

It takes more than two to (multispecies) tango: Queering gender texts in environmental education

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Abstract

Using the figuration of queer tango, we conceive this essay as a performance that responds to three *Canadian Journal of Environmental Education* articles, each of which calls for the creation and circulation of more queer scholarship in environmental education. We explore Mark Vagle's (2015) suggestion of working along the edges and margins of phenomenology using poststructuralist concepts and ideas, with a view to engaging with Joshua Russell's (2013) phenomenological interpretation of queer theory, with particular reference to Sara Ahmed's (2006) phenomenological exploration of "(dis)orientation." Although Vagle (2015) uses the Deleuzian concepts of *multiplicity* and *line of flight* to explore the phenomenological notion of intentionality, we suggest that engaging other, somewhat lesser used, Deleuzian concepts might better pair with Russell's (2013) use of the phenomenological ideas of orientation and embodied experiences. Thus, we draw on the Deleuzian creative conceptions of the *molar/molecular*, *body without organs*, and *assemblages* to queer(y) phenomenological notions of subjects, objects, lived bodies, and (dis)orientations. Through our inquiry, we found that dancing around the edges of phenomenology requires a redrawing of the boundaries of subjectivity and objectivity that moves from the individual to the collective, from static objects to material-semiotic generative nodes. Our provocation is that such a queer dance—one that prods and probes the geometries and optics of relationality (Barad, 2003)—can not only reinvigorate environmental education scholarship but also help to reimagine curriculum as a collective inquiry into the practices of enacting and policing boundaries.

Keywords: queer, tango, phenomenology, environmental education, and body without organs.

Introduction

We initially conceived this essay as a rejoinder to Joshua Russell's (2013) "Whose Better? [re]Orientating a Queer Ecopedagogy" in the *Canadian Journal of Environmental Education* and to two previous articles in the same journal to which he responds, namely Constance Russell, Tema Sarick, and Jacqueline Kennelly's (2002) "Queering Environmental Education" and Noel Gough and Annette Gough's (with Peter Appelbaum, Sophia Appelbaum, Mary Aswell Doll, and Warren Sellers) (2003) "Tales from Camp Wilde: Queer(y)ing Environmental Education Research." As J. Russell notes: "Both of these articles end with an invitation for more queer scholarship in the field ... Yet, after nearly a decade, these invitations remain unanswered ... Why? Are environmental educators hesitant to address their own underlying experiences with queerness or heteronormativity?" (2013, p. 17). He suggests that "newer approaches to queer thinking, in particular Sara Ahmed's (2006) phenomenological exploration of '(dis)orientation' ... might reinvigorate queer thought's contributions to environmental education" (p. 13).

Initially we were somewhat skeptical of the suggestion that phenomenological inquiry might constitute a “newer” approach to queer thinking, given that one of us (Gough, 1994) has long argued that poststructuralist understandings of subjectivity as multiple and continually contested irreversibly destabilize the phenomenological quest for essential meanings. However, recalling C. Russell’s (2006, p. 403) discussion of “adversarial discourse, generous scholarship, and the need to probe the potential for, and challenges of, collaborating with others working from different epistemological, ontological or methodological positions,” we explore Mark Vagle’s (2015) suggestions for “working along the edges and margins of phenomenology using post-structuralist ideas.” Vagle seeks to “experiment along the edges and margins of the phenomenological notion of intentionality using the Deleuzoguattarian concepts of multiplicity and line of flight” (p. 594). Because we share J. Russell’s interest in reinvigorating “queer thought’s contributions to environmental education,” we too will “experiment” with queer thinking by shifting our attention from *representations* of thought (as signified by terms such as “ideas,” “notions,” and “concepts”) towards Wolfgang Iser’s (2000, p. 153) more performative figuration of “dancing with the text,” an “epistemology of performance” that aligns literary interpretative theory with complexity theory. Inspired by Birthe Havmoeller, Ray Batchelor, and Olaya Aramo (2015) our dance of choice is *queer tango*.

Tango as interpretation

At the seventh annual Provoking Curriculum Studies Conference, held at the University of British Columbia in February 2015,¹ scholars and academics from around the world gathered to honor the significant accomplishments of a number of influential North American curriculum theorists including Terry Carson, Cynthia Chambers, William E. Doll Jr., Peter Grimmer, Rita Irwin, David Jardine, Ingrid Johnston, Karen Meyer, Antoinette Oberg, and William Pinar, an assemblage of scholars whose interests span arts-informed inquiry, cosmopolitanism, complexity, gender studies, hermeneutics, postcolonialism, postmodernisms, and teacher education. Five of these scholars were invited to prepare a brief speech about one of the others’ scholarly accomplishments. Antoinette Oberg agreed to honor Doll’s accomplishments in the field of curriculum studies, but instead of speaking, she and her husband, Daniel Myers, performed an Argentine tango, a performance that invoked Doll’s passionate and creative use of complexity theory to understand curriculum, teaching and learning as a dynamical system, a complex dance between chaos and order characterized by *richness*, *recursion*, *relations*, and *rigor*² (see, especially, William E. Doll, 1993, pp. 174-184). The Argentine tango, which arguably is the most intuitive and sophisticated version of the form, relies heavily on improvisation because it has no “basic step” although patterns of movement (and moves) have been codified over the years, such as the *cabeceo* (nonverbal invitation to dance) and the *abrazo* (embrace). As Havmoeller (2015b, p. 24) explains:

Escaping the frantic outer world into the microcosm of the *milonga* [a place or an event where tango is danced], all tango dancers are dying to be embraced, and the embrace is just what tango gives us. Forming the traditional A-frame of the classical tango *milonguero* [a person who frequently goes to *milongas*], our bodies meet at the upper part of the torso in the *abrazo* (the sustained close embrace). The tango leader leads by leaning forward, pushing ever so gently at the heart of the follower. The follower receives the lead by accepting their shared axis.

Antoinette and Daniel's performance affectively moved all observers, bringing the diverse assemblage of scholars together in a collective "awe" of understanding.

Invitation to dance a queer multispecies tango

Using the figuration³ of dance, specifically queer tango, we conceive this essay as a performance that responds to the three *Canadian Journal of Environmental Education* articles we refer to in our introduction, each of which calls for the creation and circulation of more queer scholarship in environmental education. In particular we want to answer J. Russell's (2013, p. 17) question: "[Why] are environmental educators hesitant to address their own underlying experiences with queerness or heteronormativity?" Maybe it's stage fright? Maybe they can't remember or don't know the exact sequence of steps? Maybe they are not confident enough to take the leading role? Maybe the invitation has been misinterpreted as—in Donna Haraway's (2008, pp. xxv-xxvi) words—"seeking information and data when what is on offer is communication and entanglements." In this essay we stage an encounter, a dance, in which we move through and around ideas and theories put forth by various inter/trans/cross-disciplinary scholars, gliding and pausing at points of inter-est and inter-sect.⁴ Like Patrick Dilley (1999, p. 469), we embrace a non-exclusive understanding of queer positions, and agree with his assertion that "anyone can find a queered position (although some might have a better vantage point than others) ... such a position is not dependent upon one's sexual orientation or predilections, but rather upon one's ability to utilize the (dis)advantages of such a position." Regardless of our theoretical (or sexual) tendencies we all have the ability to dance, to desire, and to question in critical, creative and playful ways the very idea of normalcy and the boundaries of identity categories that queer theorists have been attempting to dismantle, shakedown and/or relocate. We hope that a little fancy footwork and collective delight will help in addressing J. Russell's "problem" of reinvigorating queer theories' contributions to environmental education.

Beginning with Doll's (2012, p. 108) question, "what would a curriculum that played with boundaries look like?" we deploy the performative figuration of dance, where "there is no stable center for the dancers but there is a continually shifting space between (or among) the dancers as they glide or gyrate" (Doll, 2012, p. 108) across the dance floor, allowing us to trouble what Karen Barad (2003, p. 803) calls the "geometry and optics of relationality" between subjects, objects and others. Dancing is a queering act insofar as we are "always ... playing with the boundaries we both need and are entrapped by" (Doll, 2012, p. 108). As we foreshadow in our introduction this "moves us from an epistemology based on representation to one based on performance" (Doll, 2012, p. 108), language becomes embodied, relational and materialized in its performative expression. We engage with J. Russell's (2013) phenomenological interpretation of queer theory, with particular reference to Ahmed's (2006) phenomenological exploration of "(dis)orientation." Thus, we dance around the edges of phenomenology, glide, turn, twist, and gyrate our way nomadically across the dance floor. This is a "queer tango," a version of the Argentine tango open to all permutations of companion couplings with constantly shifting and exchanging leader/follower roles (Havmoeller, 2015a).⁵ But this queer tango is also a multispecies affair, because we believe that breaking the nature/culture divide is critical for queer theory (and environmental education); as Barad (2008, pp. 368-369) argues, it is a prerequisite for "destabilizing sexism, racism, and homophobia and other social ills that are propped up by this dualism and its derivatives." Such a multispecies tango is a "dance linking kin and kind ... full of syncopation and oddly jointed moves – as well as sinuous curves" (Haraway, 2008, p. xxvi). This dance is a relational, sensual, artistic and political act—"a subject- and object-shaping

dance of encounters” (Haraway, 2007, p. 4)—wherein each step opens up the im/possibility for response-able action and affect. The subject- and object-shaping dance to which Haraway refers anticipates what Sarah Kember (2015, p. 91) calls “an ongoing movement toward a post-dialectical feminism that engages its boundary work” without assuming any inherent separation between materials and human subjectivity. Kember examines debates about the intentionality and agency of objects in relation to questions about gendered access to the objects, environments and smart materials that she identifies collectively as “*imedia*,” and interrogates the ways in which these commodities function as agents of subjection (especially of women). Of particular relevance to our project is Kember’s (2016) deployment of what her publisher accurately describes as “queer feminist writing strategies such as parody and irony... to outsmart the sexism of smart objects, environments and materials and open out the new dialecticism of structure and scale, critique and creativity.”⁶ Recalling Haraway’s (1991) groundbreaking work on tracing the gendered roots of science in culture, Kember (2016, p. 81) argues:

As a queer feminist praxis, writing reverses and displaces the gendered hierarchical dualism of naturalized entities like subjects and objects (Haraway, 1991). Its strategic value is that of reinvention rather than mere substitution (her story never simply replaces his) and it constitutes, as an action, in its present participle, a way out of the dialecticism that precludes the possibility of doing *i*worlds differently.

Following Mark Hansen’s (2013, p. 76) argument that “in our world today, technics does not remain indexed to human consciousness and its constitutive time frame(s) but operates at scales well outside of what humans can perceive,” Kember (2016, p. 12) suggest that *imedia* are no longer “tangible memory objects,” like photographs and books, but “invisible information infrastructures” that require “a post-phenomenological account of sensation and experience across scales.” Thus, as we imagine it, our queer multispecies tango excludes *nobody* and *nothing*.

We use tango as a performative figuration that puts Deleuzian conceptual creations to work, and puts them in motion with phenomenological ideas and concepts. Our approach echoes that taken by Sellers and Gough (2010, p. 5) who work with “a view to moving readers beyond merely using select metaphors ... (e.g. nomadism, rhizome, lines of flight, smooth and striated spaces).”

We deliberately distance ourselves from those who “use” Deleuze by appropriating metaphors that were never intended as metaphors, preferring to work towards generating discourses~practices that challenge such a deployment of complexity-reducing Deleuzian figurations. Rather, we ... demonstrate how thinking with Deleuze produces previously unthought questions, practices and knowledges. (p. 5)

We also embrace Haraway’s (2009) endorsement of Marilyn Strathern’s (1992, p. 10) position that “it matters which concepts we use to think other concepts with.” Although Vagle (2015) chooses to explore “the phenomenological notion of intentionality using the Deleuzoguattarian concepts of multiplicity and line of flight” (p. 594) we suggest that—taking up J. Russell’s (2013) invitation, in which he draws on phenomenological ideas of orientation and embodied experiences—they might be performed more generatively with other, somewhat lesser used, Deleuzian concepts. Thus, we call to the dance floor the Deleuzian creative conceptions of the *molar/molecular*, *body without organs*, and *assemblages* in an attempt to queer(y) phenomenological notions of subjects, objects, lived bodies, and (dis)orientations. Performative

figurations are different from “concepts” as conceived of in Husserlian phenomenology, which views experience as directed (oriented) toward things or objects that are represented through/by particular concepts or ideas. Phenomenological concepts provide meaning to a given experience, but they are considered separate from that which they represent. Following Haraway’s (2008, p. 4) lead, we draw on performative figurations that:

[C]ollect ... people through their invitation to inhabit the corporeal story told in their lineaments. Figures are not representations or didactic illustrations, but rather material-semiotic nodes or knots in which diverse bodies and meaning coshape one another ... figures [are] where the biological and literary or artistic come together with all of the force of lived reality.

We practice, what Haraway (2010, para. 7) describes as, “ontological choreography ... co-constitutive work and play.”

Tango and the complexities of touch

In a contribution to a special issue of the journal *differerances*, Barad (2012, p. 215, italics in original) is emphatic on the *matter* of touch:

In an important sense, in a breathtakingly intimate sense, touching, sensing, is what matter does, or rather, what matter is: Matter is condensations of response-ability. Touching is a matter of response. Each of “us” is constituted in response-ability. Each of “us” is constituted as responsible for the other, as being in touch with the other.

As Marilyn Miller (2014, p. 2) notes, tango has a disputed history, lost in myth, complicated by its “many historical trajectories” and, although “there are few popular cultural forms so thoroughly interdisciplinary as the tango...scholarly investigators from different disciplines have rarely acknowledged this multivalence”. Debating the genesis of tango, as a dance, a language, a literature, and an aesthetic performance, some scholars argue that it is a hybrid derived from African exiles inhabiting the slums (and brothels) of Buenos Aires. Yet the varied cultural stylistic influences that contributed to its form/ation from “Spain, Uruguay, Cuba, Africa, Italy, the Argentine pampas, and specific Buenos Aires neighborhoods” (Miller, 2014, p. 2), and the varied and colorful characters who implemented them—people of African descent, immigrants from Europe, “*compadritos* (pimps), and *payadores* (street poets)” (Miller, 2014, p. 2, italics in original) as well as upper class Parisians—leave tango open to multiple interpretations. Similarly tango as a word, which is as promiscuous and precarious (Butler, 2015)⁷ as the word “queer,” some say derives from an African *tamgu* (“drum dance”). Others refer to the Latin origin of *tangere* “to touch” – to grasp, to handle, to reach, to move and/or draw an emotional response. Tango as touch—as hands, bodies, ideas, beliefs and ideas touching—experiencing the “sensuality of the flesh, an exchange of warmth, a feeling of pressure, of presence, a proximity of otherness that brings the other nearly as close as oneself” (Barad, 2012, p. 206) in “optic/haptic/affective/cognitive touch” (Haraway, 2008, p. 164). Touch as an embrace, as being present, as being able to make meaning and affect. As Barad (2012, p.206) explains: “So much happens in a touch: an infinity of others—other beings, other spaces, other times—are aroused”. In this sense, touching is not only an invitation but also an “involution, investigation, invisitation, wanted or unwanted, of the stranger within” (p. 207).

Together with Haraway (2008) and Barad (2012) we might ask: Whom and what are we touching when we tango? As Barad (2012) explains, within traditional classical notions of physics (an ontology composed of particles, fields and the void, inherited as modified Democritean particle/void ontology) touch is electromagnetic repulsion, individual negatively charged particles (electrons) that repel each other. Thus, when we touch in classical physics “[a]ll we really ever feel is the electromagnetic force, not the other whose touch we seek” (Barad, 2012, p. 209). (Touch is a tragic love story that always ends in death or betrayal because, as we learn from tango, we are all “dying to be embraced” [Havmoeller, 2015b, p. 24]). In classical physics, particles, fields and the void are separate entities, in a similar way—as Dorothea Olkowski (1999, p. 51) observes—to the subjects, objects and experiences that constitute the traditional categories of phenomenology. However, Barad (2012, p. 215) argues that particles, fields and the void are inseparable through their intra-action, or co-constitution, illustrating how “all material ‘entities,’ are entangled relations of becoming.” Barad (2012, p. 213) argues that “all of matter, matter in its ‘essence’ (of course, that is precisely what is being troubled here), is a massive overlaying” of perversities: “[A] radical openness, an infinity of possibilities” (p. 214), which she introduces as conceptually “a queer theorist’s delight” (Barad, 2012, p. 213).

Kenneth Surin (2011, p. 26) notes that Deleuze and Guattari’s collaborative work emerged, in part, as a response to phenomenology’s inability “to detach itself from the Cartesian model of subjectivity and self-consciousness.” Using his conceptual creation of “the fold” Deleuze (1993) moved away from phenomenological notions of intentionality and instead developed notions related to immanence and molecularity which can indeed open up—or “loosen up” in Vagle’s (2015, p. 596) words—and challenge traditional notions of identity, sexuality and gender. For Deleuze and Guattari (1987) life is made of intensities, “movements, becomings... pure relations of speed and slowness, pure affects, [which] are below and above the threshold of perception” (p. 281). However, Teresa Rizzo (2006, n.p.) warns that although “life, bodies and sexuality can be rendered along the molecular line they can also be produced along the molar line which is structured by binaries, fixed categories and hierarchies,” and Tim Conley (2005, p. 194) reminds us that the dualisms and Cartesian concepts of subjectivity and self-consciousness have deep roots: “[S]ubjectivity in our time is highly internalized, individualized and isolated. The struggle for subjectivity is a battle to win the right to have access to difference, variation and metamorphosis.” As subjects separated from the “real world,” we are lonely and isolated. Barad (2012, p. 206) asks: “What is the measure of closeness? Which disciplinary knowledge formations, political parties, religious and cultural traditions, infectious disease authorities, immigration officials, and policy makers do not have a stake in, if not a measured answer to, this question?” In the face of complex global capitalism, climate change, global migration flows, threats to the environment and biodiversity, how can we as isolated individual subjects make a difference? And not only make difference, but accept diversity and embrace it. This is an issue for all theorists, academics, policymakers, teachers, and parents.

In a recent interview, Aaron Williams (2016) asked Noam Chomsky to comment on “the surprising progress of Donald Trump” in the race to secure the Republican nomination for the 2016 U.S. Presidential election. Chomsky replied: “People feel isolated, helpless, victim of powerful forces that they do not understand and cannot influence” (n.p.). We are at war with difference, building walls of separation (literally if Donald Trump has his way). There is also, as Judith Butler (2015, p. 67) explains: “[A] war on the idea of interdependency, on ... the social network of hands that seek to minimize the unlivability of lives.” As authors of this essay, we choose to touch, to invite, to dance with diverse and sometimes contradictory notions, ideas and philosophies with the hope of forging new alliances, assemblages and practices. Following Barad

(2012, p. 208) we believe that “spinning off in any old direction is neither theorizing nor viable; it loses the thread, the touch of entangled beings (be)coming together-apart.” Rather, we intend to wander nomadically: “Stepping into the void, opening to possibilities, straying, going out of bounds, off the beaten path—diverging and touching down again, swerving and returning, not as consecutive moves but as experiments in in/determinacy” yet still “staying in touch” (Barad, 2012, p. 208), to dance around and along the edges and margins, never losing contact.

From bodies to “bodies without organs”

The Cartesian dualism of mind and body (*res cogitans* and *res extensa*), was born in the dark cave of Plato’s *The Republic* where, in Heesoon Bai’s (2009, p. 140) words: “Humans are seen as literally trapped in their bodies.” Phenomenology attempted a prison break by emphasizing human experience as a bodily subject, exemplified by Maurice Merleau-Ponty’s (1962) focus on embodied intentionality, in which he argues for understanding perception as an “‘interpretation’ of the signs that our senses provide in accordance with the bodily *stimuli*” (p. 31; quotation marks and italics in original). Yet, as Taylor Carmen (1999, p. 206) notes, for Edmund Husserl, the body was “a thing ‘inserted’ between the rest of the material world and the ‘subjective’ sphere” – similar to the “field” added to the Democritean ontological dualism of particle/void. In Carman’s (1999, p. 208) account, phenomenologists attempt to tackle the problem of embodiment by deploying concepts of perception, orientation, experience and intentionality, but a focus on the “body’s role in perception” and its intentional constitution is relegated to “the realm of localized tactile sensation,” in which “the body is neither an internal subject nor a fully external object of experience.” In Eva Hayward’s (2008, p. 256) memorable words, it is “a body-bag of nouns to keep the proper ones in order” which entails “a limiting of the body to containment alone,” an understanding that resonates with Paulo Freire’s critique of banking education (i.e. the conceptualization of students as containers [or “empty vessels”] for educational “experts” to insert knowledge). Addressing environmental education in particular Leesa Fawcett (2013, p. 411), drawing on Neil Evernden’s (1988) *The Natural Alien*, argues that the deep-rooted anthropocentrism prevalent in the field is facilitated by the perceiving of *nature-as-object* by “skin-encapsulated egos.”

Many feminists and environmental educators have drawn productively on phenomenological understandings of lived experience and embodied subjectivities to challenge mind/body and nature/culture dualisms (see, for example, Fawcett, 2009; Hallen, 2000; Payne, 1997 & 2013; Payne & Wattachow, 2009). This is particularly evident in outdoor, environmental and place-based education programs which focus on experiential learning, providing sensory experiences and engagements with place that often are not available within conventional classrooms. Experiential learning also shifts the focus from teaching “about” nature and the environment as something exterior to humans that we need to know, understand, control and repair. As Nikki Rotas (2015, p. 91) argues, “when ecology is transformed into a school subject, it creates the assumption that ecology is a natural system, that it is universal, and that it is outside, or separate, from human communities.” A number of environmental educators have sought to expand limited understandings of body functions beyond perception and containing internal subjectivities. For example, Astrida Neimanis (2007, p. 280) seeks to extend Merleau-Ponty’s work which, she argues “articulates, and anticipates the further development of, a theory of lived embodiment that is not limited by notions of the human body as merely static and subjectified,” by focusing on providing opportunities for—and encouraging students to—experience and connect to local

places, communities and histories. Nevertheless, we argue that even such creative and imaginative (re)interpretations of phenomenology fail to “break the skin.”

In order to not only challenge but also redraw the boundaries (or “break the skin”) of the phenomenological subject, Deleuze (1969) created the concept of “the body without organs,” which he later elaborated in his collaboration with Guattari (Deleuze & Guattari, 1987) to break down wholistic conceptions of entities (be they particles, bodies or theories). According to Eugene Holland (1999, p. 32) Deleuze and Guattari imagine how, through the body without organs, “senses and organs can operate productively ... in the broadest sense: creatively.” Yet, as Lauren Kapalka Rickerme (2015, p. 22) notes, “Deleuze and Guattari ... spend less time explaining the body without organs than they do offering how one might move towards attaining a Body without organs.” Deleuze and Guattari (1987, pp. 258-259) describe bodies without organs as being created by placing “elements or materials in a relation that uproot the organ from its specificity.” Bodies have traditionally been thought of as whole and pure, a complete independent subject (as in bodies of knowledge, bodies of water, bodies of work, etc.). Rickerme (2015, p. 22) further explains:

Humans traditionally view organs or body parts as serving individual, predetermined functions – the mouth eats, the legs walk, the hands grasp, and so forth. For instance, using Socratic dialogue, Plato (1978) asserts, “Can you see, except with the eye? ... Hear, except with the ear? ... These then may be truly said to be the ends of these organs?” (p. 38). In short, Plato argues that each body part has a single, immutable function.

As Hayward (2008, p. 73) observes with respect to heteronormative assumptions about transsexuals, “transsexual selfhood is entangled with images of bodily wholeness,” as distinct from a “defective body” that was/is considered less-than human (subhuman or inhuman); historically, as Russell, Sarick, and Kennelly (2002) note, this has included mentally and physically dis/abled people as well as other marginalized groups (usually based on gender, sexual orientation, class, race or political/religious affiliation). Practices of dehumanization—the denial of aspects of humanity to particular groups—is most commonly practiced through animalistic dehumanization by rendering individuals (or a group of individuals) animal-like, lacking unique human qualities such as logic, rationality or emotional complexity (see David Livingstone Smith, 2011). Such dehumanizing practices are material-discursive, minority groups are not metaphorically seen as subhuman (i.e. dehumanizing practices are not simply ideational concepts) they are materially produced and enacted (violently). We believe that we must put into motion discourses~practices such as Deleuze’s (1990) body without organs, that are able to challenge in material-discursive ways the existing dehumanizing practices and produce, as Sellers and Gough (2010, p. 5) suggest, “previously unthought questions, practices and knowledges.” Starting from Deleuze and Guattari’s (1987, pp. 150-151) questions—“Is it really so sad and dangerous to be fed up with seeing with your eyes, breathing with your lungs, swallowing with your mouth, talking with your tongue, thinking with your head...? Why not walk on your head, sing with your sinuses, see through your skin, breathe with your belly”—we ask: Should we not also be tired of relentlessly striving to acquire, sustain and use a whole, individual, isolated, purified (heteronormalized) body? How might becoming a body without organs allow us to expand normative assumptions around what it is—and could be—to be human? We hope, in this next section, to put in motion the concept of be(come)ing a body without organs in a way that generatively blurs and expands the nature/culture divide, embracing more-than-human qualities to shed light on the limitations of human knowledge/perception patterns and practices.

Queer encounters with echinoderms

Noreen Giffney and Myra Hird (2008, p. 6) introduce their edited collection of essays on “queering the non/human,” by quoting Jeffrey Cohen’s (2003, p. 40) assertion: “Queer theory is undoubtedly the most radical challenge yet posed to the immutability of sexual identities.” Nevertheless, Cohen is puzzled that “a critical movement predicated upon the smashing of boundary should limit itself to the small contours of human form, as if the whole of the body could be contained in the porous embrace of the skin”. We suggest that redrawing, blurring and/or smudging the boundaries of the essential(ized) body, poking holes and coming to terms with the porosity of our skin, might help us to grapple with the partial and processual becoming of our bodies-in-relation.⁸ This detaches form from function, challenges prefigured/predetermined conceptions and understandings of body parts (including sexual elements, organs and limbs), and opens up possibilities for thinking otherwise (and perversely) about the roles and functional boundaries being created and policed. Feminists, including Butler, Haraway and Barad, have long challenged conceptions of the “essential” and/or “natural” body. In one of her many germinal essays, Haraway (1988, p. 681) challenges notions of disembodied (scientific) objectivity: “The knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly, and therefore able to join with another, to see together without claiming to be another.” Partial vision challenges and draws attention to what Barad (2008, p. 318) describes as the “built-in optics” of our inherited classical ontological conceptions, which she asserts is “based on a geometry of distance from that which is other.” This practice of determining our orientation(s) (and [organ]ization[s]) through geometries of distance and difference from that which is exterior to us, is achieved through what Haraway (1988, p. 583) calls “passive vision.”

In “Invertebrate Visions: Diffractions of the Brittlestar,” Barad (2014, p. 222) offers an alternative to passive visualizing systems (i.e. perceptive eyes transferring information to a conscious brain) by describing a species of echinoderm, “a brainless and eyeless creature called the brittlestar, an invertebrate ... [that] has a skeletal system that also functions as a visual system.” A brittlestar’s skeleton, clad with calcite crystal micro-lenses, is composed of tiny optical arrays that collectively function as a compound eye. Barad (2008, p. 324; italics in original) explains that the “brittlestar does not have a lens serving as the line of separation, the mediator between the mind of the knowing subject and the materiality of the outside world. Brittlestar do not *have* eyes; they *are* eyes.” Barad (2008, p. 324) concludes that, for a being with no eyes and no brain, “being and knowing, materiality and intelligibility, substance and form, entail one another”—there is no *res cogitans* vs. *res extensa*, there is no “optics of mediation, no noumena/phenomena distinction, no question of representation” because knowing is entangled with the brittlestar’s mode of being. Barad (2008, p. 324) notes that, similar to human beings, the brittlestar’s visualizing system “is constantly changing its geometry and its topology—autonomising and regenerating its optics in an ongoing reworking of its bodily boundaries.” Commenting on the enthusiasm and excitement that surrounded the “discovery” of this organism’s visual capabilities, Barad (2014, p. 222) suggests that the “ability of this critter [sic] to reconfigure the boundaries and properties of its body is prompting technology enthusiasts to reimagine what it means to be human.”

Many SF⁹ writers have (re)imagined the limits and boundaries of what it is to be “human.” Of particular relevance here is Naomi Mitchison’s (1962) *Memoirs of a Spacewoman*, a story of intra-species communication in which the protagonist, a human communications officer named Mary, seeks to learn how to communicate with any sentient creatures she encounters during her

travels. The purpose of Mary's work is an intergalactic equivalent of C. Russell's (2006, p. 403) call to explore discourse which is unfamiliar or even adversarial in a spirit of "generous scholarship, and the need to probe the potential for, and challenges of, collaborating with others working from different epistemological, ontological or methodological positions." Mary's encounters with sentient aliens, confront her with the limitations of human knowledge/perception patterns and practices. A key illustration of this occurs when Mary encounters an alien species that she calls "radiates." She describes them as 5-armed starfish-like intellectual beings (that is, they resemble Earth's echinoderms). Mary reflects: "One is so used to a two-sided brain, two eyes, two ears, and so on that one takes the whole thing and all that stems from it for granted. Incorrectly, but inevitably. My radiates had an entirely different outlook" (Mitchison, 1962, p. 17). The radiates had a 5-fold logic system in which "they never thought in terms of either-or" Mary adds:

It began to seem to me very peculiar that... so many of my judgments were paired: good and evil, black or white, to be or not to be. Even while one admitted that moral and intellectual judgments were shifting and temporary, they had still seemed to exist. Above all, judgments of scientific precision. But after a certain amount of communication with the radiates all this smudged out. (Mitchison, 1962, p. 17)

By learning to think *with* and communicate *with* the alien echinoderm-like radiates, Mary is able to understand how they might have evolved:

If alternative means, not one of two, but one, two, three or four out of five, then action is complicated and slowed to the kind of tempo and complexity which is appropriate to an organism with many hundreds of what were in evolutionary time fairly simple suckers and graspers, but which in development have adapted themselves for locomotion, food retention, tool-handling, the finer delicacies of touch and probably for other purposes of which I only became partly aware. It thus came about that with no sense of awkwardness, two or more choices could be made more or less conflicting though never opposite. (Mitchison, 1962, p. 17)

Within such queer encounters (or embraces) partners join together to *see* otherwise and become, as a result, entangled "meaning-making figures" that, as Haraway (2007) explains in *When Species Meet*, "gather up those who respond to them in unpredictable kinds of we" (p. 5). It is a queer encounter that reshapes bodily boundaries, resulting in the creation of a performative figuration that can "never be replicated but must be encountered" (Haraway, 2007, p. 7) and embraced. "The story" of these queer encounters, as Haraway (2007, p. 31) puts it, "is simple: ever more complex life forms are the continual result of ever more intricate and multidirectional acts of association of and with other life forms." Yet these life forms are never "whole" or complete; this subject and object-shaping dance is about continually *becoming-other* together.

A queer place for public assemblages

In "Tales from Camp Wilde: Queer(y)ing Environmental Education Research," N. Gough and A. Gough (2003) invented Camp Wilde, "an imaginary intellectual space" (p. 45) in which guests were invited to enact textual performances that queer(y) "normal categories" such as "nature-as-object-of-knowledge, ecology, body/landscape relations, and the relationships among bodies of

knowledges, teachers, and learners” (pp. 47-48).¹⁰ Searching for a new space (a *milonga*), to gather and circulate more queer scholarship in the field of environmental education, we have taken to the dance floor, with our two left feet and tentacular limbs. We choose to tango because, as Miller (2014, p. 10) writes, tango enables “release, free expression, and boundary crossing between genres, genders, social groups, and zones of the city.” Dancing around the edges of phenomenology requires also a redrawing of the boundaries of subjectivity and objectivity, one that moves from the individual to the collective, from static objects to material-semiotic generative nodes. Tango is a relational dance, with dynamic moves that require “the touch of entangled beings (be)coming together-apart” (Barad, 2012, p. 2) – the *barrida* (to sweep), *sacada* (to displace) *lapiç* (to draw around), *abrazo* (to embrace). It is our provocation that such a queer dance—one that prods and probes the geometries and optics of relationality (Barad, 2003)—can not only reinvigorate environmental education scholarship but help to reimagine curriculum as a collective inquiry into the practices of enacting and policing boundaries, learning instead to play with boundaries and imagine other im/possible worlds. This textual performance is also, as Butler (2015) puts it, a practice of bring together those academics participating in the “struggle that seeks to expand what we mean when we say ‘we’” (p. 66). Miller (2014, p. 10) explains that tango carries with it “the illusion that happiness [is] possible and egalitarian,” resonating with J. Russell’s (2013, p. 13) belief that “[q]ueer ecopedagogy invites all of us to experience and imagine ways of being and acting that challenge our notion of what constitutes a ‘better’ life, including those that seek a more radical change in the world.” Together, as an assemblage of partial beings, we can (and must) imagine and enact alternative futures because, as Rosi Braidotti (2006, p. 93) reminds us, “‘We’ are indeed in *this* together.”

Notes

¹ <http://edcp.educ.ubc.ca/7th-biennial-provoking-curriculum-studies-conference-at-ubc/>

² Donna Trueit (2012, p. xiii) notes that Doll’s “abundant use of alliteration, [is] both heuristic and playful and very memorable. In China his name is synonymous with 4 R’s.”

³ Rosi Braidotti (2000, p. 170) argues that “the notion of ‘figurations’—in contrast to the representational function of ‘metaphors’—emerges as crucial to Deleuze’s notion of a conceptually charged use of the imagination.” Similarly, Haraway (1997, p. 11) asserts that “figurations are performative images that can be inhabited... condensed maps of contestable worlds... [and] bumps that make us swerve from literal-mindedness.”

⁴ “Inter-” (prefix) meaning between, among, in the midst of, within, mutually, and/or reciprocally; in combination with verbs to “intercēdere to go between; intercipere to seize on the way, intercept; interdicere to interpose in speech, interdict; interjacere to throw between, interject; interpōnere to put between, interpose; intervenire to come between, intervene; interdigitālis lying between the fingers; interflūus flowing between; intermūrālis between walls; interamniū a place between rivers” (OED, 2015, para. 1).

⁵ In the production of this essay we also performed a version of queer tango by exemplifying shifting and exchanging leader/follower roles. As co-authors located in different hemispheres with a 17-hour time difference, we collaborated asynchronously by exchanging, via email, successive/suggestive drafts.

⁶ See <http://www.palgrave.com/br/book/9781137374844>

⁷ Butler (2015, p. 15) warns against the process of “precaritization”—the favouring of individual entrepreneurial modalities rather than collective response-ability—a process which draws on “a heightened sense of expendability or disposability that is differentially distributed throughout society.” She continues by explaining that: “The more one complies with the demand of ‘responsibility’ to become self-reliant, the more socially isolated one becomes and the more precarious one feels; and the supporting social structures fall away for ‘economic’ reasons ... it redefines responsibility as the demand to become an entrepreneur of oneself under conditions that make that dubious vocation impossible” (Butler, 2015, p. 15). Instead we strive to create relations of, what Haraway (2010, para. 7) describes as, “response-ability,” by embracing the “ontological choreography” of life. (Also see Schrader, 2010).

⁸ Fawcett (2009) draws on two phenomenologists who attempt to shift, disrupt and/or challenge normative conceptions of bodily boundaries, namely Evernden (1992) and Thomas Csordas (1999), to argue for a shift to

what Evernden (1988) calls a “field of care” —an acknowledgement that, as Fawcett (1989, p. 16) writes: “We are not merely unique individuals all bundled up in our own needs and feelings. Our very selves extend beyond our bodies, to the beings, human and non-human, to whom we are connected.”

- ⁹ As Haraway (2011, p. 12) writes, “SF is that potent material-semiotic sign for the riches of speculative fabulation, speculative feminism, science fiction, speculative fiction, science fact, science fantasy—and, I suggest, string figures.” Haraway playfully uses multiple meanings of SF games to dismantle the fact/fiction binary, drawing connections through the various practices of creating and imagining reality/stories/worlds, “practices of scholarship, relaying, thinking with, [and] becoming with” (Haraway, 2011, p. 15). Haraway (2011, p. 12) adds: “In looping threads and relays of patterning, this SF practice is a model for worlding. Therefore, SF must also mean ‘so far,’ opening up what is yet-to-come in protean entangled times’ pasts, presents, and futures.”
- ¹⁰ In retrospect, we can interpret the production of “Tales from Camp Wilde” in terms of queer tango. N. Gough and A. Gough (2003) devised an imaginary space in which they began to improvise their textual performance of queer(y)ing environmental education research. They then invited four other “partners” (the only criterion for inviting them was that they were known to be antithetical to diverse heteronormative positions) to join in the performance, to which assemblage one partner, Peter Appelbaum, added his daughter, Sophia.

References

Note: In regard to the use of full names in the reference list, we depart from the *Publication Manual of the American Psychological Association* to facilitate reading the gender politics of the sources on which we draw in this essay. We also believe that it is discourteous to authors to arbitrarily truncate the ways in which they prefer to identify themselves.

- Ahmed, Sara. (2006). *Queer Phenomenology: Orientations, Objects, Others*. Durham NV: Duke University Press.
- Bai, Heesoon. (2009). Reanimating the universe: Environmental education and philosophical animism. In Marcia McKenzie, Heesoon Bai, Paul Hart & Bob Jickling (Eds.), *Fields of Green: Restorying Culture, Environment, and Education* (pp. 135-151). Cresskill NJ: Hampton Press.
- Barad, Karen. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society*, 28(3), 801-831.
- Barad, Karen. (2008). Queer causation and the ethics of mattering. In Noreen Giffney & Myra J. Hird (Eds.), *Queering the Non/Human* (pp. 311-338). Aldershot: Ashgate.
- Barad, Karen. (2012). On touching - the inhuman that therefore I am. *differences: A Journal of Feminist Cultural Studies*, 23(3), 206-223.
- Barad, Karen. (2014). Invertebrate visions: Diffractions of the brittlestar. In Eben Kirksey (Ed.), *The Multispecies Salon* (pp. 221-241). Durham & London: Duke University Press.
- Braidotti, Rosi. (2000). Teratologies. In Ian Buchanan & Claire Colebrook (Eds.), *Deleuze and Feminist Theory* (pp. 156-172). Edinburgh: Edinburgh University Press.
- Braidotti, Rosi. (2006). *Transpositions: On Nomadic Ethics*. Cambridge, UK: Polity Press.
- Butler, Judith. (2015). *Notes Toward a Performative Theory of Assembly*. Cambridge, MA: Harvard University Press.
- Carman, Taylor. (1999). The body in Husserl and Merleau-Ponty. *Philosophical Topics*, 27(2), 205-226.
- Cohen, Jeffrey J. (2003). *Medieval Identity Machines*. Minneapolis & London: University of Minnesota Press.
- Conley, Tim. (2005). Folds and folding. In Charles J. Stivale (Ed.), *Gilles Deleuze: Key Concepts* (2nd ed., pp. 192-203). London & New York: Routledge.

- Csordas, Thomas. (1999). Embodiment and cultural phenomenology. In Gail Weiss & Honi Fern Haber (Eds.), *Perspectives on Embodiment: The Intersections of Nature and Culture* (pp. 143-162). New York: Routledge.
- Deleuze, Gilles. (1969). *Logique du Sens*. Paris: Les Éditions de Minuit.
- Deleuze, Gilles. (1993). *The Fold: Leibniz and the Baroque* (Tom Conley, Trans.). Minneapolis, MN: University of Minnesota Press (Original work published 1988).
- Deleuze, Gilles, & Guattari, Félix. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia* (Brian Massumi, Trans.). Minneapolis: University of Minnesota Press.
- Dilley, Patrick. (1999). Queer theory: Under construction. *International Journal of Qualitative Studies in Education*, 12(5), 457-472.
- Doll, William E. (1993). *A Post-Modern Perspective on Curriculum*. New York: Teachers College Press.
- Doll, William E. (2012). *Pragmatism, Post-modernism, and Complexity Theory: The "Fascinating Imaginative Realm" of William E. Doll, Jr.* (Donna Trueit Ed.). London: Routledge.
- Evernden, Neil. (1988). Nature in industrial society. In Sut Jhally & Ian H. Angus (Eds.), *Cultural Politics in Contemporary America* (pp. 151-164). New York: Routledge.
- Evernden, Neil. (1992). *The Social Creation of Nature*. Baltimore MD: The Johns Hopkins University Press.
- Fawcett, Leesa. (1989). Anthropomorphism: In the web of culture. *Undercurrents*, 1(1), 14-20.
- Fawcett, Leesa. (2009). Feral sociality and (un)natural histories: On nomadic ethics and embodied learning. In Marcia McKenzie, Heesoon Bai, Paul Hart & Bob Jickling (Eds.), *Fields of Green: Restorying Culture, Environment, and Education* (pp. 227-236). Cresskill NJ: Hampton Press.
- Fawcett, Leesa. (2013). Three degrees of separation: Accounting for naturecultures in environmental education research. In Robert Stevenson, Michael Brody, Justin Dillon & Arjen Wals (Eds.), *International Handbook of Research on Environmental Education* (pp. 409-417). New York & London: American Educational Research Association/Routledge.
- Giffney, Noreen, & Hird, Myra J. (2008). Introduction: Queering the non/human. In Noreen Giffney & Myra J. Hird (Eds.), *Queering the Non/Human* (pp. 1-16). Aldershot: Ashgate.
- Gough, Noel. (1994). Imagining an erroneous order: Understanding curriculum as phenomenological and deconstructed text. *Journal of Curriculum Studies*, 26(5), 553-568.
- Gough, Noel, & Gough, Annette (with Peter Appelbaum, Sophia Appelbaum, Mary Aswell Doll, and Warren Sellers). (2003). Tales from Camp Wilde: Queer(y)ing environmental education research. *Canadian Journal of Environmental Education*, 8, 44-66.
- Hallen, Patsy. (2000). Ecofeminism goes bush. *Canadian Journal of Environmental Education*, 5, 150-166.
- Hansen, Mark B.N. (2013). Ubiquitous sensation or the autonomy of the peripheral: Towards an atmospheric, impersonal, and microtemporal model of media. In Ulrik Ekman (Ed.), *Throughout: Art and Culture Emerging with Ubiquitous Computing* (pp. 63-88). Cambridge MA: The MIT Press.
- Haraway, Donna J. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575-599.
- Haraway, Donna J. (1991). *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.
- Haraway, Donna J. (1997). *Modest_Witness@Second_Millennium.FemaleMan©_Meets_Onco Mouse™: Feminism and Technoscience*. New York & London: Routledge.

- Haraway, Donna J. (2007). *When Species Meet*. Minneapolis: University of Minnesota Press.
- Haraway, Donna J. (2008). Foreword: Companion species, mis-recognition, and queer worlding. In Noreen Giffney & Myra J. Hird (Eds.), *Queering the Non/Human* (pp. xxiii-xxvi). Aldershot: Ashgate.
- Haraway, Donna J. (2009). Staying with the trouble: Becoming with creatures of empire [Video file]. Retrieved 23 November, 2009, from:
<https://www.youtube.com/watch?v=3F0XdXfVDXw>
- Haraway, Donna J. (2010). Staying with the trouble: Xenoecologies of home for companions in the contested zones. *Cultural Anthropology*. Retrieved 16 June, 2016, from:
<https://culanth.org/fieldsights/289-staying-with-the-trouble-xenoecologies-of-home-for-companions-in-the-contested-zones>
- Haraway, Donna J. (2011). SF: Science fiction, speculative fabulation, string figures, so far. Acceptance speech for Pilgrim Award presented by the Science Fiction Research Association, Lublin, Poland. Retrieved 23 April, 2014, from:
<http://people.ucsc.edu/~haraway/Files/PilgrimAcceptanceHaraway.pdf>
- Havmoeller, Birthe. (2015a). How to queer a queer tango: Queer strategies for dual role dancers. In Birthe Havmoeller, Ray Batchelor & Olaya Aramo (Eds.), *The Queer Tango Book: Ideas, Images and Inspiration in the 21st Century* (pp. 54-58). Aarhus, Denmark: Birthe Havmoeller/Queertangobook.org.
- Havmoeller, Birthe. (2015b). Queer tango and the ephemeral abrazo. In Birthe Havmoeller, Ray Batchelor & Olaya Aramo (Eds.), *The Queer Tango Book: Ideas, Images and Inspiration in the 21st Century* (pp. 23-27). Aarhus, Denmark: Birthe Havmoeller/Queertangobook.org.
- Havmoeller, Birthe, Batchelor, Ray, & Aramo, Olaya (Eds.). (2015). *The Queer Tango Book: Ideas, Images and Inspiration in the 21st Century*. Aarhus, Denmark: Birthe Havmoeller/Queertangobook.org.
- Hayward, Eva. (2008). More lessons from a starfish: Prefixial flesh and transspeciesed selves. *Women's Studies Quarterly*, 36(3 & 4), 64-85.
- Holland, Eugene W. (1999). *Deleuze and Guattari's Anti-Oedipus: Introduction to Schizoanalysis*. London: Routledge.
- Iser, Wolfgang. (2000). *The Range of Interpretation*. New York: Columbia University Press.
- Kember, Sarah. (2015). *iMedia: The Gendering of Objects, Environments and Smart Materials*. London: Palgrave Macmillan.
- Merleau-Ponty, Maurice. (1962). *Phenomenology of Perception* (Colin Smith, Trans.). London: Routledge & Kegan Paul (Original work published 1945).
- Miller, Marilyn G. (2014). Introduction. In Marilyn G. Miller (Ed.), *Tango Lessons: Movement, Sound, Image, and Text in Contemporary Practice* (pp. 1-32). Durham: Duke University Press.
- Mitchison, Naomi. (1962). *Memoirs of a spacewoman*. London: Victor Gollancz Ltd.
- Neimanis, Astrida. (2007). Becoming-Grizzly: Bodily molecularity and the animal that becomes. *PhaenEx: Journal of Existential and Phenomenological Theory and Culture*, 2(2), 279-308.
<http://phaenex.uwindsor.ca/ojs/leddy/index.php/phaenex/article/view/245>
- Olkowski, Dorothea. (1999). *Gilles Deleuze and the Ruin of Representation*. Berkeley: University of California Press.
- Payne, Phillip G. (1997). Embodiment and environmental education. *Environmental Education Research*, 3(2), 5-34.
- Payne, Phillip G. (2013). (Un)timely ecophenomenological framings of environmental education research. In Robert Stevenson, Michael Brody, Justin Dillon & Arjen Wals (Eds.),

- International Handbook of Research on Environmental Education* (pp. 424-437). New York & London: American Educational Research Association/Routledge.
- Payne, Phillip G., & Wattchow, Brian. (2009). Phenomenological deconstruction, slow pedagogy, and the corporeal turn in wild environmental/outdoor education. *Canadian Journal of Environmental Education*, 14, 15-32.
- Richerme, Lauren Kapalka. (2015). Difference and music education. In Clint Randles (Ed.), *Music Education: Navigating the Future* (pp. 16-28). New York & London: Routledge.
- Rizzo, Teresa. (2006). The molecular poetics of *Before Night Falls*. *Rhizomes: Cultural Studies in Emerging Knowledge*, (11/12), n.p. <http://www.rhizomes.net/issue11/rizzo.html>
- Rotas, Nikki. (2015). Ecologies of praxis: Teaching and learning against the obvious. In Nathan J. Snaza & John A. Weaver (Eds.), *Posthumanism and Educational Research* (pp. 91-103). New York: Routledge.
- Russell, Constance L. (2006). Working across and with methodological difference in environmental education research. *Environmental Education Research*, 12(3-4), 403-412.
- Russell, Constance, Sarick, Tema, & Kennelly, Jacqueline. (2002). Queering environmental education. *Canadian Journal of Environmental Education*, 7(1), 54-66.
- Russell, Joshua. (2013). Whose Better? [re]Orientating a queer ecopedagogy. *Canadian Journal of Environmental Education*, 18, 11-26.: Phantomatic ontologies, indeterminacy, and responsibility in toxic microbiology. *Social Studies of Science*, 40.2, 275-306.
- Schrader, Astrid. (2010). Responding to *Pfiesteria piscicida* (the fish killer): Phantomatic ontologies, indeterminacy, and responsibility in toxic microbiology. *Social Studies of Science*, 40(2), 275-306.
- Sellers, Warren, & Gough, Noel. (2010). Sharing outsider thinking: Thinking (differently) with Deleuze in educational philosophy and curriculum inquiry. *International Journal of Qualitative Studies in Education*, 23(5), 589-614.
- Smith, David Livingstone. (2011). *Less Than Human: Why We Demean, Enslave, and Exterminate Others*. New York: St. Martin's Press.
- Surin, Kenneth. (2011) Force. In Charles J. Stivale, (Ed.). *Gilles Deleuze: Key Concepts* (2nd ed. pp. 19-30). London & New York: Routledge.
- Strathern, Marilyn. (1992). *Reproducing the Future: Essays on Anthropology, Kinship and the New Reproductive Technologies*. Manchester: Manchester University Press.
- Trueit, Donna. (2012). Preface. In William E. Doll, Jr. *Pragmatism, Post-modernism, and Complexity Theory: The "Fascinating Imaginative Realm" of William E. Doll, Jr.* (pp. xii-xiv). London: Routledge.
- Vagle, Mark D. (2015). Curriculum as post-intentional phenomenological text: Working along the edges and margins of phenomenology using post-structuralist ideas. *Journal of Curriculum Studies*, 47(5), 594-612.
- Williams, Aaron. (2016). Noam Chomsky: We owe the rise of Trump to fear and the 'breakdown of society'. *AlterNet*, n.p. <http://www.alternet.org/election-2016/noam-chomsky-we-owe-rise-trump-fear-and-breakdown-society>

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