English language literature, which itself engages with the *ur*-story of Western civilization.

Elizabeth Sewell would characterize Johnson's pursuit as an extension of the Orphic tradition, that Wordsworth torqued when he wrote "Of the individual Mind that keeps her own / Inviolate retirement, subject there to conscience only, and the law supreme / of that Intelligence which governs all – / I sing: – 'fit audience let me find though few!" (294). Sewell argues that what made Wordsworth's proposal to inquire into the Mind of Man so alarming was his "saying that he means to take on where Milton left off, on a task as cosmic in scope and even more difficult" (297). Johnson's work in both *ARK* and *Radi Os* inquires into the new forms that this strain of Orphic inquiry can take.

In a letter to Ted Enslin, who had read *Radi Os* without "a Milton apparatus" and liked it,

Johnson wrote:

> Guy Davenport advised me not to say where it came from, but I could not dissemble. In retrospect, though, it is more a quarrel with Christianity (as Blake) rather than one with Miltonics. So what if each has to replant The Garden — at least it is in our heads, and what could be better? *WOR(L)DS* (to which *Radi Os* will become a roof of light) has begun to lay out Imaginary Garden. (Letter to Ted Enslin)

Johnson's critique, if we were to read for it, is only visible to Johnson in hindsight and is even then not with Milton's structure but with his theology. He often compared his method in *Radi Os* to the work he did with the *Psalms* in *ARK* to generate a section called "PALMS": "my rule was that I had to have at least one word in every Psalm, and the words had to be in correct sequence through the Psalms. In other words, I took out the S; I took out the snake [laughs]. . . . So it was kind of like doing the Milton" (O'Leary "An Interview" 575). Johnson prunes back Milton, respecting the sequence of his words and yet "takes out the snake," for the resulting text has none of the sin and none of the judgment. Johnson can see symmetries in Milton's physical cosmology and his own, and looks for "what he knows of the physical universe," and finds that "[m]idway through the second book of *Radi Os* I found myself writing the Orpheus and Eurydice . . . Nobody else would have gotten that out of it. So it is still me. It happened because of music (574).

The same logic of harmonics that informs *ARK*'s resonant infrastructure informs Johnson's "discovery" of the Orphic myth of "mind become its own subject matter." The first words of Davenport's afterword to *Radi Os* are "Harmonies, harmonies" (n.p.) Davenport argues that the book "finds in Milton's poems those clusters of words which were originally a molecular intuition of the complex harmony of nature" (n.p.). Johnson was, at the time of the writing of

Radi Os, just beginning to look at the brain as *the* organic form that intuits-its-harmony-with-nature. One does not find Johnson's mind-as-brain seeing itself in *Radi Os*; the word brain is never used in *Paradise Lost*. Nonetheless, Davenport, in his afterword to the book, understands that the vision is of radical connectedness, a connectedness in which vision itself is shaped and implicated:

> These pages at first glance look haphazard (as a Cubist painting seemed to first viewers to be an accident). They are not. There is a page that has the word *man* at the top, *flower* in the middle, and *star* at the bottom. There are other words on the page, and they help us see the relationship between man, flower, and star. . . . It is, for instance, electro-chemical energy in brain cells derived from photosynthetic sugars in vegetables whereby we can see a star at all, and the fire of the star we call the sun thus arranged that it could be seen and thought of by nourishing the brain. Is that system closed? (n.p.)

The figure of the Man/Rose treeing into being from chaos does not ever return in *Radi Os* so strongly as it appears on that first page. But the vision of the man/tree-of-light, the Milton/Adam/I, propels the Song, and moves the pruning hand of "The Gardener" letting more light into Milton's firmament. I agree with Finkelstein that Johnson's move to equate his "I" with Adam Kadmon is a small-scale gesture of the structure of *ARK*. I also see it as the gesture of *Radi Os* realized in another form. If, as Finkelstein argues, the appeal not to the Biblical Adam, but to the Adam-as-Tree-of-Life, is about a desire to return to the Garden, then why would Johnson so instinctively wish to compose holes in *Paradise*? Why would Johnson not dwell fully in the Garden before the Fall, so luxuriantly realized by Milton?

In part, Johnson cannot dwell in Milton's prelapsarian Garden because he does not believe in it. My reading here challenges Finkelstein's, somewhat, in that it rests in Johnson's insistence

throughout his work that "*this* is Paradise" ("ARK 50," italics mine) or later, that "*I* thread evolving Heaven" ("ARK 96," italics mine), or even later, in *The Shrubberies*, the minute triad: "Yes Heaven/being/garden" (72). Johnson's sense of divinity is informed by Christianity but is not devout. As he once said to Stan Brakhage, referring to the Bible: "[W]e grew up with it. You can't get away from it; even if you don't believe in it. We're steeped in the language and the images" (Brakhage 37). Hence, in part, the quarrel with Christianity, not Milton. There is no Heaven outside the known universe for Johnson, but that doesn't mean he won't use the image. Johnson is informed by Frazer's *Golden Bough*, and so would see a vegetation myth in the story of the Garden, and by Carl Jung's *Man and His Symbols*, in which a reproduction of a 15th-century French painting of "Eden as a walled (and womb-like) garden" sits underneath Jung's comment that "every society has its idea of the archetypal paradise or golden age that, it is believed, once existed and will exist again" (n.p.).

The entry point I'd like to use is Johnson's prefatory comment to *Radi Os* stating that it was "the book Blake gave me (as Milton entered Blake's left foot – the first foot, that is, to exit Eden) his eyes wide open through my hand" (prefatory note to *Radi Os,* n.p.), and that though "Blake couldn't look at Newton," (n.p.) Johnson wanted to "be a Blake" that could; that is, to be moved by the same impulses as Blake but as a twentieth-century modernist. Johnson calls Blake into his own hand as, in *Milton*, Blake did the daughters of Beulah:

> Muses who inspire the Poet's Song,
>
> Record the journey of immortal Milton thro' your Realms
>
> . . . Come into my hand
>
> By your mild power; descending down the Nerves of my right arm
>
> From out the Portals of my Brain, where by your ministry

The Eternal Great Humanity Divine planted his Paradise (Blake 96)

The Blake Dictionary informs us that "in Blake's system, Beulah is the realm of the subconscious" (Foster-Damon 44). Johnson's phrasing suggests that Blake too might descend from the portals of Johnson's brain, through his nerves, to "look" through his excising hand. Johnson's comment to Ted Enslin, that he would be replanting the Garden in heads, picks up Blake's sense of spiritual Paradise as a "dwelling-place, or state of mind" (Foster-Damon 114), located in the Brain. Damon distinguishes Blake's spiritual Eden from the Eden Urizen creates on Earth; in *The Four Zoas,* "the auricular nerves" are "the Earth of Eden" (Blake 301). Elsewhere, Blake poses the brain as the dwelling-place of Los and Enitharmon (302), and its "portals open through Beulah to the poet" (Foster-Damon 57). When Blake wishes to disparage a figure, he characterizes their brains as enclosed, for example Urizen suffering under "a roof, shaggy, wild, inclos'd in an orb his fountain of thought"; "the shadowy sisters of Urzah (natural religion) form 'the orbed scull around the brain' (113). Of brains in general, Blake wrote: "Each mortal brain is wall'd and moated round within, and Og & Anak watch here . . . for in the brain and heart and loins Gates open behind Satan's seat to the City of Golgonooza" (*Milton* 20:36). Blake says much the same in *The Four Zoas.* Foster-Damon explains: “When Los builds Golgonooza, new heavens and a new earth are opened 'within the brain, within the heart, within the loins . . .' . . . The vegetated bodies which Enitharmon weaves for the spectres open 'within their hearts & in their loins & in their brain to Beulah'” (58).

It was while in Seattle that Johnson wrote to Williams that he was reading up on the mind and had become "a student now of trees in the head" (UB 309:3); the same period in which Johnson, needing a project while teaching at the University of Washington, picked up the copy of *Paradise Lost* and began playing with it. It was perhaps the very recent work of Calder and

Ferguson into the mind that Johnson drew upon when he realized that in his revision of Milton he was following in Blake's footsteps. He may have come across this passage in Ferguson's *The Brain Revolution* (1973):

> two hundred years of rational science painstakingly cleansed the civilized world of magic and superstition . . . [yet] the most astonishing reality of all appears to be the potential of the human brain. Science and the humanities have converged in the most unexpected way. In order to describe the wonders they have come upon, brain researchers have begun quoting Buddha and William Blake. And poets and mystics, long fearful of the dehumanizing aspects of science, now cite laboratory reports to verify what they had long held as intuitive knowledge. (13)

Johnson then went back to learn all he could about Blake, eventually prompting the comment to Barry Alpert that if we look at the mind as the physicists do, then we might find Blake of more use than Jung: "I found that Blake, instead of being that crazy mystic we were all told about, was saying exact truths — in a curious form sometimes, but exact truths" (556).

Alan Richardson writes that "Blake, with his own links . . . to the radical scientific currents of the 1790s, writes of the brain in a strikingly avant-garde manner. For Blake the brain is at once material, organically and developmentally interconnected with the rest of the bodily system ('His nervous brain shot branches / Round the branches of his heart') and yet limited by its Fallen form of corporal existence from realizing its potentially 'infinite' scope" (*British,* 148). What Johnson takes from Blake is permission to reform in his own modernist poetics, an encounter that Richardson, tracing the phenomenon in Romantic literature, has called the "neural sublime." The neural sublime, as Richardson defines it, "clearly depends on [an] emergent sense of the brain's awesome complexity and capacity, but . . . owes still more to the desire for at least a

negative encounter -- the dark afterimage of a brightness glimpsed through the void -- with what might be called 'a brain's eye view', a view stripped (as in Hitt's reading of Thoreau) of the usual overlay of conceptual and linguistic categories, an unfiltered and unedited encounter with the real" (*Neural,* 37).

In *Radi Os* Johnson stages the encounter of the twentieth-century poet's mind with the already-established world, the "every story" of Milton's *Paradise Lost* as the first encounter of the brain with the unfiltered world, the world as yet not-fully-polarized either by experience or by language. Milton's Garden and surrounding realms, are realms of before-the-Fall, which Johnson recognizes as Being, paradisical when apprehended in its awesome scope, when the mind is present to the "Wow. Now." Fallenness for Johnson is a state of being limited by embodied senses and inherited ideology, for these both limit experiential consciousnes of the fullness of Being. Johnson, like Blake, is uninterested in representing fallenness as a question of morality and disobedience, but is still deferential to the majesty of Milton's realization of cosmology, and still interested in the possibility of the brain to use more than just "two percent of circuitry" ("BEAM 31"). Johnson's gives his own language to his vision of Eden in "BEAM 14":

Eden, glossolalia of light

Mountain the gods stept from, spoke to fork

some sparkling *logos*

as *O hoher Baum im Orh!* . . .

O

Matrix of Harmonies

orders, opening back, beyond, and within, Laocoön of cocoon

splint crystal, *glaux*, grey matter spun

'Out of thy head I sprung'

thread not a dream by a single Being, but one of *omni-*

silk-seed of waves hummed back

vast cortex

tensile, unstill

Johnson's song of Eden, of the Matrix of Harmonies, and of the vast cortex calls back to Milton, "out of thy head I sprung" (*PL* II:758), as well as to *Radi Os,* which may well have been in progress as this passage was being composed or edited. In *Radi Os* the line in Milton is ventriloquized thus:

head?

and thy words so strange

double-formed, and

phantasm

Surprised
In darkness,

Out of thy head I sprung. Amazement seized

in secret
growing
And fields

Through all the Empyrean.
headlong

Into this Deep;
I also: key

Without my opening.

The voice of the poem seems to question the head itself, as the producer of words strange and "double-formed," words like "rose" with at least two meanings. The voice claims, it seems, to spring out of the head *of* the head being addressed; an "I" springing from "grey matter spun," locuting a self separate from the Matrix of Harmonies that the "brain's eye view" would not see. In “BEAM 14,” Eden is a "glossolalia of light," glossolalia being that babble-like language without semantic meaning said to be the direct language of God, *from* which gods *descend* into a speech-forked structure of *logos,* that "tall tree into the ear," as Rilke described Orpheus' singing. Eden, for Johnson, is the undifferentiated "mesh of space" before language; and though Johnson loves the structure of language, and the structure of rhyme, being-in-language itself is a kind of fallen state.

Johnson's pruning poetics stage that fall from Being the undifferentiated Tree of Life into the differentiated state of self and self-awareness. The Garden, the idea of that possibility of restoration, is "planted" in the brain through the very capacity of the brain to fathom its separateness-in-unity. The Bible planted its version; Milton his; Blake his; Johnson wishes to plant his own. "VISION is seeing as the sun sees" Johnson wrote (“BEAM 11”); later, "versions = visions" (“ARK 92”): there is ultimately only one VISION, and the poets who get a glimpse of it will all produce their own versions.

In *ARK*, Johnson introduces the language of physics and neuroanatomy to balance his

vision with the weight of the corresponding expanded *logos* that he as a twentieth-century poet, knows. Johnson's title in *Radi Os* shows the constraint he faces in finding his vision in language that is centuries old.

Johnson said that *Radi Os* was meant to be a vast dome, a roof of light over *ARK*. One is put in mind of the canopy of stars overhanging the earth in the anonymous wood engraving which Johnson had used on the cover of *The Valley of the Many Colored Grasses*, and was going to use in *ARK*, but took out of the plan when "it became the image of the sixties . . . then it suddenly became a logo" and he felt the image overused (O'Leary "An Interview" 578).

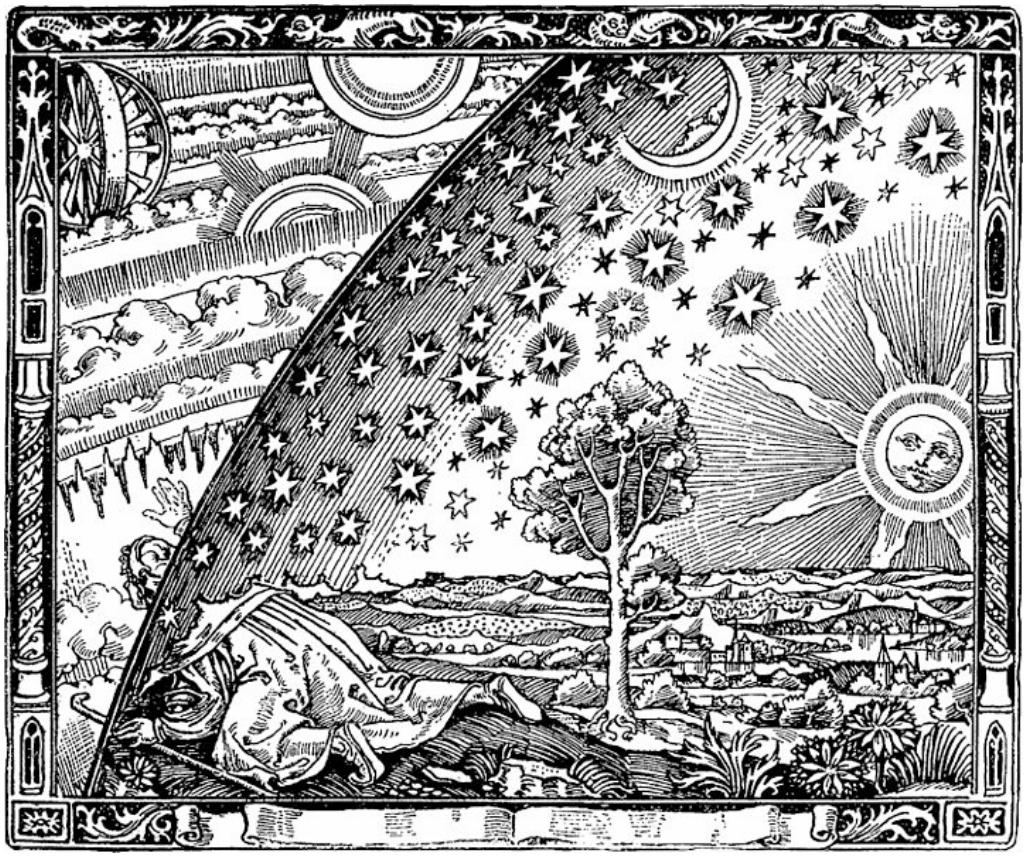


Fig. 4.1 The Flammarion Engraving
L'atmosphère: météorologie populaire p.163

The image is known as the Flammarion engraving for its first documented appearance in Camille Flammarion's 1888 book *L'atmosphère: météorologie populaire* ("The Atmosphere: Popular Meteorology"). In Flammarion's book, in a chapter on the optical phenomena created by the interaction of light with air, it accompanies the following comments:

> Que le ciel soit pur ou couvert, il se présente toujours à nos yeux sous l'aspect d'une voûte surbaissée. Loin d'offrir la forme d'une circonférence, il parait étendu, aplati au-dessus de nos têtes, et semble se prolonger insensiblement en descendant peu à peu jusqu'à l'horizon. Les ancients avaient pris cette voûte au sérieux. Mais, comme le dit Voltaire, c'était aussi intelligent que si un ver à soie prenait sa coque pour les limites de l'univers. Les astronomes grecs la représentaient comme formée d'une substance cristalline solide, et jusqu'à Copernic un grand nombre d'astronomes l'ont considerée comme aussi matérielle que du verre fondu et durci. Les poètes latins placèrent sur cette voûte, au-dessus des planètes et des étoiles fixes, les divinités de l'Olympe et l'élégante cour mythologique. Avant de savoir que la Terre est dans le ciel et que le ciel est partout, les théologiens avaient installé dans l'empyrée la Trinité, le corps glorifié de Jésus, celui de la vierge Marie, les hiérarchies angéliques, les saints et toute la milice céleste. . . . (162)[17]

Flammarion gives us the arched firmament as the dwelling place of the mythic gods and of the glorified body of Christ and angels, and as emblem of the pre-Copernican limit of human perception. In *ARK,* Johnson looks for Eden taking a "brain's eye view" and finds only "vast cortex / tensile, unstill" ("BEAM 14"). Johnson wishes to install his own dome over the tree of

[17] Whether the sky be clear or cloudy, it always seems to us to have the shape of an elliptic arch; far from having the form of a circular arch, it always seems flattened and depressed above our heads, and gradually to become farther removed toward the horizon. Our ancestors imagined that this blue vault was really what the eye would lead them to believe it to be; but, as Voltaire remarks, this is about as reasonable as if a silk-worm took his web for the limits of the universe. The Greek astronomers represented it as formed of a solid crystal substance; and so recently as Copernicus, a large number of astronomers thought it was as solid as plate-glass. The Latin poets placed the divinities of Olympus and the stately mythological court upon this vault, above the planets and the fixed stars. Previous to the knowledge that the earth was moving in space, and that space is everywhere, theologians had installed the Trinity in the empyrean, the glorified body of Jesus, that of the Virgin Mary, the angelic hierarchy, the saints, and all the heavenly host ("Flammarion Engraving." *Wikipedia: The Free Encyclopedia.* Wikimedia Foundation, Inc. 14 Feb 2012. Web. 22 April 2012.)

rhyme he is building in *ARK*; in his literary imagination he looks up and finds Milton's arched vault is already there. But for Johnson, like Blake, heaven is in the mind, not above the stars. *Radi Os*, however flippantly conceived, for Johnson seems to hold the possibility of being a new firmament for his inner architectures.

Johnson's imagined "brain" is no longer Edenic; no longer glossolalic: "Worlds / That both in him and all things / drive / deepest / Sun / are all his works / created mind / Inifinitude confined" (*Radi Os* III). Into grey matter the *glaux* of worldly experience has been ionically spun; infinitude is confined in both material sense and in that tree of logos. Johnson has already in his work imagined the brain of another writer: in "The Garden" Johnson imagined "Andrew Marvell's brain made of /arched petals," which is an imagination of a brain (Marvell's) itself imagining a third brain, of an architect "Who of his great Design in pain / Did for a Model vault his Brain" (48). To Johnson (and the Romantics felt this as well) Milton's representation of *Paradise Lost* is one of the most perfect imaginative representations of unfallenness. Seeing through Blake's eyes, the material text of *Paradise Lost* is an emanation of the Tree of Life; it is not quite Milton's brain, or an unfallen brain, but it is a mind that "dwell[s] Edenically" enough to write his work that will shape the imagination of Eden for centuries to follow. Perhaps Milton, like Marvell's architect, did for the model of Eden "vault his brain"? Johnson's Blake, speaking exact truths, might have understood it that way.

Paradise Lost, like any literary text, belongs to the Tree of *logos* that the gods forked into being as they spoke. It is also, within the context of the filiated English-language literary practice within which Johnson worked, the firmament, the literary dwelling place of the immortal gods, and the boundary set between scripture and mortal poetry. For poets who look 'up' to their predecessors, Milton's work is always there. For Johnson, who thinks in physics, as much as

Paradise Lost claims to present Eden and the realms of Heaven, *Paradise Lost* cannot – a text cannot, by its nature, be that pure undifferentiation or even contain the fullness of the metamorphosis. It can only be that "tree into the ear," or that branching into the brain, that is the nature of a language event. From the perspective of a poet for whom "Man; that light / which else, / Still ending, still renewing, / is Paradise" (*Radi Os* III), *Paradise Lost* falsely presents itself as characterizing what fallenness is, when its form itself partakes of fallenness. Johnson knows this. Neither can Johnson write a text that "knows" unfallenness. Text embodies; like Blake's "vegetated nerves" the text is always vegetated form. Whatever text Johnson writes will establish itself structurally in the neurophysiologies of his readers and as part of the rhizomatic tree of logos.

What Johnson does is create a new structure through a procedural practice that stages the Fall. Note I am not arguing this is a conscious move on Johnson's part, but again part of his intuitive advance. "People like Einstein and Bucky Fuller intuit their orders, and Blake learned to live quite comfortably in the unconscious" he told Alpert (555), and it is within such an intuitive frame that we can read Johnson's prescience of what we now know of the "physics of psychics."

UC Davis neuroscientists Lawrence K. Low and Hwai Jong-Cheng write: "Regressive events play a key role in modifying neural connectivity in early development . An important regressive event is the pruning of neural processes. Pruning is a strategy often used to selectively shed exuberant neuronal branches and connections in the immature nervous system to ensure the proper formation of functional circuitry" (1531). Within the past thirty years, researchers have firmly established that developing vertebrate nervous systems use several diverse mechanisms to remove or modify what they call "exuberant" connections, an event often referred to as developmental brain plasticity. The process by which this happens, while still being investigated

at the molecular level, has been shown to be clearly activity-dependent, operating via a use-it-or-lose-it logic that determines which of the "exuberant" connections in the developing nervous system (in both the cortex and at the neuromuscular junctions to which cortical neurons connect) will survive and establish the organism's foundational neural pathways. The logic also seems to be relative and competitive: in one key experiment, "blocking light to one eye profoundly diminished synaptic connections in the visual cortex provided by that eye, but when light was blocked to both eyes, there was much less synaptic loss in the cortex" (Kocsis 185).

This understanding of neurophysiological development may well underlie Lakoff and Johnson's integrated theory of metaphor: "For young children, subjective (nonsensorimotor) experiences and judgments, on the one hand, and sensorimotor experiences, are . . . regularly conflated -- undifferentiated in experience," they write (46). It is only through a "process of differentiation" that children separate the two domains. Lakoff and Johnson further theorize, based on the work of Srini Narayanan, that

> “associations” made during the period of conflation are realized neurally in simultaneous activations that result in permanent neural connections being made across the neural networks that define conceptual domains. These connection form [an] anatomical basis of source-to-target activations that constitute metaphorical entailments. Briefly, an entailment at the neural level in Narayanan's theory occurs when some sequence of neural activations, A, results in a further neural activation, B. If B is connected to a neuronal cluster, C, in the network that characterizes another conceptual domain, then B can activate C. . . . The activation of B is a literal entailment; C is 'metaphorically' linked to B. (47)

Lakoff and Johnson treat the hearing of language, producing language and the sensory motor

experiences that accompany these as inputs in much the same way the neuroscientists early work on developmental synaptic plasticity treated light entering the eye. The enormous potential of the flexible, plastic hyperconnectivity of early childhood, give way to a "metaphoric conceptual system" built up by this process of neural selection. Connections "randomly established at first . . . then have their synaptic weights increased through their recurrent firing. The more times those connections are activated, the more the weights are increased, until permanent connections are forged" (57).

Johnson approaches the text of *Paradise Lost* through the lens of the developmentalist formalism he has learned from Goethe, that we saw in Johnson's own concrete poetics of epigenesis and that he would have rediscovered in Blake, who Denise Gigante writes "made it clear that to rely, like Enlightenment scientists, [solely] on the characteristics of visible structure is to fail to recognize the essential nature of living form," (485). She continues: "Blakean formalism models a particular *mode of generation* with its basis in fluid, self-shaping substance. Such matter, by definition, must remain alive to the contingency of alternate formations" (485). Milton's Garden is psychological Eden approached as undifferentiated textuality, from which Johnson, as a reader, is free to make his own random connections and repeat these until new connectivities begin to emerge.

Johnson also approaches the text as undifferentiated living form, a mass of "the branched, twiggy writing" of nature, that can be pruned back to show both the topiary handiwork of the Gardener and the invisible "structure of rhyme" beneath all perception and writing. But Johnson also unwittingly acts like the hand of the Gardener on the undifferentiated neural mass of the brain as yet seeing the world through its Edenness: as the brain, fruit of the womb-as-Eden, as yet un-"cultured" moves into social being, and knows, neural connections fall away, and that

primordial openness, malleability, flexibility and egolessness falls away with it. What remains is "mind / changed at length, / the never-ending flight / with words" (*Radi Os* II*)* a structure still shaped in relation to an engagement with Being, and to the Father's always-already established Order, but a formation pruned by culture, perhaps even by Cajal's "intelligent culture," and one meant to flourish ever more strongly for it.

Johnson eventually finds a structure he is very familiar with -- Orpheus and Eurydice -- in Milton. "Nobody else would have gotten that out of it . . . it is still me" Johnson says (O'Leary "An Interview" 574). He started randomly "crossing out anything," then went back and "wrote *Radi Os*." "*Radi Os* kind of wrote itself," Johnson says, but also called the title one in which the poem "announces itself." The impulse to cut was then guided by the first impulse to choose *Radi Os* as the organizing frame. "Do you pronounce it "radios" or "radius" or "radiose"?" asked O'Leary. "When I wrote that title I knew it had all of those possibilities in it," answered Johnson. "[I]t also then gave me my text, indicating radiant things of light all the way through" (575).

This "double-formed," even triple- and quadruple- formed word, or word(s), *Radi Os*, are themselves formed in a signal act of differentiation from a deliberate reperception of the textual field, as Johnson did for the landscape in *The Book of the Green Man*, or invited the reader to do in his concrete works like "earthearthearth." I argue that the "molecular intuition of the complex harmony of nature" that Johnson finds in *Radi Os* is a staging of that self-differentiation, a reenactment of the Fall, presented not as a moral failing, but a joyous mind-seeing-itself, that wishes to take the judgment out of the recognition of the physical and imaginative limits of our "vegetetated brain." Johnson means to:

> Shine inward, and
> there plant eyes

that I may see and tell
Of things invisible

once

thick as stars,

The radiant image

the only
Garden

On the bare outside of this World (*Radi Os* III)

Though Johnson wishes to see "as the sun sees," he can never have the brain's eye view of "the inward parts" ("BEAM 22, 23, 24"), a view the Christian tradition grants only to God:

For You formed my inward parts;
You covered me in my mother's womb.
. . .
My frame was not hidden from You,
When I was made in secret,
And skillfully wrought in the lowest parts of the earth.
Your eyes saw my substance, being yet unformed.
And in Your book they all were written (Psalms 139:13-16)

Radi Os then creates a new structure of "molecular intuition," an idealized structure of primary metaphor that reattributes our linguistic cosmology to the cosmos itself; that reinterprets our imaginative world as a "music" of physics. It is up at, through, and beyond this new ventilated

structure that Orphic minds might see when they look "up" at the heavens, a structure built to sing:

Man's nature

fruition
from utter loss (*Radi Os* III)

"We are prisoners of our metaphors, metaphorically speaking," said Buckminster Fuller (*I Seem* 86A). Elizabeth Maroski understands Fuller's writing to have responded to the sense that humans "have reached a unique point in our evolving in which our understanding of the world has surpassed our capacity to express it. We're still using a Newtonian language in a quantum world" (n.p.). For example, Fuller felt the words "up" and "down" to be misleading because they reference a planar conceptualization of terrestrial space inconsistent with what humans know of their own experience. The vector that is "up" for any human on the surface of the planet is in fact a vector radiating outward from the gravitational centre of the Earth; and "down" would follow the same vector toward the Earth's centre - *Radi Os*. Fuller hoped man might "liberate himself from all the up and down kind of reflexing":

> I suggest to audiences that they say, 'I'm going "outstairs" and "instairs."' At first that sounds strange to them; They all laugh about it. But if they try saying in and out for a few days in fun, they find themselves beginning to realize that they are indeed going inward and outward in respect to the center of Earth, which is our Spaceship Earth. And for the first time they begin to feel real 'reality.' (*Intuition* 103)

When Johnson suggests that *Radi Os* might form a Dymaxion Dome over *ARK*, he evokes an image of the poem as Fuller's tensegrity structure. All geodesic domes are *tensegrity* structures (the term "tensegrity" coined by Fuller as a contraction of *tensional integrity)*, or "tensed-

framework" structures that depend on a precise balance of compression and tension, forming "a lightweight space structure consisting of compression members surrounded by a network of tension members" (Fest 515) that "gets its stability from continuous tension that is transmitted over all of its elements and is balanced by a subset of elements that cannot be compressed" (Powledge 254). *Radi Os* finds the nodes in *Paradise Lost* that can support a structure of perceptions that means to establish the post-Newtonian "network of primary metaphor." Stripped down to a "lightweight space structure," there are holes between the invisible BEAMS of its framework; the actual Milky Way and space with its own black holes is perceptible on the other side for those who come to *Radi Os* looking for paradise.

Johnson also, again likely unwittingly, has in *Radi Os* created a metaphor of the brain. Only fairly recently, writes cell biologist Donald Ingber of Harvard Medical School in 2008,

> have scientists and physicians begun to appreciate the key role which mechanical forces play in biological control at the molecular and cellular levels . . . all cells in our tissues also exist in a state of isometric tension, and it is because of this internal prestress that surgeons need to suture together wounds when they incise living organs. Thus, tensegrity is used to stabilize the shape of living cells, tissues and organs, as well as our whole bodies. (198)

Ingber has been arguing since 1993 that "cells are not, as conventionally pictured, elastic bags of viscous gel"; but rather that "cells create tension in their contractile microfilaments and transmit the tension all over the cell. The tension is resisted both by external attachments and by internal elements, such as microtubules, . . . liken[ed] to compression-resistant tent poles" (254-55). While Ingber is interested in showing how structural tension in cells gives integrity to various tissues and organs, he notes in *The Journal of Cell Science* that "neural architecture in the brain

[is] also governed by internal tissue forces, in this case generated by within the cytoskeletons of their constituent cells" (1168). Gyorgy Buzsàki, a celebrated neuroscientist at Rutgers University, has built on the biotensegrity premise and writes:

> Like Buckminster Fuller's tensegrity structures, neurons in most, but not all, brain structures attempt to map out the shortest paths with their surrounding peers. They receive most information from their neighbors and act locally. Communicating with distant neurons requires costly connections, and transporting electrical pulses over long distances is metabolically expensive. The local order of neuron connections has important consequences for brain functions. . . . Neurons in the retina, visual thalamus, and cortex combine information representing adjacent parts of the environment much more efficiently than nonadjacent parts. (47)

Buszàki describes the various ways in which localized sensorimotor information is mapped onto similarly closely located neurostructures in the cortex; for example, a brain more efficiently processes the touch sensations of a bug crawling up one's hand to the wrist, because the processing neurons for adjacent touch sensors will themselves be adjacent. Even in the area of the cortical mantle not *directly* related to sensory inputs or motor outputs, called the *associational cortex,*

> the cortical modules in the associational areas are not fundamentally different from the sensory or motor cortical areas, an indication that local computation in cortical modules enables the brain to map out the neighborhood relations of the environment efficiently, because local interactions are the main organizational principle of the physical world. We may conclude, therefore, that the statistically correlated features of the environment are the principle reason for the primarily local tensegrity organization of the neocortex. . . . In

> general, the distributions of the connections are "tuned" to extract the most likely information from the environment (48)

It seems that the environment literally maps itself into and "of" our brains. Ronald Johnson attempted to explain it in *ARK*:

– as the eye leaves outside itself the object that it sees –

the mind weaves it

of itself

incessant shuttle to external's

shelf

. . .

wind Os wind Os

wind Os wind Os

wind Os wind Os

wind Os wind Os

("BEAM 8")

Johnson later decided to rename *Radi Os* "Dome Excised Paradise Lost," a name which has not stuck, in part because there has been no published edition of the *Outworks*, a collection of shorter poems that was to include *Radi Os* under the new title, that itself was meant to be an adjoining garden around *ARK. Radi Os*, as it appeared in 1977 from Sand Dollar Press, and then as it appeared in 2007 in a new edition from Flood, remains provisionally 'above' *ARK*, its firmament, confirming the morphological rhyme of nature and man.

It is in the same “BEAM 8” of *ARK,* above, considering the developmental, structural and perceptual interdependency of mind and environment "beyond utterance," that Johnson writes the following:

Linkings, inklings,

around the stem & branches of the nervetree --

shudder and shutterings, sensings.

SENSE sings. . . .

The Definition of Perception

)(

The nervetree: a neologism, the compound word made, like Mencken’s American vernacular, simply out of adjacent familiar forms; the human itself seen with "an eye / against /the *Is*." The nervetree is the "radiant image" by which Johnson maps a new perception of ourselves in "our-cell-ves." The figure of the nervetree is readable in objectivations in over twenty years of Johnson’s work. It is there in his early work in *The Book of the Green Man*, where we "stand in our rayed form" and are exhorted to “Rise and put on your foliage” (31). It is there in his Orphic poems in *Valley of the Many-Colored Grasses* where he means to create "a new foliage of sensings" (87). The nervetree is anticipated in his fresh concretions of p(rose) and poetree. In his drafts of the movement of the garden in the branches of the brain to the "bush burning inner

bush" of later *ARK*, in the spiritual Man/Tree-of-Light that is Adam Kadmon that appears in *Radi Os* and *ARK*, even in the late work, *The Shrubberies,* where Adam reappears as the vegetable-fleshed Archimboldo, the figure of the a human-plant, a nervous tree, is objectivated. To become familiar with Johnson's work is to become familiar with the nervetree, to recognize it in its many forms (as Davenport recognized Johnson's Green Man on a can of peas), and to have the connection between nerves and trees extend new branches into our own cerebrums.

Our brains, experientially 'tuned' to perception, are not able to perceive themselves in the early interactions that shape the network of primary metaphor that I argue is intuited in the "structure of rhyme" that Johnson elaborates in his work. Neither do we arrange our perceptions according to the physics of the stars, Newtonian or quantum; we arrange experience within the range of perceptions of the human body, where information from our senses suggests the earth is flat, and the heavens are a blue dome overhead. Johnson, like Buckminster Fuller, means to reframe our historicizable imaginations of Paradisical or Edenic being as a state of awareness of our "one being, surround in bloom" and to "gospel sentience" ("ARK 99"). This radical reorientiation to the material morphology of our own human sentience emphasizes that the mental relationship of mind to Nature is one of physical form to physical form; physical force to physical force; object to object. The practice of writing and reading is "*a landscape of Simulars / where shape sort inked shape*" ("ARK 91"). Perception and thought are embodiment itself: "Forthwith / from every / head / – godlike Shapes, and Forms / cell / the invisible / by various name" (*Radi Os* I).

Johnson set out on an Orphic quest to stage the mind seeing itself and produced a body of work that intuitively 'saw' a stunning glimpse of what twenty-first century scientists have discovered of brain function. I point this out not to argue for Johnson's genius in anticipating

empirical science, but to contribute to that conversation that explores, as Vicki Kirby now does, the suggestion that deconstruction, or the self-reflexive poetry that is, we might now say, cognition seeing itself, might be "considered a positive science" ("Original Science" 201); that asks, "is it possible that all those claims made by cultural analysts about the materiality of language and the constitutive efficacy of representations could be taken more seriously than their authors ever envisaged, and enfolded into the question of science and objectivity more generally" (205). Reading Johnson's poetics of textualising "the mind seeing itself" and noting that it produces language objects similar to the sciences, albeit by different means, participates in Kirby's provocative reading of Derrida:

> 'textuality' as systemic self-reference could be recast as the Nature of Nature, the ontological complexity of Life as it unfolds – both subject and object (at the same time) of its own enduring curiosity and self-reflection, now a form of self-diffraction. However in saying this, I can understand the reader balking at this sense of the Subject writ large, a recuperation of the human that now practices science on itself. . . . And yet, in an open system that is always in touch with itself the other is uncannily familiar. (218)

Johnson poses language as fundamentally mimetic and founded in "poetic" vision in ways that other writers in other centuries have expressed. Yet through his collage, concrete and procedural approaches, the tools of linguistic deconstruction, Johnson shows us that "the very notion of language – what it is and how it works – [and how it functions to document observation and cognition] is distributed in ways that give rise to the same quandaries that surround the quantum problematic" (Kirby 201). Johnson's poetry stages cognitive events in ways that bring the entire Romantic and modernist poetic tradition into a particularly cerebral conversation with the scientific method.

The image of the man-tree has been central to Johnson's investigation. "Mind" is an abstraction, a language-signal for a faculty of language production experienced as distinct from other aspects of embodiment, a faculty that for two centuries has been imagined through language as separate from the body. Yet for those centuries and more, the faculty called "mind," despite its invisible ways of functioning, needed figuration. The observable and predictable developmental changes in the motion and language production (behaviour) of bodies were deemed the "growth" of mind often figured as blossoming, expanding, unfolding, blooming. This registerable, yet invisible, "growth" was experienced as *not* co-terminous with the growth of the physical body. Until the recent ratification in the scientific community of the proposal that the brain, though largely "rooted" in its early structure (*fallen* from an unimaginable early neuroconnectivity that cannot be restored) "grows" with learned experience, literary figures and vernacular metaphors of the mind-as-plant seemed purely imaginative. Johnson's work shows us that the long-tradition of representing minds (and souls, in devotional poetry) as flowers or plants is uncannily proprioceptive; merely the senses sensing themselves, yet stammering through the rude organs of a language structured first by "external" interaction.

"Always my core dream / winding a garden / secret in every sense" wrote Johnson near the end of his life (*Shrubberies* 67). Johnson's desire to "wind a garden" puns with the breath of *wind*, or the aspiration that ended *ARK*) as his desire to speak a new, densely-sensed, *physical* landscape of *psychic* interiority. His work "speaks" the then-secret reality of neuroplastic change coincident in every perception and conception, in every neural "sense." Johnson also cultivates,

over and over, new hybrids of his man-plant *in* the Gardens, both textual and neurophysical, "of human sense exposed" (*Radi Os* II). Johnson *draws us:*

> into pool of being being
> *hommage floreal*
>
> yes Heaven/being/garden
>
> (*Shrubberies* 72)

WORKS CITED

Abram, David. *The Spell of the Sensuous: Perception and Language in a More-Than-Human World*. New York: Pantheon, 1996. Print.

Abrams, Meyer Howard. *The Mirror and the Lamp*. Oxford: Oxford UP, 1971. Print.

Ahearn, Barry, ed. *The Correspondence of William Carlos Williams and Louis Zukofsky.* Middletown, CT: Wesleyan, 2003. Print.

Altieri, Charles. "The Objectivist Tradition." In DuPlessis and Quartermain 25-36.

Alpert, Barry. "Ronald Johnson: An Interview (*Vort*, 1976)." In Bettridge and Selinger 545-560.

Anderson, Edgar. *Plants, Man and Life.* Boston: Little, Brown, 1952. Print.

Anderson, William. *Green Man: The Archetype of Our Oneness with the Earth*. San Francisco: HarperSanFrancisco, 1990. Print.

Anzaldùa, Gloria. *Borderlands: the New Mestiza = La Frontera.* San Francisco: Aunt Lute, 2007. Print.

Arber, Agnes. *The Mind and The Eye*. Cambridge: Cambridge UP, 1954. Print.

---. *The Natural Philosophy of Plant Form*. Cambridge: Cambridge UP, 1950. Print.

"Art Nouveau." *Encyclopedia Brittanica Concise.* Brittanica.com. 2012. Web. 14 Dec. 2012.

Balcetis, E. and David Dunning. "See What You Want To See: Motivational Influences on Visual Perception." *J. Personality and Social Psychology* 91:4 (2006) 612-625. Print.

Balcombe, Jonathan. “Concluding Remarks: From Theory to Action: An Ethologist’s Perspective.” In Taylor and Signal 255-280.

Baluska, F., S. Mancuso, and D. Volkmann, eds. *Communication in Plants; Neuronal Aspects of Plant Life*. Springer, 2006. Web. 13 June 2008.

Bartram, William. *Travels Through North and South Carolina, Georgia, East and West Florida*. 1791. New York: Penguin, 1996. Print.

Basinski, Michael. "The Concrete Poetry of Ronald Johnson in Relation to That of Ian Hamilton Finlay." In Bettridge and Selinger 195-204.

Basford, Kathleen. *The Green Man*. Rochester: D.S. Brewer, 1998. Print.

Bate, Jonathan. *Romantic Ecology: Wordsworth and the Environmental Tradition*. London and New York: Routledge, 1991. Web. 2 Sept. 2009.

---. *The Song of the Earth*. London: Picador, 2000. Print.

Beam, Jeffery. "Tales of a Jargonaut: An Interview With Jonathan Williams." *Rain Taxi* Vol. 8. (Spring 2003). Web. 3 Aug. 2012.

Bellanca, Mary Ellen. *Daybooks of Discovery: Nature Diaries in Britain, 1770-1870*. Charlottesville: U of Virginia P, 2007. Print.

Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke UP, 2009. Print.

Berner, Jeff, ed. *Astronauts of Inner Space: An International Collection of Avant-Garde Activity.* San Francisco: Stolen Paper, 1966. *loriemerson.net.* Web. 6 Mar 2012.

Bernstein, Charles. "Introduction to Ezra Pound." In *Poetry Speaks.* Eds. Elise Paschen and Rebekah Presson Mosby. Naperville, IL: Sourcebooks, 2001. Electronic Poetry Center Online. Web. 15 Oct 2011.

Bettridge, Joel and Eric Murphy Selinger, eds. *Ronald Johnson: Life and Works.* Orono: National Poetry Foundation, 2008. Print.

Bhabha, Homi. *Location of Culture.* New York: Routledge, 1990. Print.

Biglieri, Gregg. "Of My Cells I Sponge." Bettridge and Selinger 435-468.

Blake, William. *Complete Poetry and Prose of William Blake.* Ed. Erdman, David. Berkeley: U California, 2008. Print.

Bloom, Harold. *John Milton*. New York: Bloom's Literary Criticism, 2011. Web. 17 July 2012.

Botar, Oliver A. I. and Isabel Wünsche. *Biocentrism and Modernism*. London: Ashgate, 2011. Print.

Brakhage, Stan and Ronald Johnson. "Stan Brakhage and Ronald Johnson (with Jim Shedden)" (1977). *Chicago Review* 57: 3/4 (Winter/Spring 2013) 31-37. Print.

Bringhurst, Robert. *Everywhere Being Is Dancing: Twenty Pieces of Thinking*. Berkeley: Counterpoint, 2009. Print.

---. *The Surface of Meaning: Books and Book Design in Canada*. Vancouver: CCSP, 2008. Print.

---. "The Tree of Meaning and the Work of Ecological Linguistics." *Canadian Journal of Environmental Education* 7:2 Spring 2002. Web. 20 Nov. 2008.

Brown, Bill. "Thing Theory." Spec. issue of *Critical Inquiry* 28 (Autumn 2001). 1-22. Print.

Brown, Nathan. "The Materials— Technoscience and Poetry at the Limits of Fabrication." Dissertation. Los Angeles: U of California P, 2008. Print.

Butler, Judith. *Excitable Speech: A Politics of the Performative*. New York: Routledge, 1997.

Buell, Lawrence. "Ecological Contemplation as Spiritual Practice: The Case of Henry David Thoreau." 2006. Web. 30 June 2008.

---. *The Environmental Imagination : Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge MA: Belknap, 1995. Print.

Buzsàki, Gyorgy. *Rhythms of the Brain.* Oxford: Oxford UP, 2006.

Calder, Nigel. *The Mind of Man.* New York: Penguin, 1973.

Chen, Simon Xuan and Kurt Haas. "Function Directs Form of Neuronal Architecture."

BioArchitecture 1:1 (Jan/Feb 2011) 2-4. Print.

Clark, Thomas. Rev. of *A Line of Poetry, A Row of Trees. Poetry* Nov. 1965: 123-24. Print.

Cole, Barbara. "To Do As Eve Did: Ronald Johnson's Dickinsonian Poetics of (Not) Choosing." In Bettridge and Selinger 117-134.

Collis, Stephen. "'The Frayed Trope of Rome': Poetic Architecture in Robert Duncan, Ronald Johnson and Lisa Robertson." *Mosaic* 35.4 (2002): 143-62. Print.

---. *Through the Words of Others: Susan Howe and Anarcho-Scholasticism.* Victoria, BC: ELS, 2006. Print.

Comer, Krista. *Surfer Girls in the New World Order.* Durham, NC: Duke UP, 2010. Print.

Corey, Joshua. "Had A Pleasant Visit With John Beer." *Cahiers de Corey.* 20 Sept. 2005.Web. 2 Feb. 2012.

---. "The American Avant-Pastoral: Ezra Pound, Louis Zukofsky, Ronald Johnson." Dissertation. Ithaca: Cornell UP, 2008. Print.

---. "Ronald Johnson: The Earth from Space." *Octopus* 3. 10 August 2006. Web. 7 Jan 2011.

Creeley, Robert. "A Note For Ronald Johnson." *Chicago Review* 42.1 (1996): 23-24. Print.

Davenport, Guy. *Flowers and Leaves.* Highlands NC: Nantahala Foundation (Jargon), 1966. Print.

---. Introduction. *Valley of the Many-Colored Grasses*. By Ronald Johnson. New York: Norton, 1969: 4-19. Print.

---. Letter from Guy to Dear Ron [Johnson]. Typescript. 25 May 1979. Box 22 File 101. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. Letter from Guy to Dear Ron [Johnson]. Typescript. 12 Jan 1980. Box 22 File 101. Ronald

Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *The Geography of the Imagination: Forty Essays*. Boston: David R. Godine, 1997. Print.

De Campos, Augusto, De Campos, Haroldo and Décio Pignatari. "Pilot Plan for Concrete Poetry." *Novas: Selected Writings.* By Haroldo de Campos. Evanston, IL: Northwestern, 2007. Print.

De Man, Paul. *Blindness And Insight: Essays in the Rhetoric of Contemporary Criticism* (1972). Minneapolis: U of Minnesota P, 1983. Print.

Deleuze, Gilles. "Gilles Deleuze, The Body, the Meat and the Spirit: Becoming Animal." In Tracy Warr, ed. *The Artist's Body.* Trans. Liz Heron. London: Phaidon, 2000. Web. 14 June 2008.

Deleuze, Gilles, and Felix Guattari. *A Thousand Plateaus*. Vol. 2. Minneapolis: U of Minnesota P, 1987. Print.

Derrida, Jacques. *Dissemination*. Trans. Barbara Johnson. Chicago: U of Chicago P, 1981. Print.

---. *Limited Inc.* Evanston, IL: Northwestern UP, 1977. Print.

Descartes, René. *Discourse on Method and the Meditations*. Harmondsworth, UK: Penguin Books, 1968. Print.

"Don Sylvester Houédard Papers." *Archiveshub.* Manchester: U of Manchester, n.d. Web. 11 Aug. 2012.

Duncan, Robert. *Bending the Bow*. New York: New Directions, 1968. Print.

---. *The Opening of the Field.* New York: Grove, 1960. Print.

---. *Roots and Branches.* New York: New Directions, 1964. Print.

Duncan, Robert Edward and Eric Mottram. Eds. Amy Evans and Shamoon Zamir. *The Unruly*

Garden: Robert Duncan and Eric Mottram, Letters and Essays. Bern: Peter Lang, 2007. Print.

Duncan, Robert Edward, Robert J. Bertholf, and Albert Gelpi. *The Letters of Robert Duncan and Denise Levertov*. Stanford: Stanford UP, 2004. Print.

DuPlessis, Rachel Blau. "Echological Scales: On *ARK* of Ronald Johnson." In Bettridge and Selinger 297-322.

DuPlessis, Rachel Blau and Peter Quartermain, eds. *The Objectivist Nexus: Essays in Cultural Poetics.* Tuscaloosa : U of Alabama P, 1999. Print.

Dutton, Paul. "bpNichol, Drawing the Poetic Line." In *St. Art: The Visual Poetry of bpNichol.* Gil McElroy, ed. Charlottetown: Confederation Centre Art Gallery and Museum, 2000. *thing.net.* Web. 20 Mar. 2012.

Edmonson, Amy. *A Fuller Explanation: The Synergistic Geometry of R. Buckminster Fuller.* Pueblo, CO: Emergent World, 1997.

Eisley, Loren. "NYT Book Review of *The Orion Book of Evolution* (June 25 1961)" in *The Caravan, Newsletter of the Friends of Loren Eisley* 10:2 (1996), 12. Print.

Emerson, Ralph Waldo. *Collected Poems and Translations*. New York: Library of America, 1994. Print.

---. *Essays and Lectures.* New York: Penguin, 1983. Library of America. 1983. Print.

---. "Representative Men." In *Essays and Lectures* 611-762.

---. *The Essential Writings of Ralph Waldo Emerson.* Modern Library Series. New York and Toronto: Random House, 2000. Print.

Emerson, Ralph Waldo, Joel Porte and Saundra Morris. *Emerson's Prose and Poetry: Authoritative Texts, Contexts, Criticism.* New York: Norton, 2001. Print.

Featherstone, Joseph. “Rousseau and Modernity.” *Daedalus* 107.3 (1978): 167–192. Print.

Fenollosa, Ernest, and Ezra Pound. *The Chinese Written Character as a Medium for Poetry: A Critical Edition*. Bronx: Fordham UP, 1936. Print.

Ferguson, Marilyn. *The Brain Revolution: The Frontiers of Mind Research.* New York: Taplinger, 1973. Print.

Fest, Etienne et al. “Adjustable Tensegrity Structures.” *Journal of Structural Engineering* 129.4 (2003): 515. Print.

Fields, R. Douglas. “Imaging Learning: The Search For A Memory Trace.” *Neuroscientist* 17:2 (April 2011) 185-196. Print.

Fink, Karl J. *Goethe’s History of Science*. Cambridge: Cambridge UP, 1991. Print.

Finkelstein, Norman. "Exploring the Duncan/Johnson Connection." In Bettridge and Selinger 47-72.

---. *On Mount Vision: Forms of the Sacred in Contemporary American Poetry*. Iowa City: U of Iowa P, 2010. Print.

Finlay, Alec. *Wood Notes Wild: Essays on the Poetry and Art of Ian Hamilton Finlay*. Edinburgh: Polygon, 1995. Print.

Finlay, Ian Hamilton. Letter from Ian Hamilton Finlay to Jonathan Williams and Ronald Johnson. Aug 2. Box 223 File 27. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. *Poems To Hear and See.* New York: Macmillan, 1971. Print.

Flammarion, Camille. *L’Atmosphère: météorologie populaire.* Paris: Hachette, 1888. *Bibliothèque Nationale de France.* Web. 22 April 2012.

Foster-Damon, S. *A Blake Dictionary: the Ideas and Symbols of William Blake.* Hanover, NH:

Brown UP, 1988. Print.

Frazer, James. *The Golden Bough: A Study in Magic and Religion*. Abridged ed. Harmondsworth, UK: Penguin, 1996. Print.

Frye, Northrop. *Collected Works of Northrop Frye: Northrop Frye on Milton and Blake*. Toronto: U of Toronto P, 1996. Print.

Fuller, Buckminster. *I Seem To Be A Verb.* New York: Bantam, 1970. Print.

---. *Intuition.* New York: Doubleday, 1972. Print.

---. *Synergetics: Explorations in the Geometry of Thinking.* New York: Macmillan, 1982. Print.

---. "Tensegrity by R. Buckminster Fuller." Intro by John McHale. (1961). www.rwgrayprojects.com. Web. 17 July 2012.

Furlani, André. *Guy Davenport: Postmodern and After*. Evanston, IL: Northwestern UP, 2007. Print.

Gaard, Greta. *Ecofeminism.* Philadelphia: Temple, 1993. Print.

Garrard, Greg. *Ecocriticism*. London: Routledge, 2004. Web. 2 Sept. 2009.

Gigante, Denise. *Life: Organic Form and Romanticism*. New Haven: Yale UP, 2009. Print.

Goethe, Johann Wolfgang von. *Botanical Writings* (1790). Honolulu: U of Hawaii P, 1952. Print.

---. *Metamorphosis of Plants* (1790). Cambridge: MIT, 2009. Print.

Gould, Stephen Jay. *The Structure of Evolutionary Theory*. Cambridge: Harvard, 2002. Print.

Gould, Stephen Jay and Rosamund Purcell. *Finders, Keepers: Eight Collectors.* New York: Norton, 1992. Print.

"green man, n.". *OED Online*. December 2012. Oxford UP. Web. 4 January 2013.

Grenier, Robert. "On Speech." In Silliman, Ron, ed. *In The American Tree.* 5-26.

Hair, Ross. “A ‘Mosaic of Cosmos’: Bricolage in Ronald Johnson’s ARK.” *National Poetry Foundation "Mesh."* 23 June 2008. Web. 24 Nov. 2010.

---. "Local Colour: Ronald Johnson, Charles Ives and America." *Comparative American Studies* 9:2 (2011) 131-45. Print.

---. *Ronald Johnson’s Modernist Collage Poetry*. Basingstoke, UK: Palgrave Macmillan, 2010. Print.

Hall, Matthew. *Plants As Persons: A Philosophical Botany*. Buffalo: State U of New York P, 2011. Print.

Hamilton, Craig. “A Cognitive Rhetoric of Poetry and Emily Dickinson.” *Language and Literature* 14 (2005): 279-94. Print.

Haraway, Donna Jeanne. *The Haraway Reader*. New York: Routledge, 2004. Print.

---. *When Species Meet*. Minneapolis: U of Minnesota P, 2008. Print.

Harman, Graham. “Intentional Objects for Non-Humans.” (2008). *scribd.com.* Web. 20 Nov. 2012.

---. "The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism." *New Literary History* 43.2 (2012): 183-203. *Project MUSE Online*. Web. 27 Dec. 2012.

Hart, George. “A New Green Script: Reading *The Book of the Green Man* Ecocritically.” In Bettridge and Selinger 167-194.

Hayles, N. Katherine. *How We Became Posthuman*. Chicago: U of Chicago P, 1999. Print.

Hayman, Richard. *The Green Man.* Oxford, UK: Shire, 2010. Print. 3 Feb 2012.

---. “Ballad of the Green Man.” *Historytoday.com* 60:4 (April 2010). Web.

Hebb, Donald Olding. *The Organization of Behavior: A Neuropsychological Theory*. 1949. New York: Psychology, 2002. Print.

Hejinian, Lyn. "For Change." In Silliman *In The American Tree.* 468-487. Print.

Heidegger, Martin. *Discourse on Thinking.* Trans. John Anderson and Hans Freund. New York: Harper & Row, 1966. Print.

Houédard, Don Sylvester. Letter to my dear Ron. 11 Nov. 1963. Box 26 File 70. Kansas University Special Collections, Ronald Johnson Papers, Lawrence, Kansas, USA.

---. Letter to my dear Ron. 10 May 1964. Box 26 File 70. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. "Paradada." In Berner 30-33.

Ingber, Donald E. "Tensegrity and Mechanotransduction." *Journal of Bodywork Movement Therapies* 12.3 (2008): 198–200. Web. 17 July 2012.

Jackson, Peter. "Race and Racism." In *Research Training for Social Scientists: A Handbook for Postgraduate Researchers.* Ed. Dawn Burton. London: Sage, 2000.

Jenson, Deborah, and Marco Iacoboni. "Literary Biomimesis: Mirror Neurons and the Ontological Priority of Representation." *California Italian Studies Journal* 2.1 (2011): n. pag. Web. 5 July 2012.

Johnson, Mark. *The Body in the Mind: The Bodily Basis of Meaning, Imagination and Reason.* Chicago: U of Chicago P, 1999. Print.

Johnson, Ronald. *A Line of Poetry: A Row of Trees*. Jargon 42. Highlands, NC: Nantahala, 1964. Print.

---. *ARK*. Albequerque, NM: Living Batch, 1996. Print. N. pag.

---. *Ark: The Foundations / 1 – 33.* Coversheet to "Beam 4." Typescript. n.d. Box 10 File 12a. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer

Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Assorted Jungles--Rousseau*. San Francisco: Auerhahn, 1966. Print.

---. *The Book of the Green Man.* New York: Norton, 1967.

---. *Balloons for Moonless Nights, Arrows Like S's, GsAeRcDrEeNtS: 3 Concrete Poems*. Urbana, IL: Finial, 1968. Print.

---. Binder. Three-ring binder serving as quotation book, commonplace book and address book. Typed quotations, approx 175 pp. n.d. Literary Estate of Ronald Johnson, James Jaffe holdings, now part Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Blocks to Be Arranged in a Pyramid: In Memoriam, AIDS*. Broadside. Chicago: LVNG, 1996. Print.

---. "Career." Typescript statement. n.d. James Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. "Collected Early and Short Poems" Unpublished typescript. Box 49 File 7. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. "Concrete." One manila folder captioned "Concrete" containing 57 pages of original typescript poems and 4 pages holograph worksheets. Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries,

Lawrence, Kansas, USA.

---. “Dense senses ...” Typescript. n.d. Box 18 File 5. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. Draft Pulitzer statement. Draft of statement for Pulitzer Prize application. n.d. Literary Estate of Ronald Johnson, James Jaffe holdings, now part Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Eye-deep in the world...” Typescript. n.d. Box 19 File 70. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Eyes and Objects: (Catalogue for an Exhibition: 1970-72)*. Highlands, N.C.: Jargon Society, 1976. Print.

---. “Eyes in the air: the sky turns...” Typescript. n.d. Box 6 File 62. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Gorse Goose Rose & Other Poems*. Bloomington: Fine Arts Department, Indiana University, 1966. Print.

---. “Hurrah for Euphony.” *Chicago Review* 42.1 (1996): 25–31. Web. 3 June 2011.

---. Holograph Journal. 5” x 8” bound notebook recording a walking tour of England. 1 of 23 notebooks. Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “I can add little ...” Typescript draft of letter to unnamed prize committee. n.d. Literary Estate of Ronald Johnson, James Jaffe holdings, “One manila file folder of job-related materials ... .” Now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Io and the Ox-eye Daisy*. *Poor. Old. Tired. Horse 19.* Dunsyre, Scotland: Wild Hawthorn, 1966. Print.

---. "In jacket copy ..." Typescript statement. n.d. James Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “The Italics are Guy Davenport’s.” Vort 3.3 (1976) 42-45. Original typescript. n.d. Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Jonathan (Chamberlain) Williams.” *American Poets since World War II*. *Dictionary of Literary Biography* Vol. 5. Ed. Donald J. Greiner, Detroit: Gale , 1980. *jacketmagazine.com.* 2009. Web. 14 Apr 2011.

---. “Jonathan Williams in the Valley of the Many-colored Grass.” Prose typescript, 5 pp. Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. Letter to Dear Dr. –. Letter from Ronald Johnson to Jonathan Williams. n.d. 1973. Box 309

File 3. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Jonathan Williams. May 11 1970-80. Box 307 File 49. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Jonathan Williams. Letter from Ronald Johnson to Jonathan Williams. 19 June 1970-80. Box 307 File 57. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Jonathan Williams. Letter from Ronald Johnson to Jonathan Williams. Sept 8. 1970-80. Box 307 File 58. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Jonathan Williams. Sept 11 1970-80. Box 307 File 36. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Jonathan Williams. Sept X 1970-80. Box 307 File 37. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Jonathan Williams. Letter from Ronald Johnson to Jonathan Williams and Tom Meyer. Dec 12. 1970-80. Box 309 File 49. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. Letter to Ted Enslin. n.d. Box 68 File 1. Enslin Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. “Lullaby.” Typescript. n.d. Box 16 File 36. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. "Mentors." Typescript statement. n.d. James Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Microscopic/telescopic sculpture.” Typescript. n.d. Box 16 File 8. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “The Planting of the Rod of Aaron.” *Northern Lights Studies in Creativity 2* (1985- 86): 1-13.

---. *Radi Os*. Berkeley: Sand Dollar, 1977. Print.

---. *Reading 1*. Urbana: Finial, 1968. Print.

---. *Reading 2*. Urbana: Finial, 1968. Print.

---. *The Shrubberies.* Ed. Peter O'Leary. Chicago: Flood, 2001.

---. "Sculptures: Variations ..." Leaf of typescript of A Line of Poetry, A Row of Trees. 1964. Box 49 File 2. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. “slowly swirling ...” Typescript and manuscript. n.d. Box 7 File 117. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Songs of the Earth.* San Francisco: Grabhorn-Hoyem, 1970.

---. “Sound Songs (A Journal).” Typescript. n.d. Box 18 File 4. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. "Still Life." Typescript. 31 Jan 1962. Box 309 File 34. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. *Sun Flowers.* Gloucester, UK: Furnival, 1966.

---. *The Round Earth on Flat Paper*. Urbana, IL: Finial, 1968. Print.

---. *To Do as Adam Did: Selected Poems of Ronald Johnson*. Ed. Peter O'Leary. Jersey City: Talisman, 2000. Print.

---. To Mr. McClung. Draft of letter from Ronald Johnson to Mr. McClung of UCal Press. n.d. Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. "Two Poems: Wor(l)ds 20, Jan 1st and Wor(l)ds 23." *The Iowa Review* 6:3-4 (Summer / Fall) 1975: 101-103. Print.

---. “Up To Now.” 29-page typescript draft of essay later edited and published in Contemporary Authors’ Autobiography Series 30 (1999) p. 109-122. Literary Estate of Ronald Johnson, James Jaffe holdings, now part of Ronald Johnson Collection, Department of Special Collections, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds __ How To See Flowers.” Typescript and manuscript. n.d. Box 5 File 17. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer

Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds 22 , Charles Ives: Two Eyes, Two Ears.” From Wor(l)ds Book 1. Unpublished typescript. Box 50 File 3. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. “Wor(l)ds 23 [1].” Typescript. n.d. Box 5 File 25. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds 23 [2].” Typescript. n.d. Box 6 File 60. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds 23 [3]” Typescript. n.d. Box 7 File 106. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds 24 , For Robert Duncan.” From Wor(l)ds Book 1. Unpublished typescript. Box 50 File 3. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

----. “Wor(l)ds 27, Days.” Typescript and manuscript. n.d. Box 7 File 115. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

--. “Wor(l)ds 31 Days.” From Wor(l)ds Book 1. Unpublished typescript. Box 50 File 3. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. “Wor(l)ds 31, The Naked Eye.” Typescript. n.d. Box 5 File 34. Ronald Johnson Collection,

Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds 38.” Typescript and manuscript. n.d. Box 5 File 30. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. “Wor(l)ds 43, The Naked Eye.” Typescript and manuscript. n.d. Box 8 File 147. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. Wor(l)ds Book 1. Unpublished typescript. Box 50 File 3. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

---. “Worksheet, Balloons for moonless nights.” Manuscript. n.d. Box 10 File 8. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. *Valley of the Many-Colored Grasses*. New York: Norton, 1969. Print.

Johnson, Ronald and Thomas Kovacs. *Sports and Divertissements*. Urbana, IL: Finial, 1969. Print.

Jones, Edward G. "Ramón Y Cajal and the Croonian Lecture, March 1984." *TINS* 17:5 (1994) 190-192. Print.

Jonik, Michael. *A Natural History of the Mind: Edwards, Emerson, Thoreau, Melville.* Diss. State University of New York, 2009. Print.

Jung, Carl Gustav. *Man and His Symbols*. New York: Random House Digital, 2012. Web. 16 March 2011.

Keenaghan, Eric. “World-Building and Gay Identity: Ronald Johnson’s Singularly Queer Foundations.” In Bettridge and Selinger 361-396.

Kemmer, Suzanne. “About Cognitive Linguistics: Historical Background.” *Cognitivelinguistics.org.* Internal Cognitive Linguistics Association. 24 Apr. 2010. Web. 9 Dec 2012.

Kenner, Hugh. *The Pound Era*. Berkeley: U California, 1973. Print.

Kerrigan, William. “Introduction to *Paradise Lost.”* In *The Complete Poetry and Prose of John Milton.* By John Milton. Eds. William Kerrigan, John Rumrich and Stephen M. Fallon. New York: Modern Library, 2007. 251-282. Print.

Kimmelman, Burt. "The Lyre and The Atom: Ronald Johnson's Reinvention of Nature." Bettridge and Selinger 421-434.

Kirby, Vicky. "Original Science: Nature Deconstructing Itself." *Derrida Today* 3:2 (2010). 201-220.

---. *Quantum Anthropologies: Life At Large.* Durham: Duke UP, 2011. Print.

---. *Telling Flesh: The Substance of the Corporeal.* New York: Routledge, 1997.

Klobucar, Philip Andrew. "After Modernism: Charles Olson, Ecological Thought and a Postwar Avant-Garde." Diss. University of British Columbia, 1999. Web. 10 October 2012.

Kneale, J. Douglas, and Ross Greig Woodman. *The Mind in Creation: Essays on English Romantic Literature in Honour of Ross G. Woodman*. Montreal: McGill-Queens, 1992. Print.

Kocsis, Jeffery D. “Competition in the Synaptic Marketplace: Activity Is Important.” *Neuroscientist* 1:4 (1995) 185-187. Print.

Kolb, Bryan. “Brain Plasticity and Behavior.” *Psychological Science* 12 (2003): 1-5. Web. 20

Oct. 2011.

Kraitsir, Charles V. *Significance of the Alphabet*. Boston: Peabody, 1846. Print.

Krapp, George Philip. *Modern English: Its Growth and Present Use*. New York: Charles Scribner's, 1909. Web. 3 Nov. 2011.

Kroeber, Karl. *Ecological Literary Criticism: Romantic Imagining and the Biology of Mind*. New York: Columbia UP, 1994. Print.

La Bash, Heather. "Yoko Ono: Transnational Artist in a World of Stickiness." Diss. University of Kansas, 2008.

La Mettrie, Julien Offray de. *Man a Machine and Man a Plant*. 1748. Trans. Richard A. Watson and Maya Rybalka. Indianapolis: Hackett, 1994. Print.

Lake, Paul. Letter to Ronald Johnson. Feb 22 (no year). Box 27 File 83. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

---. "Unfolding the Manifold." Rev. of *ARK: The Foundations*. *Threepenny Review* 8 (1982): 12-13. Print.

Lakoff, George. "Academic Biography." *georgelakoff.com.* n.d. Web. 9 Dec. 2012.

Lakoff, George and Mark Johnson. *Metaphors We Live By*. Chicago: U of Chicago P, 1980. Print.

---. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic, 1999. Print.

---. "The Metaphorical Structure of the Human Conceptual System." *Cognitive Science* 4.2 (1980): 195–208. Web. 26 Sept. 2011.

Latour, Bruno. *We Have Never Been Modern*. Cambridge: Harvard UP, 1993. Print.

Lerner, Max. "The Essence of the Human." *Daytona Beach Sunday News.* 28 Dec. 1973. *News-JournalOnline.* Web. 1 June 2012.

"Levens Hall - Topiary for the Ages." *Telegraph UK Online.* 12 Dec 2011. Web. 5 May 2012.

Levertov, Denise. Letter from Denise [Levertov Goodman] to Ronald Johnson. 14 Aug. 1965. Box 27 File 91. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

Lewis, Richard Warrington Baldwin. *The American Adam: Innocence, Tragedy and Tradition in the Nineteenth Century*. Chicago: U of Chicago P, 1984. Print.

Lorde, Audrey. *Sister Outsider: Essays and Speeches* (1984). Berkeley: Crossing, 2007.

Low, Lawrence K. and Hwai-Jong Cheng. "Axon Pruning: An Essential Step Underlying the Developmental Plasticity of Neuronal Connections." *Philosophical Transactions of the Royal Society B: Biological Sciences* 361.1473 (2006): 1531–1544. Web. 14 July 2012.

Loy, Mina. *Last Lunar Baedeker.* Black Mountain, NC: Jargon, 1958. Print.

Luster, Helen. Letter from Helen Luster to Ronald Johnson. 18 Mar 1976. Box 27 File 95. Ronald Johnson Collection, Department of Special Collections, MS 66, Kenneth Spencer Research Library, University of Kansas Libraries, Lawrence, Kansas, USA.

Macmillan, Malcolm. "Free Association." In *Encyclopedia of Counseling.* Ed. Frederick T. L. Leong. Vol. 2 Thousand Oaks, CA: Sage, 2008. 608-609. *Sage Knowledge.* Web. 28 Dec. 2012.

Malevich, Kazimir. *The Non-Objective World: The Suprematist Manifesto* (1926). Trans. Howard Dearstyne (1959). New York: Dover, 2003. Print.

Marder, Michael. "Vegetal Anti-metaphysics: Learning from Plants." *Continental Philosophy*

Review 44:4 (2011). 469-489. Print.

---. "Plant Intentionality and the Phenomenological Framework of Plant Intelligence." *Plant Signaling & Behavior* 7:11 (Nov 2012) 1–8. Print.

---. "Plant-Soul: The Elusive Meanings of Vegetative Life." *Environmental Philosophy* 8 (1): 83–99. Print.

---. "Resist like a plant! On the Vegetal Life of Political Movements." Peace Studies Journal 5:1 (2012) 24-32. Print.

Maroski, Elizabeth. "A Language Of Interconnectedness." *The Buckminster Fuller Challenge.* Web. *challenge.bfi.org.* Web. 19 Aug. 2012.

Marvell, Andrew. "Upon Appleton House, To My Lord Fairfax." *The Poems of Andrew Marvell.* Ed. Nigel Smith. Harlow, UK and New York: Longman, 2003.

Mayr, Ernst. *The Growth of Biological Thought*. Cambridge: Belknap, 1982. Print.

McCaffery, Steve. "Corrosive Poetics: The Relief Composition of Ronald Johnson's *Radi Os.*" *Pretexts: Literary and Cultural Studies* 11.2 (2002): 121-132. Print.

---. *Prior to Meaning: The Protosemantic and Poetics*. Evanston, IL: Northwestern UP, 2001. Print.

---. "Synchronicity, Ronald Johnson and the Migratory Phrase." *VORT* 3.3 (1976): 112-116. Print.

McGahey, Robert. *The Orphic Moment: Shaman to Poet-thinker in Plato, Nietzsche, and Mallarmé*. Buffalo: State U of New York P, 1994. Print.

Mencken, H.L. *The American Language: A Preliminary Inquiry into the Development of English in the United States* (1921). New York: Cosimo, 2010. Print.

Michaels, Walter Benn. *Our America: Nativism, Modernism and Pluralism.* Durham, NC: Duke

UP, 1995. Print.

Middleton, Christopher. Letter from Christopher Middleton to Jonathan Williams and Ronald Johnson. 1965-1967. Box 398 File 41. Jargon Society Collection. The Poetry Collection of the University Libraries, University at Buffalo, The State University of New York, U.S.A.

Miller, Greg. "Linnaeus's Legacy Carries On." *Science* n.s. 307.5712 (2005): 1038–1039. Print.

Milton, John. *Paradise Lost: Authoritative Text, Sources and Backgrounds*. Ed. Gordon Teskey. London: Norton, 2005. Print.

Morton, Timothy. *The Ecological Thought.* Cambridge: Harvard, 2010. Print.

---. "Ecology as Text, Text as Ecology." *Oxford Literary Review* 32:1 (2010): 1-17. Print.

---. *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge: Harvard UP, 2007. Print.

---. "Here Comes Everything: The Promise of Object-Oriented Ontology." *Qui Parle* 19:2 (2011) 163-90. Print.

---. "The Oedipal Logic of Ecological Awareness." *Environmental Humanities* 1 (2012) 7-21. Print.

---. "Of Babies and Bathwater." *ecologywithoutnature.blogspot.com.*17 December 2012. Web.

---. "Of Matter and Meter: Environmental Form in Coleridge's 'Effusion 35' and 'The Eolian Harp'." *Literature Compass* 5.2 (2008): 310–35. Web. 14 Oct. 2009.

---. "Queer Ecology." *PMLA* 125.2 (2010) 273-82. Print.

Nash, Richard. *Wild Enlightenment: The Borders of Human Identity in the Eighteenth Century*. Charlottesville: U of Virginia, 2003. Print.

Nathanson, Paul. *Over the Rainbow: The Wizard of Oz As a Secular Myth of America*. Buffalo:

State U of New York P, 1991. Print.

Nelson, Erika M. *Reading Rilke's Orphic Identity*. Berlin: Peter Lang, 2005. Print.

Nichols, Ashton. "The Loves of Plants and Animals: Romantic Science and the Pleasures of Nature." *Romanticism and Ecology*: Romantic Circles - Praxis Series. Ed. James McCusick. Web. 13 June 2008.

Nichols, Miriam. "American Orphic." Diss. York University, Toronto. 1988.

O'Leary, Peter. "An Interview With Ronald Johnson (Chicago Review 1996)." Bettridge and Selinger 561-86.

---. "ARK as a Spiritual Phenomenon: An Approach to Reading Ronald Johnson's Poem." *Sagetrieb* 14.3 (1995): 141-44. Print.

---. "Gilding the Buddha: My Apprenticeship with Ronald Johnson." In Bettridge and Selinger 587-642. Print.

---. *Gnostic Contagion: Robert Duncan and the Poetry of Illness*. Middletown, CT: Wesleyan, 2002. Print.

---. "Talking Cosmos: Influencing Ronald Johnson, Deriving Robert Duncan." *National Poetry Foundation: Mesh. vectors.usc.edu* Web. 4 Nov. 2011.

O'Rourke, P.J. "God's Engineer." *Atlantic Monthly* 24 Jul 2011. Web. 7 Dec. 2012.

"occult, adj. and n.". *OED Online*. December 2012. Oxford UP. Web. 30 December 2012.

Olson, Charles. *Collected Prose: Charles Olson.* Eds. Donald Allen and Benjamin Friedlander. Berkeley: U of California P, 1997.

---. "Projective Verse." In Allen and Friedlander 239-249.

---. *Selected Writings.* New York: New Directions, 1966. Print.

Osman, Jena. "Paranomastic Migrations." In Bettridge and Selinger 227-48.

Ovid. *Metamorphoses*. Eds. A. D. Melville and E. J Kenney. Oxford: Oxford UP, 2008. Print.

Packham, Catherine. *Eighteenth-Century Vitalism: Bodies, Culture, Politics.* London: Palgrave Macmillan, 2012. Print.

Perloff, Marjorie. *21st-Century Modernism: The "New" Poetics*. Oxford: Blackwell, 2002. Print.

---. "Charles Olson and the 'Inferior Predecessors': 'Projective Verse' Revisited." *ELH* 40.2 (1973): 285–306. Print.

---. *Differentials: Poetry, Poetics, Pedagogy*. Tuscaloosa: U of Alabama P, 2004. Print.

---. "Hugh Kenner and the Invention of Modernism." Home Page. Web. 3 June 2011.

---. "Language Poetry and the Lyric Subject: Ron Silliman's Albany, Susan Howe's Buffalo." *Critical Inquiry* 25.3 (1999): 405–34. Print.

---. "Modernism Now." Home Page. Web. 2 April 2012.

---. *Poetic License: Essays on Modernist and Postmodernist Lyric*. Evanston, IL: Northwestern, 1990. Print.

---. "Unoriginal Genius: Walter Benjamin's Arcades as Paradigm for the New Poetics." Home Page. Web. 25 Aug. 2011.

Pfau, Thomas. "All is Leaf": Difference, Metamorphosis, and Goethe's Phenomenology of Knowledge." *Studies in Romanticism* 49 (Spring 2010) 3-41.

Piele, John. *Philology.* New York: Appleton and Co., 1879. *Hathi Trust Digital.* University of British Columbia Library. Web. 4 July 2012.

Porteous, Alexander. *Forest Folklore, Mythology and Romance* (1928). London: Hesperides, 2008. Print.

Pound, Ezra. *The Cantos of Ezra Pound.* 1942. New York: New Directions, 1996. Print.

---. "A Pact." *Collected Shorter Poems.* 2nd ed. London: Faber, 1968.

---. *Pavannes and Divagations*. New York: New Directions, 1958. Print.

Pounds, Norman John Greville. *The Culture of the English People: Iron Age to the Industrial Revolution*. Cambridge: Cambridge UP, 1994. Print.

Poynor, R. "First Things First: A Brief History." *Adbusters* 27: 54-56.

Powledge, T.M. "Tensegrity Lives." *Cell Biology* 154:2 (23 July 2001) 254-55. Web. 22 Nov. 2011.

Prokopoff, Stephen S. "Tchelitchew, Pavel." *Grove Art Online.* Oxford: Oxford UP. Web. 21 Dec 2012.

Quammen, David. "Linnaeus: The Name Giver." *National Geographic* 211:6 (June 2007) p. 73. Print.

Rasula, Jed. "Make It New." *Modernism/modernity* 17.4 (2010): 713–33. Print.

---. *Syncopations: The Stress of Innovation in Contemporary American Poetry*. Tuscaloosa: U of Alabama P, 2004. Print.

---. *This Compost: Ecological Imperatives in American Poetry*. U of Georgia P, 2002. Print.

Richardson, Alan. *British Romanticism and the Science of the Mind*. Cambridge, UK: Cambridge UP, 2001. Print. Cambridge Studies in Romanticism 47.

---. *The Neural Sublime: Cognitive Theories and Romantic Texts*. Baltimore: Johns Hopkins UP, 2010. Print.

Ricou, Laurie. *Salal: Listening for the Northwest Understory*. Edmonton: NeWest, 2007. Print.

Rilke, Rainer Maria. *Sonnets to Orpheus*. Ed. David Young. Middletown, CT: Wesleyan UP, 1987. Print.

Rohman, Carrie. *Stalking the Subject: Modernism and the Animal.* New York: Columbia UP,

2009. Print.

Rousseau, Jean-Jacques. *Emile, or On Education* (1762). Trans. Allan Bloom. New York: Basic, 1979. Print.

Ruskin, John. *Proserpina: Studies of Wayside Flowers, While the Air Was yet Pure Among the Alps, and in the Scotland and England Which My Father Knew*. Project Gutenberg Online. New York: Wiley, 1886. Web. 4 April 2012.

Saguaro, Shelley. *Garden Plots: the Politics and Poetics of Gardens*. Aldershot, VT: Ashgate, 2006. Print.

Schiebinger, Londa L. and Claudia Swan. *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*. Philadelphia: U of Pennsylvania P, 2005. Print.

Scroggins, Mark. "*The Book of the Green Man:* Ronald Johnson's American England." In Bettridge and Selinger 167-194.

---. *Louis Zukofsky and the Poetry of Knowledge*. Tuscaloosa: U of Alabama P, 1998. Print.

---. "Marrow Bones and Turkish Delight." *Parnassus: Poetry in Review* 30:1/2 (2006) p. 440. Print.

---. "Notes and Numbers: (Johnson, Ives, Zukofsky)." In Bettridge and Selinger 3-24.

---. *The Poem of a Life*: *A Biography of Louis Zukofsky*. Berkeley: Counterpoint, 2007. Print.

---. *Upper Limit Music: The Writing of Louis Zukofsky*. Tuscaloosa: U of Alabama P, 1997. Print.

Sedgwick, Eve Kosofsky. *Touching Feeling: Affect, Pedagogy, Performativity.* Durham: Duke UP, 2002.

Selinger, Eric. "*ARK* as a Garden of Revelation." In Selinger and Bettridge 323-342.

---. "Ronald Johnson." *The Dictionary of Literary Biography.* Web. Mar 15, 2011.

---. “I Composed the Holes‘: Reading Ronald Johnson’s *Radi Os*.” *Contemporary Literature* 33.1 (1992): 46–73. Web. 16 June 2011.

---. "Important Pleasures and Others: Michael Palmer, Ronald Johnson." *Postmodern Culture* 4:3 (1994) 1-37. Print.

Sewell, Elizabeth. *The Orphic Voice: Poetry and Natural History*. New York: Harper, 1971. Print.

Shaner, David E. "The Bodymind Experience in Dōgen's "Shōbōgenzō": A Phenomenological Perspective." *Philosophy East and West* 35:1 (Jan 1985) 17-35. Print.

Shklovskij, Viktor. “Art as Technique.” *Literary Theory: An Anthology*. Eds. Julie Rivkin and Michael Ryan. Oxford: Blackwell, 1998. Print.

Silliman, Ron, ed. *In The American Tree.* Orono, ME: National Poetry Foundation, 2002. Print.

---. “On the Reissue of *Radi Os*.” Home Page. 5 May 2005. Web. 14 July 2012.

---. “Space May Yet Produce New Wor(l)ds.” *Montemora* 4 (1978): 289-91. Web. 14 Sept 2012.

Sitwell, Edith. *Gardeners and Astronomers*. London: Bloomsbury, 1953. Print.

Smith, Hazel. *Hyperscapes in the Poetry of Frank O'Hara: Difference, Homosexuality, Topography.* Liverpool UK: Liverpool UP, 2000. Print.

Solt, Mary Ellen. “Charles Sanders Peirce and Eugen Gomringer: The Concrete Poem as a Sign.” *Poetics Today* 3.3 (1982): 197–209. Web. 20 Nov. 2011.

---. *Flowers in Concrete.* Indianapolis: Indiana UP, 1966.

Solt, Mary Ellen, ed. *Concrete Poetry: A World View*. Bloomington: Indiana UP, 1968. Print.

Stein, Gertrude. *The World is Round*. 1939. San Francisco: North Point, 1989. Print.

Stevens, Anthony. *Archetype Revisited: A Natural History of the Self.* London: Routledge, 1982. Print.

Stratton, Dirk. *Ronald Johnson*. Boise ID: Boise State UP, 1996. Print.

Taylor, Nik and Tania Signal. *Theorizing Animals: Re-thinking Humanimal Relations*. Leiden, Netherlands: Brill, 2011.

Théoret, Hugo and Alvaro Pascual-Leone. "Language Acquisition: Do As You Hear." *Current Biology* 12 (2002) R736-R737. Print.

Thoreau, Henry David. *Journal. Vol. 3.* (1848 – 1851). Ed. Robert Sattelmeyer, Mark R. Patterson, and William Rossi. Princeton: Princeton UP, 1990. Print.

---. *Journal. Vol. 10*. Ed. Bradford Torrey, and Francis H. Allen. Boston: Houghton, Mifflin, 1949. Print.

---. *Walden, Civil Disobedience, and Other Writings: Authoritative Texts, Journal, Reviews and Posthumous Assessments, Criticism*. New York: Norton, 2008. Print.

Toga, Arthur W. et al. "Mapping the Human Connectome." *Neurosurgery* 71.1 (2012): 1–5. Web. 14 July 2012.

Travis, John. "Glia: The Brain's Other Cells." *Science* n.s. 266.5187 (1994): 970–972. Print.

Varnedoe, Kirk. "On The Claims and Critics of the 'Primitivism' Show." In *Primitivism and Twentieth-Century Art: A Documentary History.* Ed. Jack D. Flam and Miriam Deutch. Berkeley: U California P, 2003. 369-383. Print.

Vickery, John B. *The Literary Impact of The Golden Bough*. Princeton, NJ: Princeton UP, 1973. Print.

Wade, G.L. and Robert R. Westerfield. *Basic Principles of Pruning Woody Plants.* Athens: U Georgia, 2012. *caes.uga.edu.* Web.

Warde, Beatrice. "The Crystal Goblet, or Printing Should Be Invisible" (1932). In *The Crystal Goblet Sixteen Essays on Typography* 18-30. New York: World, 1956. *GoogleBooks.*

Web. 30 July 2012.

Watten, Barrett. *The Constructivist Moment: From Material Text to Cultural Poetics.* Middletown, CT: Wesleyan UP, 2003.

Weismann, August. *The Germ-plasm: A Theory of Heredity*. New York: Scribner, 1898. Web. 7 May 2008.

Whitman, Walt and Ezra Greenspan. *"Walt Whitman's "Song of Myself": A Sourcebook and Critical Edition.* New York: Routledge, 2005. Print.

Williams, Emmett. *An Anthology of Concrete Poetry*. New York: Something Else, 1967. Print.

Williams, Jonathan. "A Bit of Cheeky, Déclassé West Riding Gardenage." In *Amen / Huzza / Selah.* Black Mountain, NC: Jargon, 1960. Print.

---. "Jonathan C. Williams Interviews J. Chamberlain Williams." *Jargon Books*. n.d. Web. 16 Nov 2011.

---. *JW, On The Road Selling that Old Orphic Snake-Oil in the Jargon-sized Bottles, 1951-1978.* Washington, D.C.: Visual, 1979. Print.

---. "Two Pastorals for Samuel Palmer at Shoreham, Kent." *Jubilant Thicket: New And Selected Poems.* Port Townsend, WA: Copper Canyon, 2005. *Poetry Foundation.* Web. 13 Nov. 2011.

---. "Two Typiary Chops." In *Amen / Huzza / Selah.* "A Preface?" by Louis Zukofsky. Black Mountain, NC: Jargon, 1960. Print.

Williams, Peter. "Living 'As and Where We Are': Feeling and the Emotions as Situated Poetics." *symploke* 18.1 (2010): 83–98. Print.

Williams, Raymond. *Keywords: a Vocabulary of Culture and Society*. Oxford: Oxford UP, 1985. Print.

Williams, William Carlos. *In The American Grain.* 1925. New York: New Directions, 1956. Print.

Williams, William Carlos and Ezra Pound. *Pound/Williams: Selected Letters of Ezra Pound and William Carlos Williams*. New York: New Directions, 1996. Print.

Williams, William Carlos, A. Walton Litz, and Christopher John MacGowan. *The Collected Poems of William Carlos Williams. Volume II: 1939-1962*. New York: New Directions, Print.

Wordsworth, William. *The Major Works including The Prelude.* Oxford: Oxford UP, 1984. Print.

Yoder, R. A. *Emerson and the Orphic Poet in America*. Berkeley: U of California P, 1978. Print.

Zukofsky, Louis. *"A"*. Berkeley: U of California P, 1978.

---. *Complete Short Poetry*. Baltimore: Johns Hopkins UP, 1991.

---. *Prepositions +: The Collected Critical Essays*. Middletown, CT: Wesleyan UP, 2000.

Zukofsky, Louis and Robert Creeley. *Anew: Complete Shorter Poetry*. New York: New Directions, 2011. Print.