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FCJ-121 Transversalising the Ecological Turn: Four Components of Felix Guattari's Ecosophical Perspective

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Over the past decade, the humanities disciplines have played host to an explosion of ecologically themed transformations, which continue to open up new (sub)fields of research and teaching. The development of the ecological turn in English studies (conceived broadly to house the study of literature, composition, film, and new media) resonates with the general evolution of the eco-humanities; indeed, English departments have led this movement in many respects. A survey of English's recent appropriations of ecological ideas (and their failings) establishes a point of departure for rethinking the eco-humanities. Ecocriticism, with its reputable journals and popular conferences, has no doubt become the most institutionalised of English's eco-fields, while more pointed approaches continue to gather loosely around terms such as green cultural studies, ecofeminism, ecocomposition, and ecomedia studies.[1] At the turn of this century, much of the early work in ecocriticism was devoted to 'naming the most important works in the field and elaborating the reasons why they matter more than others' (McNamee, 1997: 14). Contemporary leaders in ecocriticism continue this "green" canon-building project, issuing pronouncements similar to Libby Robin's 2008 declaration, 'We need a literature that enhances understanding of relations between people and nature, of how we notice change personally, and how such global changes affect places we know intimately' (Robin, 2008: 292). The growth of ecocriticism, however, has attracted an increasing number of critical attacks, the most significant of which have been waged by literary theorists who, despite their objections, share the ecocritical desire to respond to ongoing ecological crises. In particular, these theorists assail ecocriticism for its reluctance to engage with issues raised by contemporary theory. [2] Timothy Morton goes as far as saying that ecocriticism 'consciously blocks its ears to all intellectual developments of the last thirty years...ecocriticism promises to return to an academy of the past' (Morton, 2007: 20). And yet, none of the leading books associated with ecocriticism (not even

the famous "ecocritiques" by Dana Phillip or Timothy Morton) seem interested at all in the work of Gilles Deleuze and Felix Guattari. That the eco-humanities generally shares this gap in knowledge seems very bizarre, especially given the explicit ecological focus in Guattari's later writings and given Deleuze's claim in the late 1980s that he and Guattari wanted to write a (last) book on their philosophy of Nature. We should wonder now, with great pertinence, where Deleuze and Guattari's philosophy would lead the ecological turn, which, along with the digital turn, promises to be a formative influence for humanities disciplines in the twenty-first century.

If there is a unifying theory that connects most ecological approaches across the humanities disciplines, certainly that theory is Arne Naess's widespread notion of deep ecology or "ecosophy". As Gary Genosko (2009: 86) points out, Guattari's writing on ecosophy never refers to Naess and his development of the term. That said, certain statements by Guattari throughout *The Three Ecologies* (e.g., 'Ecology must stop being associated with the image of a small nature-loving minority...') may arguably function as indirect references to, if not critiques of, Naess's project (Guattari, 2008: 35). At a fundamental level, the mission of Naess's ecosophy is to expand the sphere of objects with which people identify. He believes that 'identification elicits intense empathy' and that humans remain indifferent to that which they take to be utterly different than themselves (Naess, 1995: 15). To support this position, Naess shares a personal anecdote about a flea that suddenly landed in a sample of acid chemicals, which Naess was studying under a microscope. He claims, 'If I was alienated from the flea, not seeing intuitively anything even resembling myself, the [flea's] death struggle would have left me indifferent' (Naess, 1995: 15). This anecdote, a vital illustration of Naess's thought, brings us to the most important difference between his ecosophy and the ecosophy of Felix Guattari. Naess calls for an expansion of the self via identification ("Self-realisation"), whereas Guattari (and Deleuze) valorise autopoietic processes that perform a dissolution of the self via disjunction ("becoming-other"). In other words—in a Guattarian reworking of the flea anecdote—I would not look for elements of the flea that remind me of myself; rather, I would receive the flea in its alterity and encounter aspects of the fleas that are completely different from myself, so as to "become-flea": to introduce the flea's manner of existence into the way I think and live. [3] Initially, the difference between Naess's identification and Guattari's autopoiesis may seem trivial. This minor difference, however, actually lays out two divergent, even conflicting, paths for diagramming the production of subjectivity. 'Guattari's concern,' writes Genosko, 'is not self-realization through widening of a pre-given self, but processes of singularization that resist the frames of reference imposed by an identity' (Genosko, 2009: 87). Consequently, an eco-humanities inspired by Guattari's theory of ecology would look very different than the familiar Naessian project of Nature appreciation. A living monument to Naess, ecocriticism typically invokes ecology as a strictly environmentalist discourse. This position tends to prioritise the thematic study of literary representations of Nature, often espousing, at the very least, a desire to distance one's self from technological advancements and other complexities of modern urban life.

On the other hand, Guattari's ecosophical perspective promises to remotivate the ecological turn in the humanities towards radical transformations in the production of subjectivity and concepts that carry with them the potential to sustain a more transversalised conception of identity. [4] Janell Watson summarises the quintessential thrust of transversality against the tradition of normative models of the human psyche:

Familiar topologies such as the semiotic triangle, the conscious-preconscious-unconscious, the ego-id-superego and the Oedipal triangle must be expanded, extended, and opened up. Connections between them must be retraced. Their borders and boundaries must be effaced and erased, or at least made more porous. Above all, these expanded, redrawn and reconnected topographies must be set in motion...
(Watson, 2002: 23)

Transversality, as can be surmised Watson's insightful work on Guattari, moves hand in glove with the activity of metamodeling. Models such as the Oedipal triangle purport a representational, standardised map of the psyche designed for the clinical evaluation and diagnosis of individual patients. [5]Metamodels, on the other hand, adopt a more playful and constructivist stance towards modeling; here the ultimate aim is singularity rather than standardisation, and this entails appropriation from a multitude of models in order to avoid being "stuck" within the entropy of a dominant model (Watson, 2008). As Guattari writes of schizoanalysis, transversal thinking 'does not choose one modelisation to the exclusion of another'; rather, transversality is about creating lines of flight among various models, 'making them...operative within modified assemblages, more open, more processual, more deterritorialised' (Guattari, 1995: 61). As such, transversality is a radically ecological concept in that it pushes us to constantly (re)articulate things at the relational level of their interactions. With Guattari, then, we are not enlarging the selfhood model—we are developing the metamodels and practices of emergent subjectivities. Inspired by Guattari instead of Naess, we would become less interested in the representational paradigms of nineteenth century realism (which are often celebrated by leading ecocritics) and more interested in modernist and contemporary aesthetics of collage and montage; rhetorical acts of aesthetic invention would become as important, if not more important, than pseudoscientific methods of literary hermeneutics.

Though Naess coined the term "ecosophy", he does not think through the semiotic implications of the word as fully as Guattari does. Ecosophy is not the same thing as eco-philosophy; it is not simply the redirection of the philosophical tradition towards ecological concerns. To think ecosophically is to rethink philosophy in our contemporary moment defined by the convergence of nature and culture, ecological crises, globalisation, and the Internet. Born of his transversal conception of subjectivity, Guattari's ecosophical perspective suggests for (eco)humanities scholars a unique constellation of concepts adequate to these emergent situations;

it offers an alternative to the standard “normal science” approach by which critics apply old ideas to the same type of texts, only now in the spirit of environmentalism. By analogy, then, the proper aim of ecosophy (and a properly transversal eco-humanities) is not to produce a more energy-efficient light bulb or a hybrid car, but to reconfigure subjectivity and to remake academic and/or social practices altogether. While scientist and social scientists rightfully pursue advancements in green technology and debate environmental policy issues, humanities scholars should aim to further our understanding of ecological problems in ways that are unavailable to the technocratic perspective. Guattari's ecosophy suggests that humanities scholars should concern themselves first with ontological advancements. Thus, in addition to green buildings, hybrid vehicles, environmental legislation, etc., we need to rethink traditional notions of selfhood and, at the same time, invent practices designed to facilitate an ontology consummate to contemporary ecological concerns, as well as the emergent relational modes proliferating with the expansion of global capitalism and digital media. Of profound importance to these latter issues is Guattari's notion of the “post-media era”—his ecosophical vision of the potentialities afforded by emergent media technologies—which I expound upon later in this essay.

While much work in ecocriticism tends to avoid poststructuralist theory in favor of deep ecology, leading Guattari scholars have begun to survey the ecological implications of the philosopher's notoriously complicated writings. Readers new to Guattari should be cognisant of three basic ways in which the tenets of his ecosophy conflicts with more popular appropriations of ecology. First, affirming his belief in the inseparability of nature and culture, Guattari contents throughout his later writings that what we call the ecological crisis is not simply an environmental disaster, and that ecology is not limited to the natural environment. For Guattari, ‘The ecological crisis can be traced to a more general crisis of the social, political and existential’, which ‘involve[s] changes in production, ways of living and axes of value’ (Guattari, 1995: 119/134). Furthermore, Guattari differs from the early leaders of ecocriticism who tended to work from the popular belief that ecological thought is simply an idealistic, utopian project committed to preserving Nature's pure, harmonious, and delicate balance. In Guattari's radical ecology, the ecological point of view beholds the world as a dance between chaos and complexity—a multitude of productive syntheses between nomadic parts that exist independent of any fixed structure or transcendental whole. There is no larger “natural” order, no transcendent grand scheme according to which beings manifest. The ecology of ecosophy is neither that of popular environmentalism nor environmental science. Whereas environmentalism (like Naess) attempts to strengthen the bond between humans and the natural environment, which are articulated as two discrete and relatively stable categories, Guattari's ecosophy rethinks this relationship in terms of dynamic assemblages of enunciation without assigning humans, nature, or culture a fixed role or place in the production of subjectivity. In this way, we might think of ecosophy as performing a metamodeling with respect to environmental models such as the ecosystem. While the model of the ecosystem was first drawn by environmental scientists, a generalised ecology extends relational

modes of thinking implied by this model across disciplinary boundaries with hopes to enrich the study of any number of paradigmatic problems—most notably the production of subjectivity in Guattari’s case.

Moreover, in metamodeling environmental ecosystems, by bringing them into contact with mental and social ecologies, one can rethink the ethos of management and regulation that has pervaded the largely scientific discourse of environmental ecology. Indeed, the challenge of Guattari’s ecosophy is not to regulate the forces of the world into some idealised, harmonious balance, but rather to engender institutional and ontological conditions that encourage people to encounter the world as a series of open and ongoing syntheses between partial objects (as opposed to regarding phenomena as objects-in-themselves, complete and isolatable). This challenge informs and is informed by passages in *The Three Ecologies* and *Chaosmosis* where Guattari discusses nascent subjectivity and machines (see below). Guattari’s view of ecology is especially unique in that he claims to be working from an “ethico-aesthetic paradigm” rather than from scientific or pseudo-scientific paradigms. For Guattari, ethico-aesthetic paradigms do not necessarily deal with art as we traditionally conceive it, but seek to incorporate an aesthetic order—an artist’s ‘way of assuming their existence’—into the existential territories of everyday life, within and beyond the studio or the museum. [6] He insists that the decision to engage subjectivity on a scientific basis or an aesthetic basis carries important ethical implications; Guattari of course asserts that attempts to “scientifise” subjectivity lead to its reification, while ethico-aesthetic approaches mobilise subjectivity ‘in its dimension of processual creativity’ (Guattari, 1996: 198). To be clear, Guattari’s turn towards ethico-aesthetic paradigms does not constitute a rejection of science so much as a pointed critique of the ‘use of reductive models and general laws, at the expense of singularity and complexity’ (Watson, 2009: 97). Ultimately, I will suggest that it is this autopoietic node of Guattari’s ecosophy that most powerfully distinguishes his approach to ecology.

Though recent scholarship on Guattari is quick to mention his notion of ecosophy, only a few of these books and essays contain elaborations of Guattari’s ecosophy that are specific to the larger ensemble of concepts quintessential to his philosophical outlook. Genosko and Watson stand out of course as two scholars who have taken immense steps towards recognising the (potential) impact of Guattari’s contributions on the contemporary study of ecology, subjectivity, and media. More typically, however, humanities scholars commenting on Guattari’s engagement with ecology rarely venture beyond his most explicitly ecological book, *The Three Ecologies*, and are therefore likely to miss the transversal connections among the otherwise disparate domains of ecology, subjectivity, and media that he developed throughout his later writings. While it is accurate in some sense to summarise Guattari’s ecosophy by mentioning his three interrelated ecologies (i.e., mental, social, and environmental), such summaries do not convey the full potential of Guattari’s ecosophical perspective, which he seemed to regard as the crowning accomplishment of his philosophical career. To appreciate the theoretical

weight of *The Three Ecologies*, one must explore the ways in which this short book intersects with Guattari's larger body of work. In what follows, I offer an exploration of ecosophy in the context of *The Three Ecologies* and Guattari's other writings such as *Chaosmosis* and selected essays from *The Guattari Reader*, as well as the collaborative works *Anti-Oedipus* and *What is Philosophy?*. Indeed, Guattari's ecosophy is a concept that, like all concepts, configures the 'constellation of an event yet to come' and 'renders components inseparable within itself' (Deleuze and Guattari, 1994: 19/33). But given its (unfinished) state at the time of Guattari's sudden death, ecosophy remains a concept whose components need to be rendered further. The four sections below strive to construct a "zone of neighborhood" or "threshold of indiscernability" wherein these four components (i.e., nascent subjectivity, machines, post-media, and autopoiesis) become seen as the vital constituents of ecosophy's conceptual consistency. Only then can we mobilise ecosophy towards the invention of the event yet to come, the people yet to come, or at least, the eco-humanities yet to come.

Nascent Subjectivity

At the end of *The Three Ecologies*, Guattari claims that we must, in responding to the 'major crises of our era', invent new practices that are conducive to what he calls 'nascent subjectivity' (Guattari, 2008: 45). Of course, the project to resingularise subjectivity does not center upon the individual—Guattari prefers to speak of components of subjectification rather than posit a "subject"—but it makes pragmatic sense to start the discussion at this molecular level and then move into molar dimensions, provided that one does not regard this movement as a linear progression along what Guattari sometimes calls a 'definitive schematic hierarchy'. We need to first of all to be concerned with the following questions: What exactly is nascent subjectivity? Why does Guattari place such a high premium on it? How would this nascent subjectivity put us in a better position to address contemporary ecological realities?

Like many of the concepts Deleuze and Guattari have developed, nascent subjectivity in *The Three Ecologies* is at once a rephrasing and a reworking of terms that appear earlier in the two philosopher's oeuvre. In fact, one of the best ways to comprehend Guattari's difficult terminology is to trace the evolution of the names he ascribes to particular conceptual territories, always paying attention to how each change in wording advances his overall line of thought. In this case, it will help to read *The Three Ecologies* in parallel with Guattari's first collaboration with Deleuze, *Anti-Oedipus*, specifically the early passages in which they introduce 'the residuum subject'. The notion of the residuum subject presents a useful starting point for grasping the significance of Guattari's theoretical move from the subject to components of subjectification, which is so vital to his later writings on ecosophy. Considered

as an isolated phrase, 'the residuum subject' implies that the subject, or one's subjectivity, is simply what remains or gets left over, in the sense of a residue. Thus begging the question: of what substances or processes is the subject a residue?

By Deleuze and Guattari's configuration, in contrast to the Cartesian cogito, an individual's thoughts do not constitute the full measure of his or her being. The subject is less the product of his or her own thought and more the residue of the social machinery in which he directly and indirectly participates, for the boundaries of "private" thought are drawn through the sociohistorical apparatus (an emergent assemblage of desiring-machines):

This subject itself is not at the center, which is occupied by the machine, but on the periphery, with no fixed identity, forever discentered, defined by the states through which it passes...the subject is born of each state in the series, is continually reborn of the following state that determines him at a given moment, consuming-consummating all these states that cause him to be born and reborn (the lived state emerges first in relation to the subject who lives it).

(Deleuze and Guattari, 1983: 20)

By means of this passage, we understand why many of Guattari's later writings are devoted to locating what he calls 'existential refrains', a term that denotes the crucial and contended sites through which subjectivity is produced, negotiated, and learned. Far from considering subjectivity a pre-established individual phenomenon, Guattari contends that a 'polyphony of modes of subjectivation' are always at work in the (de)composition of an existential territory (Guattari, 1996: 199). Existential refrains can emerge anywhere, but some common areas that Guattari emphasises include education, mass-media, the arts, sports, architecture, and the organisation of labor. Indeed, he does not oppose economic production to subjective or cultural production; the intersection of such refrains constitute complex existential territories that are ripe with transversal connections involving both material and semiotic work, civic and machinic flows, etc. (Guattari and Rolnik, 2008: 38). More specifically, refrains emerge 'when motifs are detached from the flux of components...acquiring the ability to generate a process of positive self-reference' (Genosko, 2009: 80). Because of this detachability, refrains can be ripped from intimate moments of singularity and in some cases become mapped over by repetitively drawn associations to 'the diversions of consumption'; for instance, through advertising a musical refrain (e.g., a few notes from a song) often becomes 'hijacked and affixed to automobile tires or boxes of breakfast cereal' (Genosko, 2009: 80).

The eco-logic of Guattari's argument in *The Three Ecologies* does not at all affix his thinking to the idea of a normative "ecological subject". In fact, he wants to 'ward off, by every

means possible, the entropic rise of a dominant subjectivity' (Guattari, 2008: 45). Guattari (2008:23) clearly asserts that he is not concerned with 'creating an unequivocal ideology', which would outline a set criteria for being-ecological—an occasional tendency in Naess's writing—and position himself as leader or guru. Instead, Guattari is much more interested in conveying the importance of generating a multitude of methods designed to inspire an ecosophical perspective on the production of subjectivity. From an ecosophical perspective, intensities precede both ideology and identity; one's work becomes more productive when attention is paid to molecular, intensive qualities (e.g., the universes of concepts, functions, precepts and affects elaborated in *What is Philosophy?*). [7] *The Three Ecologies* clearly builds from the same image of thought sketched by the residuum subject and incorporates Guattari's subsequent insights on refrain-intersection:

Vectors of subjectification do not necessarily pass through the individual, which in reality appears to be something like a 'terminal' for processes that involve human groups, socio-economic ensembles, data-processing machines, etc. Therefore, interiority establishes itself at the crossroads of multiple components, each relatively autonomous in relation to the other, and, if need be, in open conflict.
(Guattari, 2008: 25)

Here, Guattari specifies some of the obscurities of *Anti-Oedipus*; in particular, the earlier image of the individual-as-residue is redrawn: the individual becomes a "terminal". Hence, one's subjectivity is not only a by-product of forces operative in the three ecologies (mental, social, environmental); subjectivity is always already immersed in the flow of existential refrains or vectors. The individual can no longer be seen separately at any point. To speak of an individual subject, natural as it seems, is to reinforce a reductive vocabulary of existence, which inhibits any actualisation of '[a] collective and individual subjectivity that completely exceeds the limits of individualization, stagnation, identificatory closure, and will instead open itself up on all sides' (Guattari, 2008: 44). Nascent subjectivity, then, is not an entity one can postulate once and for all; indeed, it is best described as a process whereby thinking emerges immanently in relation with the event, which it perpetually strives to encounter in the manner of a rhizome.

Furthermore, Guattari's preference for immanent thought can be traced back to Deleuze's 1970 critique of consciousness as it has been represented by the transcendence-oriented history of western philosophy. Deleuze writes, 'the conditions under which we know things and are conscious of ourselves condemn us to have only inadequate ideas, ideas that are confused and mutilated, effects separated from their real causes' (Deleuze, 1988: 19). Deleuze constantly reminds us that our thought always occurs in the middle of things; that is to say, the outside to which thought connects has already begun and exists prior to our

consciousness of it. Guattari's writing in the early 1990s addresses these illusions of consciousness in an era in which, despite growing awareness of environmental problems, 'we fail to grasp the contradiction in the fact that the factories producing our soaps are polluting our habitat' (Ulmer, 2005: xxvi). Given the absolute immanence of nascent subjectivity, humanities scholars today should redirect the tradition of thinking the human subject as a discrete element towards new projects that create concepts and design methods, in conjunction with new technologies, which expand the scope of subjectivity, or, in other words, increase our capacity to affect and be affected by immanent forces in the world.

The subject-as-cogito (i.e., the isolated individual personified by Descartes' "idiot") has become an inadequate foundation for thinking and acting in the context of twenty-first century developments, such as globalisation, ecological crises, and the proliferation of the digital medium. In order to comprehend global multitudes—and participate effectively in emergent political and rhetorical situations—future generations will need to be capable of experiencing themselves disjunctively, in the sense of an emergent and processual assemblage. In an article submitted to *Le Monde* just weeks before his death, Guattari writes of a desire to 'bring individuals out of themselves' via 'the invention of new collective assemblages', which, as he envisions already in the early 1990s, could become all the more viable with the 'new possibilities of interaction' afforded by computer networks; for this reason, he believes that networked personal computing bears with it the potential for (but by no means guarantees) 'a real reactivation of a collective sensibility and intelligence' (Guattari, 1996: 263). And so, though we begin at the level of so-called individual subjectivity, this is only the beginning of the issue because, for Guattari, the question of the individual is inextricably linked with trans-individual domains of flows, phyla, territories, and universes. [8] Existential refrains are laid out by collective machines, which are themselves dialogically related to the available modes and technologies of production.

Machines, Not Structures

Guattari stipulates that his ecosophical perspective is 'at once applied and theoretical, ethico-political and aesthetic' (Guattari, 2008: 44). Nowhere is this blend more evident than in his discussions of machines, which are informed by numerous disciplines from second-order cybernetics to modernist art, as well as concepts set forth by Lacan and Deleuze. [9] Guattari uses the term "machine" to refer at once to actual and virtual properties. (He is not simply pointing to the technical appliances that the term often refers to in everyday conversation.) Machines are actual in that the word denotes existing institutions, groups, and practices, but machines also address the virtual possibilities of collectivity and thus function as a theoretical metamodel. In his assessment of the contemporary psychological landscape, Guattari

(1995: 58) claims that 'individual and collective subjectivity lack modelization' and, further, that this lack explains the stasis of many social movements, including environmentalism. For this reason, Guattari insists that the development of alternative diagrams for the production of subjectivity (in contrast to Oedipal model, for example) must become 'an immense site' of theoretical work and lead to 'the invention of new practices' (Guattari, 1995: 58).

Without the existential recomposition (e.g., the subject to components of subjectification) that theoretical metamodels engender, the ecosophical project of nascent subjectivity becomes lost to itself. Nascent subjectivity is entirely dependent on the capacity to install one's thinking into 'a constantly mutating socius' (Guattari, 2008: 45). In this sense, the 'effects of the machinic phylum on subjectivity' detailed in *Chaosmosis* should be read right alongside of the challenges and tasks Guattari proposes at the conclusion of *The Three Ecologies* (Genosko, 2009: 70). Ultimately, Guattari's machines (be they desiring, celibate, abstract, aesthetic, etc.) have two crucial, praxis-oriented objectives: (1) to help "the individual" install himself into collective dimensions (becoming-machine); (2) to help institutions and groups evolve autopoietically through processual encounters with—and complex articulations of—disparate sources of alterity (nascent subjectivity at the collective level).

In many ways, Guattari's version of the machine could be regarded as an appropriate figure or emblem for poststructuralism. Breaking with the (dogmatic) sign systems of structuralism, Guattari's focus on machines also performs an important inversion of phenomenology's tendency to 'reduce the objects under consideration to a pure intentional transparency' (Guattari, 2008: 25). And yet, though he explicitly distances his thought from structuralism and phenomenology, Guattari does retain important traces of each these intellectual movements. His writing on machines incorporates a preference for studying contextualised structural objects, but the methods he advocates (schizoanalysis, transversality, etc.) clearly emphasise the need for "spontaneous receptivity", a quality esteemed by many phenomenologists, which encourages us to encounter each phenomenon in its heterogeneity rather than overwrite its expression according to the structure of our own interpretative frameworks. In grasping Guattari's important theoretical distinctions between machine and structure, one should acknowledge, as Watson aptly notes, that the two terms are 'inseparable' and 'dependent on one another' as a conceptual pair, in much the same way as we might say of poststructuralism and structuralism (Watson, 2009: 39). Thus, the notion of structure must play a crucial role in discussions of the machine, even though Guattari writes about structures with evident disdain.

For Guattari, machines pose at least three qualitative differences to "structures" (the obvious emblem of structuralism). First of all, machines express an affective logic of intensities (or "pathic logic"), while structures operate according to the logic of discursive sets. Discursive sets presuppose a separation between subject and object, and for this reason, 'The truth of

a proposition answers to the law of the excluded middle: each object appears in a relationship of binary opposition with a 'foundation' (Guattari, 1995: 28). With the logic of intensities, the relationship between subject and object remains open or in question; therefore, the machine 'extracts complex forms from chaotic materials' because 'there is no extrinsic global reference' (Guattari, 1995: 28). Indeed, the logic of intensities is the flow quintessential to ethico-aesthetic paradigms. Structures, however, smack of scientific paradigms in that they slow down or bracket chaos and alterity in order to erect a referent (Deleuze and Guattari, 1994: 118). To combine the terms of *What is Philosophy?* with *Chaosmosis* (published in consecutive years), machines-as-philosophy seek to articulate a 'consistency specific to' chaos or alterity, whereas structures-as-science use the referent to 'actualize the virtual,' and, by extension, to define sources of alterity through reference to known variables (Deleuze and Guattari, 1994: 118). [10]

From the polarity above, we can clearly distinguish machines and structures in terms of their opposing attitudes towards alterity or difference. A structure defines difference only in relation to itself, while machines 'direct us towards a more collective machinism without delimited unity, whose autonomy accommodates diverse mediums of alterity' (Guattari, 1995: 42). The machinic drive for autopoiesis necessitates a process of undergoing all the heterogeneous elements operative in the event, which "heterogenises" the machine clean of any dominant, unifying, or universal trait (Guattari, 1995: 39). Machines initiate processes of resingularisation precisely by allowing themselves to breakdown as they disjoin and rejoin to form new configurations immanent to the singularity of the event. As such, machines offer strong metamodels for negotiating refrain-intersections through the invention of 'new ecological practices', upon which Guattari comments in *The Three Ecologies*, 'their objective being to processually activate isolated and repressed singularities that are just turning in circles' (Guattari, 2008: 34). In fact, as Watson reminds us, the rationale and language Guattari employs to describe eco-praxes hold much in common with his writing on schizo-analysis, and we may see them as intricately related projects (Watson, 2009: 184).

Moreover, as a consequence of these two prior distinctions, machines embody an awareness of their own fluidly and finitude, whereas structures, like Guattari's diagnosis of 'capitalist subjectivity', are 'intoxicated with and anaesthetized by a collective feeling of pseudo-eternity' (Guattari, 2008: 34). In addition to dividing human experience of the socius into rigid categories (e.g., nature vs. culture), structures naturalise the divisions they construct by 'stabilizing the maximum number of existential refrains' (Guattari, 2008: 34). Given our knowledge of machines and structures in *Chaosmosis*, we can (re)approach *The Three Ecologies* to gain an even greater command of this crucial opposition:

The principal common to the three ecologies is this: each of the existential Territories with which they confront us is not given as an in-itself [en-soi], closed in on itself, but instead as a for-itself [pour-soi] that is precarious, finite, finitized, singular, singularized, capable of bifurcating into stratified and deathly repetitions or of opening up processually from a praxis that enables it to be made 'habitable' by a human project. (Guattari, 2008: 35)

This passage in particular—its language of 'in-itself' (structure) and 'for-itself' (machine)—speaks to the important role of Jean-Paul Sartre's theory of groups in Guattari's thinking on disjunctive collectivity, which his machines diagram.

Gary Genosko has already demonstrated the degree to which Guattari's early distinction between subjugated groups and subject groups is an appropriation of Sartre's writings on seriality and fusion. For our purposes, it is also useful to consider machines and structures in this context. Guattari inherits Sartre's passion for thinking about group behavior precisely because he shares Sartre's hatred of seriality, which Fredric Jameson defines as 'the mode of human interaction which corresponds to the domination of the practico-inert' (Jameson, 1974:147). [11] In other words, a population is subjugated by seriality whenever they relate to one another automatically via behavior that is mass-proscribed by an elite, seemingly invisible authority. On the other hand, according to Genosko, a subject group 'has liquidated its seriality and come together in "the flash of a common praxis"' (Genosko, 2008: 60). Subject groups connect in response to an event rather than the mandates of a leader or doctrine. Subject groups illustrate a disjunctive mode of collectivity in their priority for a processual engagement in dynamic encounters with sources of alterity, rather than the stability and dominion of a self-asserted structure. For Guattari, this mode of group subjectivity—like the machine—signifies a solidarity that occurs without the dogmatic influence of any leaders. Furthermore, the subject group measures its collectivity not by the amount of people participating in the group, but rather on the quality of difference articulated among group members, as well as the group's capacity to register the enunciations of (non)human assemblages outside of the group. [5] Consequently, a subject group attentive to its own ecology—the diversity of its (ephemeral) constituency and the broader institutions and environment with which it interacts—is quick to (re)shape itself in response to a wide spectrum of mental-social-environmental forces. When "isolated" structures are brought into working proximity, structure breaks apart, and this disjunction is necessary for true collectivity. Again, this is a monumental insight of Guattari's ecosophy: relationships of mutual constructivism and acts of co-creation are predicated upon commitments to disjunction—the processual breakdown of structures into machines.

Genosko makes a critical point that Guattari's distinctions between machine and structure, subject group and subjugated group, are "non-absolute" (Genosko, 2008: 60). For instance, an institution or group that operates à la the machine is not necessarily machinic by nature—it could devolve at any moment into the seriality of a structure. But the same holds true of the inverse (i.e., structure to machine), and this conviction is the cause of Guattari's optimism regarding the potential impacts of remaking social practices. In critiquing what he calls "Integrated World Capitalism" (IWC), Guattari simultaneously sets up a contrast against which to invent eco-praxes and he specifies a target discourse at which to direct ecosophical interventions. Throughout *The Three Ecologies*, Guattari suggests a generative opposition between the ecosophical goal of nascent subjectivity and the limits of IWC's "capitalist subjectivity":

A capitalist subjectivity is engendered through operators of all types and sizes, and is manufactured to protect existence from any intrusion of events that might disturb or disrupt public opinion. It demands that all singularity must be either evaded or crushed in specialist apparatuses and frames of reference. Therefore, it endeavors to manage the worlds of childhood, love, art, as well as everything associated with anxiety, madness, pain, death, or a feeling of being lost in the Cosmos...IWC forms massive subjective aggregates.

(Guattari, 2008: 33)

On none of these "subjective aggregates" is IWC more dependant than mass media. In fact, Guattari likens mass media to poison and mutant algae as he illustrates its tendency to pollute mental ecology and erode social ecology. Doubtlessly alluding to mass medial conditions and his image of the television spectator, he claims, 'It is not only species that are becoming extinct but also the words, phrases, and gestures of human solidarity' (Guattari, 2008: 29). When Guattari (2008: 38) calls for a 'value-systems revolution', which would 'reevaluate the purpose of work and of human activities according to different criteria than profit and yield', he is at once announcing the need for a revolutionary way of using media technologies. If, as Genosko (2009: 70) insists about Guattari's project, 'the most important stake is the development of a new kind of subjectivity' (and if we also remember Guattari's contention that new telematics and computer technologies are vital to contemporary productions of subjectivity), then media is arguably the most important target of ecosophy today.

Towards Post-Media

Digital theorist Gregory Ulmer has recently claimed that electracy is the principal site of the emergence of group subjectivity—a mode of experience that interfaces 'between individual

and collective' (Ulmer, 2005: 115). As a pedagogy of new media, electracy purports 'to do for the community as a whole what literacy did for the individuals within the community' (Ulmer, 2005: xxvi). Unprecedented both in degree and kind, the new collaboration called for by electracy will require, throughout its development, the testing of numerous concepts derived and appropriated from poststructuralist theory. With Guattari's work in mind, we can formulate some urgent questions for electracy, and these questions also posit urgent connections between ecological and digital approaches to the humanities. For instance, what happens to our understanding and experience of the digital apparatus when we adopt the theoretical components of ecosophy (e.g., nascent subjectivity and the machine)? Guattari does not answer this question in his own work; however, he does leave a number of provocative signposts—particularly in his select use of the term "post-media". Post-media, as I will suggest, names a potential mode of cultural production that makes ecosophical use of digital media technologies.

Post-media remains a relatively underdeveloped area in scholarship invoking Guattari, probably because Guattari develops the concept only in passing, elusive and intermittingly, throughout his later works. [12] Unlike schizoanalysis or geophilosophy, post-media is never the subject of entire chapters. Still, post-media (or "the post-media era") stands out in Guattari's writing as an optimistic horizon to which his other key concepts repeatedly refer:

Only if the third path/voice takes consistency in the direction of self-reference—carrying us from the consensual media era to the dissensual post-media era—will each be able to assume his or her processual potential and, perhaps, transform this planet—a living hell for over three quarters of its population—into a universe of creative enchantments.

(Guattari, 1996: 104; my emphasis)

An essential programmatic point for social ecology will be to encourage capitalist societies to make the transition from the mass-media era to the post-media age, in which the media will be reappropriated by a multitude of subject groups capable of directing its resingularization.

(Guattari, 2008: 40)

Technological developments together with social experimentation in these new domains are perhaps capable of leading us out of the current period of oppression and into a post-media era characterized by the reappropriation and resingularization of the use of media.

(Guattari, 1995: 5; my emphasis)

We can already notice from this sample that Guattari's "post-media" carries connotations that evade Lev Manovich's 2001 definition of the term. For Manovich, post-media signifies a change surrounding artworks and the nature of mediums in contemporary, digital milieus. On one hand, the Internet makes multimodal communication the norm; hence, it becomes difficult to categorise net art (which often combines photography, video, text, images, and sound) under the traditional logic of genre typology (i.e., identification via medium: sculpture, drawing, painting, etc.). According to Manovich, 'if one can make radically different versions of the same art work...then the traditional strong link between the identity of an art object and its medium becomes broken' (Manovich, 2001). In other words, as more artworks commonly exist across different mediums, the idea of the medium—though still important in the formation of meaning—can no longer be appealed to in sorting out various artworks from each other. In Manovich's terms, post-media is synonymous with post-medium.

By contrast, Guattari appears to be less focused on the typology of art proper, as his use of post-media evokes a broader sense of social transformation. Although Guattari and Manovich identify a similar historical cause (i.e., the proliferation of new media and its accessibility to non-corporate entities), Guattari's conception of post-media is true to his idea of the "new aesthetic paradigm", which, at a basic level, involves the explosion of artistic techniques and mentalities into arenas of social practice and institutional politics. Innovative, aesthetic uses of media technology become a way to generate nascent subjectivity and machinic collectivity: 'One creates new modalities of subjectivity in the same way that an artist creates new forms from the palette' (Guattari, 1995: 7). Guattari points to several examples in the field of psychoanalysis that demonstrate how new media may be used in parallel with his theory of the new aesthetic paradigm. For instance, he refers to a practice in which the therapist acts out or improvises "psychodramatic scenes" with the patient while a video camera records both of them. Therapist and patient then watch and discuss the video playback of the scene; here, the audiovisual affordances of video make possible a new mode of relating to the production of one's subjectivity—just as early alphabetic writing systems established a new relationship between people and language. These video-enabled practices, according to Guattari, often furthered patients' treatment programs by emphasising the fluid, creative dimensions of a subjectivity that is always in production, always open to manipulation and mutation, in opposition to "realist" or representational models of the subject (Guattari, 1995: 8). Guattari argues that, in cases like these, 'the inventiveness of the treatment distances us from the scientific paradigms and brings us closer to an ethico-aesthetic paradigm' (Guattari, 1995: 8). Post-media, then, continues a pre-digital mission to transform subjectivity; as such, media technologies are employed (and considered vital) because they generally provide the most accurate means to diagram nascent subjectivity. In essence, the desire to use the technology is motivated by the theory, and the development of the theory is itself influenced by technological developments. It is very tempting to think—and certainly not unreasonably so, given grammatological research confirming the correlation between literate societies and analytical thought processes—that a society equipped with new media

is in a better position to sustain a lived experience of nascent subjectivity, provided, of course, there are concurrent efforts to develop post-media practices by which to engage these technologies.

While Guattari sketches several prototypes for post-media practices in writing about his activist and clinical work, humanities scholars still need to unpack the theoretical underpinnings of his vision before we can really be in a position to initiate, facilitate, or even evaluate its realisation. From the onset, we must be clear that post-media for Guattari does not allude to an era devoid of media or its effects; Guattari agrees with Paul Virilio when he claims, 'the increased speed of transportation and communications and the interdependence of urban centres are equally irreversible' (Guattari, 2008: 29). While Guattari is very against mass media, he is anything but a technophobe. Verena Conley rightly points out that '[u]nlike many post-68 French theorist, Guattari does not use a Heideggerian blue print...[h]e advocates the construction of new subjectivities with technology' (Conley, 2009: 120). In Guattari's work, mass media is conceived as a stance—an ideological use of media technology that is in no way inherent to or determined by the medium. In his essay 'Toward an Ethics of the Media', Guattari identifies four 'series of factors' that he believes will give shape to a 'coming perspective', from which to begin envisioning post-media futures (Guattari, 2002: 18). Without rehashing them here, these four series of factors speak largely to the possibility for new kinds of relationships among traditionally stratified groups arising commensurate with new levels of interaction in writing, education, and politics. Guattari's speculations about post-media take a more rigorous theoretical turn in *Chaosmosis*, wherein he problematises our habitual attitude towards the technologies (e.g., radio, television, computers) that have now become fixtures of everyday life in many parts of the world. From the stance of mass media, especially from the consumer's point of view, a television or a computer is regarded as a technical machine—the machine as a subset of technology' (Guattari, 1995: 33). Guattari calls for a reversal of this relationship, such that his expanded conception of the machine (see above) becomes a 'pre-requisite for technology rather than its expression' (Guattari, 1995: 33).

Thus, if we take this reversal to be a critical gesture of the post-media stance, the user finds herself recast into an altogether different set of relations with media: technical machines become machinic technologies. And so, rather than seeing the computer as a structure whose operations demands technical expertise above all else, the post-media user would approach the computer as a technology in progress (i.e., always 'in the process of being reinvented'), whose operations affect and are affected by machinic assemblages of a 'constantly mutating socius' (Guattari, 2008: 45). That is to say, under the logic of post-media all users maintain a potential to invent the practices by which people relate to new media, while, at the same time, there is a basic awareness that the hardware and software of new media wield a powerful stake in the production of human subjectivity. Digital media—considered as machinic technologies rather than technical machines—constitute "complexes of subjectivation:

multiple exchanges between individual-group-machine" (Guattari, 1995: 7). In other words, with digital writing systems, we are "not confronted with a subjectivity given as in-itself, but with processes of the realization of autonomy, or of autopoiesis" (Guattari, 1995: 7). Neither the writing of the programmer nor the writing of other contributors of a given digital writing system can be said to be the sum of a single individual's choices; once writing enters into the complexity of such systems, theoretically speaking, writing becomes less the product of single-minded rhetorical intentions and more a dynamic variable whose semiotic life affects and is affected by patterns of movement across an intermingling if not deterritorialising ecology of collective assemblages of enunciation.

Of course, the post-media stance owes its viability to the decentralisation of the means of media production and dissemination brought about by the commoditisation of personal computing; however, it would be a dangerous reduction to mistake the mere technocratic fact of decentralised media production for the cultural achievement of a post-media sensibility. Indeed, theorising post-media enables us to see just how well mass media has already adapted to the "emancipatory" conditions of Web 2.0. Before hastily celebrating the transgressive qualities of any emergent media ecologies, we would do well to note Michael Godard's insistence that the shift from mass media to post-media is anything but a sudden or superficial matter:

the post-media era is...not something that can be given in advance; it is instead a process of the production of subjectivity, the becoming of a collective assemblage of enunciation whose starting point is the emptiness and coerciveness of the normalising production of subjectivity that the mass media currently enact. This already gives us some indications as to what aspects of digital network culture might be able contribute to this emergence of a post-media sensibility and which elements in contrast merely help to add sophistication and diversity to normalisation processes under the guise of interactivity. (Godard, 2011)

In fact, some of the most striking examples of mass media 2.0 can be found on popular websites dealing with ecological crises and the green movement. Guattari's ecosophical perspective on media and globalisation offers a framework with which to analyse some recent surges of this emergent online genre, which we may call the "green list". To begin with a basic definition, the green list is a form of Web 2.0 writing whereby Internet users enumerate a clear and simple list of steps or tips intended to promote an eco-friendly lifestyle. In its most common manifestation, however, the green list—whether authored by individuals or corporations—becomes a testament to IWC, mass media, and consumerism. As the brief discussion of green lists below will suggest, the Web 2.0 environment is entirely susceptible to mass media colonization, and we therefore must aim to develop oppositional, post-media

pedagogies in order to realise any of the revolutionary potential that scholars typically attribute to digital authorship. [13]

Guattari provides the perfect preface for my mini-critique of the green list when he speculates on the prospects of 'computer-aided design':

The machinic production of subjectivity can work for better or for worse...It's impossible to judge such a machinic evolution either positively or negatively; everything depends on its articulation within collective assemblages of enunciation. At best there is the creation, or invention, of new Universes of reference; at worst there is the deadening influence of the mass media to which millions of individuals are currently condemned.

(Guattari, 1995: 5)

On one hand, green lists apparently pop up as so many signposts directing consumers to the market's "socially responsible" transitions, marking the promise of "conscious consumerism" under a new kind of capitalism. Launched by a few environmental journalists in 2007, The Daily Green has quickly become 'one of the most trusted sources on the Web for news and information about going green' with the mission to 'broaden the audience for earth-friendly living by showing how going green is relevant to everyone' (Daily Green, 2009). A section of their website called 'top going green tips' offers ten 'idiot-proof' steps every user can implement immediately to 'get started on a green path' (Daily Green, 2009). These steps, many of which are common to most green lists, include: stop idling in your car, turning off computers when not using them, switching to green energy for your home, doing laundry with cold water, carpooling, and paying bills online (Daily Green, 2009). Each of these tips constitute a gesture towards sustainability in that they effectively control the damage of cultural habits that waste natural resources on account of laziness or inefficiency.

On the other hand, all of the tips assume, no doubt encourage, a basic continuity: people will continue to define themselves (and their relation to environmental concerns) through consumerism. The explicit message is to commute to the corporate office with a coworker, or to share one car for a trip to the mall with a group of friends—keep amassing bills, but pay them online now. By taking, as a given, activities associated with working and spending in the name of the commodity, green lists protect institutions like malls and transnational corporations by maintaining them innocently in the background. Figuratively speaking, corporate institutions are the pervasive white space in between each eco-friendly tip; they issue the invisible motives that prompt each tip and they linger as the implicit destinations for which green lists prepare their readers. Rather than question the mall or the corporation, green lists insist that consumers must become more efficient in their consumption of the

capitalist commodity. As such, green lists function as training manuals meant to help consumers help corporations survive the growing awareness of humanity's contributions to the ecological crisis. This crisis is of course particularly due to the rampant spread of American consumer culture during the last fifty years, which is now being exported more than ever throughout the world.

While plenty of green lists are published in isolation from one another on the web, there are a number of major Web 2.0 style hubs for this genre that act as databases, organizing lists according to topics such as "green cuisine" or "green cleaning". First of all, just as there is a studio executive behind each Hollywood feature film, many green list databases are subtly sponsored by corporate entities. A true manifestation of Guattari's nightmare of IWC, the database The Great Green List is sponsored, albeit discretely, by a company called Earthsense. [14] Though the site's amateur appearance is meant to resemble the template-format of a grassroots, public wiki, all submissions to The Great Green List must pass review by an editorial staff hired by Earthsense. Moreover, many green list hubs, including The Great Green List, feature product promotion hyperlinks that send users directly to online shopping areas. In April of 2009, The Daily Green hosted a link (atop every single page of their website) that sent users to a Radio Shack promotion. (Hence, this "neutral" green list hub frames and feeds straight into a corporate buying site.) Clicking on the Radio Shack link, users learn that the promotion offers a Radio Shack gift card to anyone willing to exchange used electronics for store credit (PC Informant, 2009). Perhaps such deals do lead to some reduction of the 20 to 50 million tons of electronics waste that accumulates around the world each year, though non-profit organizations already offer free and convenient services for recycling electronics.

Nevertheless, applying Guattari's writings on capitalist subjectivity, I would argue that these promotions shorten the experienced life cycle of the company's products by furnishing consumers with incentives to part with electronics before they reach the end of their technical-functional life cycle (or as soon as impulse decides it is a nice day to upgrade to the latest model). Implicitly, these promotions grease the skids for more efficient patterns of consumption, encouraging an even quicker rate of product turnover and fueling the capitalist mode of production's expansion into new global markets. We should also note the acceleration that accrues to the shopping experience, which is now more aptly a buying experience. Shopping time is eclipsed as less profitable waste, for here the path is laid out for consumers around the world—without waiting in line—to use their "old" computer (if you already own it, then it must be old) to purchase the newest computer, all the while feeling like a good, socially responsible capitalist: they "made" money and "saved" the environment. If left to the green list conventions, this is what the concept of sustainability becomes for citizens whose native tongue is the language of consumption. Indeed, IWC's hypertextual green lists are literal relays to the commodity, and they are much improved from the printed pamphlets of early

capitalism, which merely spelled out the what, where, and why of commodity expenditure.

Assuming the collective assemblages of enunciation of post-media should contrast with the commercial logic evident in green list hubs, we need to return to the question of post-media in search of a more analogous and desirable comparison. Without going into much detail here, I want to suggest a space of potential synthesis between post-media pedagogies and the contemporary art practices theorised as "relational aesthetics" by curator and critic Nicolas Bourriaud, himself an expert on Guattari's work. Speaking from his encounters with contemporary art, Bourriaud asserts that an artwork's primary value is its status as a "social interstice" (Bourriaud, 2002: 16). Appropriating the term from Marx, Bourriaud explains, 'The interstice is a space in human relations which fits more or less harmoniously and openly into the overall system, but suggests other trading possibilities than those in effect within the system' (Bourriaud, 2002: 16). For Bourriaud, art acts as a social interstice to the degree that it 'creates free areas, and time spans whose rhythm contrast with those structuring everyday life' or 'encourages an inter-human commerce that differs from the "communication zones" that are imposed upon us' (Bourriaud, 2002: 16).

Translating the concept of social interstice into humanities education, one can imagine how academic projects could be designed, with the resources of digital media, to act as an interstice for proposing ideas on the basis of a 'social and aesthetic "profitability"' and for exploring ways of relating to new media that deal with non-commercial forms of exchange (Guattari, 2008: 42). One promising example of humanities education becoming-interstice is the Critical Media Lab (CML) at the University of Waterloo, founded in 2008. Marcel O'Gorman, director of the CML, describes the program as 'a research-creation incubator that links researchers in the Faculty of Arts [and humanities graduate students] with the people and tools necessary to apply critically reflective work at the R & D level of technological production' (O'Gorman, 2008). By virtue of the institution's transversal relations to groups inside and outside the university, participants in the CML work on innovative media projects that speak to values beyond commercial profitability, doing so in a language of product/experience design that makes critical theory/thinking manifest to diverse publics. [15] This pioneering work furthers our thinking about the prospects for developing post-media practices in the context of humanities education, precisely in the sense that it suggests the necessity of creating institutional spaces that foster critical intervention into media (and subjectivity) at the level of its production, rather than just a consumerist imitation of the mass media forms, as is the case with green listing. Such endeavors demand a notion of creativity—applied to the formation of both specific projects and collective institutions—that traverses multiple ecologies, not simply transposing content from one domain into the pre-established form of another domain.

Autopoietic Creativity

Claiming that tertiary descriptions usually revert back into dualisms, Guattari prefers four-term frameworks, 'The fourth term stands for an nth term: it is the opening onto multiplicity' (Guattari, 1995: 31). Autopoiesis is the nth component of ecosophy. Autopoiesis, often summarised by Guattari as a dance between chaos and complexity, characterises the passage back and forth between nascent subjectivity, machinic collectivity, and post-media. Near the end of *Chaosmosis*, Guattari evokes a condition omnipresent in his worldview of self-organising, partial objects: 'Something is detached and starts to work for itself, just as it can work for you if you can "agglomerate" yourself to such a process' (Guattari, 1995: 132-3). One can think of autopoietic creativity as the capacity to yield one's self to chaos and, in doing so, undergo the event so as to channel the advent of nascent subjectivity. (Guattari calls this process an "event-advent".) The task here is to 'grasp alterity at the point of its emergence', to create in concert with sources of alterity (i.e., the machine, post-media), rather than overwriting alterity in favor of default, apriori, or transcendent representations (i.e., the ego, mass media) (Guattari, 1995: 117).

In opposition to "whole over parts" models that characterise more popular notions of ecology, Guattari's conception of autopoiesis—the logic of parts without wholes—may actually provide a more thoroughly ecological account of the relationality involved with dynamic open systems. Wholes can become problematic when they are posed in terms of transcendence; literary scholars like Dana Phillips and Timothy Morton have already illustrated how environmentalist constructions of Nature—posed as a whole magically thought to transcend culture—severely limited the efforts of early ecocriticism. Thus, an ecology without Nature, to borrow Morton's phrase, would employ a logic of parts without wholes; here, there are no discrete, transcendent wholes upon which to ground or stabilise an (eco) system because the so-called constituent parts always retain their partiality. With processual disjunction comes constant connection and reconfiguration, and there is no whole to impose stability by restricting the relationality of the partial objects. One of the greatest strengths of Guattari's autopoietic methodology is that it initiates, at a conceptual level, a processual disjunction of discrete elements. In fact, for Guattari (and Deleuze), thinking becomes more "holistic" to the degree that transcendent wholes (especially the discrete entities of oedipal psychology) are continually broken down into partial objects along a plane of immanence on which they engage and reengage in infinite productive syntheses with other partial objects.

This autopoietic mode is of course absent from the so-called "ecological subject" of deep ecology, which retains an ever-expansive Self at the front and center of its ontology. An eco-humanities adapted to Guattari's ecosophy would thus replace Naess's "Self-Realization" with autopoietic creativity, making autopoiesis a new core value at the heart of the humani-

ties. Furthermore, the virtual ecologies of digital media make the Internet, for instance, an ideal pedagogical scene for humanities courses to introduce autopoiesis, which, as Guattari suggests, is a far cry from our oedipal habits. In this sense, autopoietic creativity should be regarded as a crucial skill for the development of both ecological literacy and media literacy. We must learn to teach autopoietic creativity and, in doing so, autopoietise the academic research and writing practices of the humanities tradition.

Transversal connections among recent scholarship suggest a promising starting point. In particular, Guattari's ecosophical imperative to intervene at a micro-social level finds pedagogical expression in the tenets of ecocomposition set forth by Sidney Dobrin and Christian Weisser, namely that 'student writing should be directed beyond the limited scope of classroom assignments to address larger, public audiences' and that writing should be taught as a vehicle 'to affect change, to bring about awareness' in the mental, social, and environmental ecologies of which students are a part (Dobrin and Weisser, 2002: 58). Additionally, Ulmer has already theorised some ways in which the digital humanities class can act a kind of online consultancy. [16] Under this approach, students work heuristically through an intensive web-based project, experimenting with digital authoring software in order to inject humanities (often poststructuralist) perspectives into the discourse surrounding public policy issues. As the pedagogical genres of electracry continue to develop, teachers should begin to build networks between their classes and larger, public audiences with the goal of circulating academic work among relevant social organisations or political bodies. [17] Of course, the primary value of any student project should lie in its capacity to facilitate learning experiences specific to a given discipline; one risk of doing service-learning projects (via partnerships with non-academic organisations) is that the service can undermine the learning. Thus, in designing institutional spaces and collaborative projects for the post-media era, one should mind Guattari's distinction between machines and structures: create an autopoietic network that learns like a machine.

For example, Guattari's theory of group subjectivity via machines could be applied to present efforts to alleviate the disciplinary isolationism that continues to cripple many research universities. Scholars who aspire to collaborate across multiple fields should aim to create transdisciplinary machines rather than interdisciplinary structures. With transdisciplinary machines, the objective is not necessarily to incorporate the study of science (its objects and methods) into the study of, for instance, cultural or aesthetic texts. Such "inclusive" maneuvers result, more often than not, in a homogenisation on both fronts. In the case of ecocriticism, as Dana Phillips points out, both ecological science and literary analysis often become reduced to ideological critique. Therefore, rather than encouraging humanities scholars to somehow acquire an additional expertise in scientific inquiry (and vice versa), cross-disciplinary efforts would do well to recast some energy to the co-creation of transdisciplinary machines (i.e., evolving sets of processes committed to institutionalising the production of

a group subjectivity). This transversalist mode of working valorises an ensemble of heterogeneous scholars, each sounding their mastery of instruments unique to their respective disciplines, playing in concert with one another at the same venue (i.e., collaborating on the same problems and projects). [18] If we apply this analogy to much of the work that currently parades under the banner of interdisciplinary, then we find the projection of an impossible ambition: to command expertise in seemingly every academic field—to become, in short, a one-man band.

Furthermore, concerning teaching, I would argue that by creating networks for the ecosophical circulation of student writing, we may open up pedagogical interactions that otherwise get left to chance when students merely post their work onto vast Web 2.0 platforms. If we can publicise aspects of the learning process—thereby ‘accommodating diverse mediums of alterity’—our various academic communities (e.g., courses, collaborative scholarly projects, etc.) will operate much closer to the disjunctive collectivity that Guattari’s machines diagram. By building into the work autopoietic relations to extra-academic perspectives, academic discourse will be inevitably challenged to become different in response to different problems and different rhetorical situations. The motive to create these opportunities goes hand in hand with the imperative to extend complex humanities perspectives into the public sphere—particularly those domains where competing discourses threaten to overwrite or displace the humanities. As Deleuze and Guattari assert, over the course of the twentieth century, commerce has all but replaced philosophy in the creation of concepts (Deleuze and Guattari, 1994: 16). Yet the circulation of electrated projects will bring us much closer to the political conditions of the post-media era, which, according to Guattari, will ‘require collective forms of administration and control, rather than a blind faith in the technocrats of the State apparatuses’ (Guattari, 2008: 28). Ultimately, autopoietic networks do not promote allegiance to a specific, existing political position; rather teaching autopoiesis constitutes an ethical ‘refoundation of political praxis’ (Guattari, 1995: 120). The eco-humanities of the post-media era, then, would be less directly concerned with environmentalist themes or values and more rigorously committed to the promotion of transversal thinking/learning, by which traditional objects of study become recast so as to foreground the ecological relationships within-among-between-across “isolated” entities.

Scholars and teachers working in the (eco)humanities occupy a unique position from which to invent the public spheres of post-media and to inspire students to proliferate disciplinary knowledge beyond academic conventions through electrated encounters with ecosophical problems. Collectively, our research will lead to the discovery of new paradigmatic problems that will reaffirm the vitality of our fields for thinking the digital apparatus in an age of general ecological crisis. Our pedagogical experiments with emergent technologies will push students toward new ways of understanding and experiencing media, but also toward new ways of putting academic research (even poststructuralism) to use in unconventional rhetori-

cal situations. As Guattari suggests—and this may seem counterintuitive—theory across the humanities disciplines can become more experimental and more creative if we cultivate methods for appropriating computers as equipment to think with:

Computers, expert systems and artificial intelligence add as much to thought as they subtract from thinking. They relieve thought of inert schemas. The forms of thought assisted by computer are mutant, relating to other musics, other Universes of reference.

(Guattari, 1995: 36)

In taking a post-media stance towards emergent media, we can think the new and think it collectively, but only to the extent that we develop digital practices capable of producing a new (ecosophical) relation between individual subjectivity and the collective thought. From this perspective, anticipated in Guattari's writing, the eco-humanities and the digital humanities become rhizomatically bound towards one another through the concept/project of ecosophy.

Biographical Note

John Tinnell is a PhD student specialising in post-structuralist theory and digital media at the University of Florida, where he also serves as the webmaster for the English Department. Another one of his recent essays on Felix Guattari, ecosophy, and digital writing—which rethinks human-computer interaction in terms of autopoiesis as opposed to augmentation—is set to appear in the forthcoming collection *Ecology, Writing Theory, and New Media: Writing Ecology* (Routledge, winter 2011). He has also published a review of Deleuze/Guattari and Ecology in *Deleuze Studies* (2010) 4(1). His current project explores the rhetorical and grammatological significance of mobile media, particularly smartphone apps that mobilise visual search epistemologies, augmented reality browsing, and the global positioning system.

Notes

[1] In 2002, Sidney Dobrin and Christian Weisser examined this tendency among composi-

tionalists and identified several key differences that distinguish "ecomposition" from ecocriticism, green cultural studies, ecofeminism, etc. In contrast to writing about nature (nature writing) or teaching environmentally themed texts (ecocriticism), ecomposition strives to rethink discourse (particularly the activity of its production) as an ecological process and points to the myriad ways in which writing affects and is affected by surrounding environments. Aware of ecomposition's academic infancy, Dobrin and Weisser were quick to stipulate a pioneering quality about their work, 'This book only begins to scratch the surface of a body of research that needs to be further explored' (15). The first consistent use of the term "ecomedia studies" emerged during the 2009 ASLE conference, specifically in panel discussions categorised under the section heading "Ecological Media". Though a small group of film and media specialists have begun to promote themselves as ecomedia scholars, they have yet to produce a book-length work which would, in effect, do what Dobrin and Weisser did for ecomposition. *EcoMedia*, Sean Cubitt's 2005 book, perhaps bears a misleading title since Cubitt's primary objective is to extract environmental themes from popular film and television. Cubitt's book (and many other books like it) does not attempt to define ecomedia as a new field of study; he basically applies literary ecocriticism to the study of film and media.

[2] Dana Phillips and Tim Morton argue that ecocriticism's ideological attachments to the pastoral worldview and false beliefs about literary representation render the movement too nostalgic and too naïve to sustain the most urgent dialogues to be had between English studies and ecological research.

[3] Of this process of "becoming-animal", Leonard Lawlor writes, 'Instead of a resemblance relation, the relation that defines becoming is pre-positional. I find myself positioned before the animal, but 'before' in fact means I am in proximity with the animal. I am among the others and they are in me. But just as imitation does not define becoming, neither does representation define the preposition of one for another. Instead, becoming consists in a zigzag structure: we become animal so that the animal becomes, not human, but something else. The zigzag is set in motion by emission and extraction of a function (deterritorialization). And finally, beyond the destruction of the molar form, deterritorialization, in order to be successful, must use the animal function to produce something. It must take the micrological function of the rat, for example, and write "like" a rat' (Lawlor, 2008: 178-9).

[4] Guattari was in fact wary of popular and critical notions of "identity", so much so that he tends to avoid using the term in his discussion of subjectivity and describes his own project as 'a matter of a perspective on identity which has no meaning unless identities explode' (Guattari, 1996: 216).

[5] Gary Genosko and Andrew Murphie provide a further critique of such models from the perspective of metamodeling: 'models operate largely by exclusion and reduction, tightly circumscribing their applications and contact with heterogeneity. The world of models is arid, lacking ambiguity and uncertainty. By contrast, metamodeling operations...introduce movement, multiplicity, and chaos into models' (Genosko and Murphie, 2008).

[6] Genosko (2009: 73) argues that the mental ecologies in Guattari's work owe more to artists and writers (e.g., Kafka, Beckett, Proust) than to psychoanalysts (e.g., Freud, Lacan, Klein).

[7] Guattari regarded so-called ideological critique as a framework unfit to grasp the productive dimension of subjectivity as it unfolds across integrated world capitalism (IWC): 'Ideology remains in the sphere of representation, whereas the essential production of IWC does not simply concern representation, but also a modelization of behavior, sensibility, perception, memory, social relations, sexual relations, imaginary phantoms, etc.' (Guattari and Rolnik, 2008: 38-9).

[8] See Janell Watson's chapter 'An Energetics of Existence' in her book *Guattari's Diagrammatic Thought* for the most thorough engagement with Guattari's diagrams of his four ontological functions (i.e., flows, phyla, territories, universes), which appear in *Cartographies schizoanalytiques* and *Chaosmosis*.

[9] As Janell Watson has shown, Guattari's early formation of machine and structure marks a quite concrete instance of his "writing between Lacan and Deleuze." In particular, Watson discusses how Guattari develops this pair of concepts with direct references to Lacan's *objet petit a* and Deleuze's characterisation of structure in *Logic of Sense* (Watson, 2009: 39-41).

[10] This explication is by no means intended to function as a wholesale critique of science or a blanket statement about its aims, which is beyond the scope of this essay. I am merely alluding to what Deleuze and Guattari call the 'respective attitudes toward chaos' elaborated upon in their comparative analysis of philosophy and science in *What is Philosophy?* (Deleuze and Guattari, 1994: 117-133).

[11] Sartre's 'practico-inert' refers to conditions in which institutions structure social relations in a way that delimits human action, rendering freedom into a mere exercise of "dead possibilities". For an authoritative commentary, see Fredric Jameson's chapter "Sartre and History" in *Marxism and Form*.

[12] Verena Conley (2009: 123-126) and Janell Watson (2009: 176) both acknowledge the importance of the post-media era in Guattari's work, though Conley's engagement is strictly implicit. Michael Goddard is one of the only media studies scholars to deal at length with the post-media question in Guattari. Goddard's approach differs from mine in that his insights are drawn primarily from examining Guattari's participation with Italian free radio. At the end of his 2006 article, though, Goddard formulates a question that I will address later in the context of humanities education: 'The [post-media] question is one of how to compose networks of subjective auto-organization that are able to assume an autonomy from neo-liberal economic and military networks and their associated deadening of relationality, affect and desire in the direction of pure functionality and aggressivity' (Goddard, 2006).

[13] For a dynamic introduction to the discourse on the revolutionary potential of Web 2.0 authorship, see the collection of video lectures posted on the professional websites of digital ethnographer Micheal Wesch and media theorist David Gauntlett.

[14] Earthsense is a for-profit company that specialises in marketing research and branding with the mission of 'making sense of our world to provide "must-have" consumer knowledge that would make cause-related product, marketing and strategy efforts more effective...we focus on marketing that directly affects the bottom line' (Earthsense, 2009).

[15] The Critical Media Lab is perhaps this closest thing in humanities education today to the hypothetical organisation that Guattari envisions in 'Toward an Ethics of the Media': 'a new type of organism of production, adjacent to the private, supported by the state, but directly managed by the creators, and truly free and responsible for its projects' (Guattari, 2002: 19).

[16] For more on Ulmer's vision of this electrated consultancy, see the introduction ('The EmerAgency') of *Electronic Monuments*. Here, Ulmer initially defines the EmerAgency as 'a deconstructed consultancy, meaning that it is simultaneously an immanent critique of conventional consulting and an experiment in an alternative mode that adapts arts and letters knowledge to a practice supportive of a virtual civic sphere' (xxxi).

[17] By incorporating Ulmer's logic of invention, the humanities can become more autopoietic by appropriating the creative arts project as a process-based affective learning experience. These "new aesthetic projects" would depart from the role that art projects typically occupy in courses such as creative writing, studio art, and film or video production. Traditional arts courses tend to structure all lecture and discussion around improving students' artwork, at-

tempting to polish the pieces according to the criteria of prospective artistic venues. The student is positioned as an artist-in-training. New aesthetic projects in general humanities education, however, would incorporate aspects of the art project as an experiential vehicle to enhance students' engagement with disciplinary questions. As rhetorically situated acts of aesthetic invention, new aesthetic projects promise to cultivate the affective dimensions so crucial to digital rhetoric, and they also promote a relational aesthetics that is not isolated from social or political contexts. As such, new aesthetic projects offer a unique approach for teaching and learning autopoiesis in relation to the digital apparatus.

[18] On the question of (trans)disciplinarity, Genosko writes, 'Although transdisciplinary ecology goes beyond the multi- and inter-disciplinary pretenders, it is not a higher-level synthesis or a transcendent solution' (Genosko, 2009: 70). While the formation of transdisciplinary machines mobilising ensembles of heterogeneous scholars appears to be the most promising cross-disciplinary strategy, it certainly renders false the idea of a universal vocabulary/methodology with which to build knowledge that would somehow synthesise and transcend all disciplinary knowledges. More likely, the transversality of transdisciplinary machines would promote a multitude of minor exchanges, leading to molecular changes in the way specific disciplines operate rather than to the eventual creation of something like an uber-discipline.

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