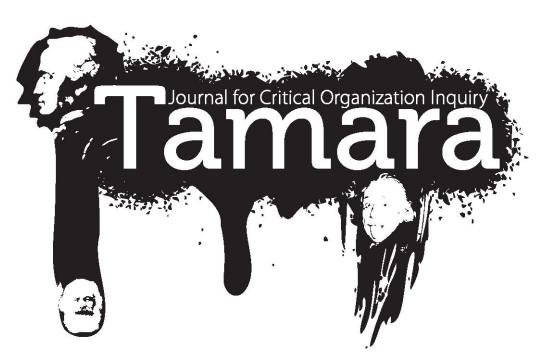
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Ontological Storytelling and Biomediation

Tonya Henderson Wakefield

Colorado Technical University, US wakefieldz@me.com

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Abstract

This paper explores post-humanist assemblage and biomediation through ontological storytelling and antenarrative. It considers material agency via biomediation, examining the use of material devices to prolong and enhance human and animal life. The first ontological story presented is that of a woman and her biomediated dog (titanium knees), running in an urban setting with various material actants in assemblage supporting human health and psychological wellbeing. The second considers the use and efficacy of biomediation to prolong the lives of humans afflicted with renal disease and cancer. The work offers an experiential lens for contemplation of biomediation, assemblage, post-humanism and ethics. Its contribution is an authentic, contextual exploration of Heidegger's (1962) Dasein and a related antenarrative fore-having of metanoia-derived strength. These illustrations support discussion of how material (ontic) and ontological (Being-there) aspects are overlooked or actively suppressed by social constructionism.

Introduction

An ontological story offers a means of analyzing lived experience, materiality, and assemblage by detailing a scene and examining it through the lens of theory. This paper uses the technique to explore material agency through biomediation, examining the use of medical devices to prolong animal mobility and human life. It begins by introducing key concepts from the literature and setting the stage for ontological storytelling. The first story presented is that of a middle-aged woman and her bio-mediated dog (titanium knees), running in an urban setting with the aid of various material actants whose collective effects support human health and psychological wellbeing. The second, more serious exploration, considers the use and efficacy of biomediation to prolong the lives of those afflicted with renal disease and cancer. Some ethical implications of these stories are then considered. Finally I explore the fore-having (Heidegger, 1962) of psychological healing and strength born of metanoia (Grant, 2009). The work applies a lens of existential experience to the contemplation of biomediation, assemblage, and post-humanism. Genuine lived experience (Bakhtin, 1993; Heidegger, 1962) is used to illustrate theoretical concepts.

Assemblage, Biomediation, and Ethics

Assemblage: Assemblages are groups of elements, human and non-human, that exist in relation to one another (Boje, 2010b; Latour, 2005). They "are ad hoc groupings of diverse elements, of vibrant materials of all sorts" (p. 23, Bennett, 2010). Identity as assemblage is one of the building blocks of Zingsheim's (2011) mutational identity theory, wherein an individual's identity is comprised of the combination of the material body and various subjectivities applied by others. Whatmore (2006) suggests humans as something co-fabricated like any other assemblage, shifting the focus to "more—than—human modes of enquiry" (p. 604). For Bennett (2010) "an actant never really acts alone. Its efficacy or agency always depends on the collaboration, cooperation, or interactive interference of many bodies and forces" (p. 21). Latour (2005) suggests two types of sociology, the traditional type that focuses on the social as independent from material realities and one focused on connections between objects and people that make up assemblages, also termed collectives. His collectives are analogous to assemblages (Boje, 2010b; Haraway, 1992, 2008; Latour, 2005) tying together human and nonhuman actors and generating agentic capacity (Bennett, 2010).

Consideration of post-humanist assemblage has ethical implications. Haraway (1992) advocates a new relationship with nature, one that does not involve man trying to dominate it or designate it as "other" (p. 297). Jonas (2012) introduces a post-humanist version of stewardship and considers how the vicious circle (Masuch, 1985) of positive feedback praising our technological progress may entrap us as well. Our rapt attention to technology may undermine our humanity as we lose sight of what human existence means, leading us toward nihilism. This discussion leads to consideration of man as a co-creator of nature, a blurring of the line between artificial and natural and a call for wisdom; not mere knowledge, but the humble, self-aware application of knowledge in acceptance of uncertainty (Jonas, 2012). Man must shift from a position of dominator of nature, toward that of a co-creator of reality, an insider of nature participating in generative intra-action with other actants and actors.

Biomediation: Acceptance of assemblages as subjects draws attention to how we bound the assemblages and systems we study. Many argue for the abolishment of boundaries between human, animal and machine (Bell, 2007; Haraway, 1992, 2008; Myerson, 2001). The biomediated body is conceptualized as an open systems combination of the human body and technology, redrawing the boundary of self to include media and/or material prostheses (Barad, 2007; Haraway, 1992, 2008). This notion is consistent with Barad's (2007) account of Niels Bohr's definition of phenomenon as including not only observed occurrences, but also human actors and experimental apparatuses. She notes the "indeterminacy of bodily boundaries" considering incorporation of an instrument or prosthesis into one's concept of the body (p. 157). For example, a wheelchair comes to be viewed as part of its occupant's body vis a vis her intra-action with the world at large. Clough (2008) describes the biomediated body as a combination of the human body and technology, redrawing the boundary of the self to include media. She defines the biomediated body as "a definition of a body and what it can do – its affect" indicating a "post biological threshold" (pp. 2-4, Clough, 2008). "There is a need to rethink the questions we might ask about bodies and related concepts such as subjectivity, agency, power, technology, the human, the social and matter" (p. 5, Blackman & Featherstone, 2010).

Rethinking these questions raises ethical concerns regarding the social and material aspects of biomediation, particularly as vis a vis genetic engineering and medical care. Genetic engineering may worsen socio-economically derived inequalities in health care, for example, by improving immunity in only the offspring of the rich. Silver (2012) and Sandel (2012) express apprehension that socioeconomic bifurcation from genetic modification might be passed on exclusively to wealthy offspring, potentially giving rise to a separate subspecies of humanity. For some, genetic manipulation points to the eventual emergence of strict hierarchies like those in Aldous Huxley's (1932) Brave New World, wherein one's social standing, function, and possibilities are all a matter of breeding. Despite the long-term effect of further polarizing society, Silver (2012) condones genetic enhancement that builds in immunity to disease, overcomes fertility problems, and grants biological offspring to same sex couples (pp. 311-312). The use of feeding tubes and administration of intravenous fluids to dying patients also give rise to ethical concerns, as these measures both prolong suffering and spare the patient from short-term starvation and dehydration (McGrath & Henderson, 2008). Jonas (2012) takes issue with efforts to expand human life indefinitely, suggesting "the price of extended age must be a proportional slowing of replacement, i.e., a diminished access of new life" (p. 129). Genetic modification combines with efforts to cheat death to create a sense of tension between nature and man.

Lived experience: Central to consideration of such matters is how we honor experience in our efforts to comprehend the world. While social constructivism emphasizes the generative nature of cognition, Bakhtin (1993) rejects this position to emphasize the once-occurrent event of being, "something that is, something that is being actually, inescapably accomplished through me and others... actually experienced, affirmed in an emotional-volitional manner" (p. 13). For him, "cognition constitutes merely a moment in this experiencing-confirming" (p. 13, Bakhtin, 1993). Throop (2003) articulates the role of experience in anthropology, wherein it is defined "in relation to narrative, which is understood to be a distortion of life—as—lived—through" (p. 221, Throop, 2003). Experience as a sequence of occurrences is not the same as "retrospective attribution of meaning tied to the structuring of 'experience' as a particular coherent unit or form" (p. 223, Throop, 2003). For James pure experience is "a non-reflexive, nonverbal, pre-conceptual feeling that grasps the immediate flux of life in terms of its undifferentiated unfolding in the field of sensory immediacy" (p. 229, Throop, 2003). Experience is both unified and disjointed. The lived experience of biomediated assemblage raises ethical concerns aptly illustrated through ontological stories.

Ontological Storytelling

Two ontological stories are used to illustrate the lived experience of a dynamic, post-humanist, biomediated assemblage. In the first case I describe a healthful and supportive assemblage successfully promoting human and canine life. Co-creation of a healthful reality in a post-humanist assemblage (Haraway, 2008) is examined by considering the collaborative agency of a woman, a dog, titanium joints, good running shoes, a jogging path, a leash, and an iPhone. It illustrates the interrelationships between various human and nonhuman elements (Latour, 2005). The second ontological story differs from the first in three ways. First, instead of considering biomediation allowing an injured dog to run, this story considers the use of a dialysis machine and later a chemotherapy port to prolong my parents' lives. These efforts prove unsuccessful on both counts and call into question the lengths we go to trying to prolong the beating of a human heart. Second, this story takes on a deontological perspective, wherein preservation of human life is treated as the supreme good to the exclusion of any other considerations. The first instantiation of this assemblage consists of a woman, a chair, needles, monitors, nurses, a dialysis machine, loved ones, and a blanket. The second consists of a widower, a chair, an IV of potent and dangerous drugs, nurses, a blanket, and a daughter doing doctoral work. Third, this lived experience includes a dualism consisting of astonishment (Bakhtin, 1993) regarding the technological marvels briefly keeping terminal illness at bay, and intense horror derived from the realities of renal and cancer patients' intense suffering. This conflicted knowledge casts biomediation of terminally ill humans as both savior and torturer, creating an ethically perplexing, complex assemblage.

Socially constructed narratives in both cases differ from lived experience. Judgments about the validity of shared human-canine experience, joggers' rights alongside other users of the path, and the worth of a functioning dog knee vary but fail to capture the endorphin rush, the warm sun, and the mental quiet of the experience. In contrast, medical settings are permeated with hopeful narratives- "You will get better" and "You can beat cancer," that deny the true experiences of suffering and death. Amid appreciative superficiality there is a tendency to relegate authentic emotions to the status of shadow content (Boje, 2010a; Fitzgerald, Oliver, & Hoxsey, 2010). Lived experiences of agony and the helplessness of watching it are not allowed expression as we put on a brave face and rely on the decorum of the thy-self (Heidegger, 1962). Whether the authentic self demonstrates too much exuberance or too much pain, it is seldom granted free reign within the context of socially accepted narratives designed to give the appearance that all is under control.

Dynamic Post-human Assemblage: an Illustrative Onto-story

An ontological story (Bennett, 2010) provides a meaningful way to make sense of the dynamic intra-action (Barad, 2007) of human and nonhuman, sentient and non-sentient (Boje, 2011d, Haraway, 1992, 2008). When I run with my dog, we are such an assemblage (D. Boje, 2010; Latour, 1999, 2005). Spot is a cyborg of sorts, a hybrid Dalmatian mongrel with a microchip under the skin of her neck and a titanium knee, replaced at great expense so that she could continue her service as a jogging companion after an injury last year. We move over a hilly urban fitness landscape (double entendre intended), climbing hills local to us, but unable to jump to far heights such as the mountain top that dominates the horizon, without the aid of further bio-mediation in the form of a car to take us to the trail head.

The elements of my mobile assemblage are as follows. Human: One middle-aged woman running to stay healthy; Nonhuman but sentient: One cyborg dog; Non-sentient: Leash, tags and collar to protect the cyborg dog from the city's

animal control authorities and to prevent her from running out in traffic, shoes that bio-mediate less than perfect feet, and my iPhone, which tracks my run via GPS, plays alternative rock, allows me to call for help if I should injure myself, and will allow my spouse to find me if I don't make it home. Such is the assemblage of a woman running in the city parks and along the trails. Strange attractors in the form of robins pull our assemblage off course, as does the occasional addition of a full plastic bag that redirects us to search for a garbage can. We contract in play, expand in attempted bird chasing, and stop to record thoughts using the phone's message recorder, or answer phone calls in motion. We find our peace from the world together and come home hot, tired, and happy. This is our own dynamic, hybrid repetition, self-similar over time but never precisely the same, varying in distance, time, weather, and environment.

This assemblage is generative, its biomediation enabling. The ethical concerns are minimal, as its sole function is the promotion of physical and psychological health and its consequences are not grave in any respect. It is reminiscent of Haraway's (2008) descriptions of agility trials in that the combination of woman and dog expands the boundary of the self to suggest two entangled beings, bonded, moving in unison, with all the space for possibility that she so eloquently describes.

Medical Assemblages: More Onto-stories

An entirely different sort of biomediated assemblage surrounded the deaths of my parents. Instead of a healthful, joyful collective, these assemblages were born of desperation. Entrenched in modern medicine and its dominant narrative of wellness amid the signs of apparent, sometimes unnecessary, suffering. First I offer a glimpse at the lived experience of renal failure and the blessing-curse of the dialysis machine, and then step forward less than two years in time to my father's cancer treatments. These painful ontological stories illustrate a more sinister form of biomediated assemblage, one that raises serious ethical questions.

An agential cut must include the entire phenomenon (Barad, 2007). Dialysis is both miracle and torturer. It was fascinating that one's blood could not only course through one's veins, but also simultaneously loop through a life-giving assemblage of plastic and metal at the same time. It was hard to decide where my mother began and the machine ended, or vice versa. Any consideration of either had to include both. A machine somewhere beeped and the nurse went to check that the person's blood pressure hadn't bottomed out. It was so precarious, this miraculous co-creation of man and nature, linking woman and machine in the most intimate way, her blood coursing through it and through her at the same time-so delicately balanced. For over three years my mother sat for four hours straight, twice a week, tilted back in a hospital arm chair trying to nap to avoid thinking about the experience, trying to hide the fear. Sitting next to her in a straight-backed chair for hours on end, sipping stale coffee that he pretended to like was my father – healthy, strong, perpetually sleep deprived and always worried. His only respite was a run to the sandwich shop – turkey for her and pastrami or roast beef for him.

My mother's assemblage consisted of a hospital recliner, hat and blanket all year round, dialysis port in her left forearm underneath the skin, tubes, oxygen, filtering machine, worried husband, complete with ball cap, stale coffee, newspaper, and Louis L'Amour paperback. Unlike the earlier, healthful assemblage, this one's purpose was not the celebration and sustainment of life. It served only to postpone a much-feared death, to push back the inevitable a few more days, maybe weeks or even months, always with a price as the lived experience became increasingly difficult. It pumped blood through a filter and money through an economic and bureaucratic system. Health insurance, Medicare, hospitals, drug companies, all benefit each day an ailing heart continues to beat, regardless of how the patient suffers. My mother's drug of choice was hope.

My father lost her in 2009, was lucky enough to fall in love again in late 2010, and then became short of breath in December. Asbestos exposure had caught up with him. In March he was diagnosed and the look on the surgeon's face made me crumble to my knees on the carpet in the waiting room. I sobbed, then pulled myself up to standing, willing the surgeon to offer me some shred of hope. No such luck. Soon my father was bio-mediated, the chemotherapy port placed exactly where his deer rifle should have rested. No matter. He died the week of his annual hunting trip.

Sometimes treatment seems like a painful, empty gesture, as if we have to feel as if we are doing something, fighting somehow. Dad's drug of choice was also hope and he readily swallowed the tiny doses offered to him, but treatment brought only sickness, fights with the insurance company, and a heartbreaking summer and fall as the cancer took over. Dad's assemblage consisted of a hospital recliner, hat and blanket all summer long, a port in the left side of his chest under

the skin, IV tubes full of toxic chemicals, oxygen, and a worried daughter, complete with laptop, hot tea, books, and highlighters. This was a self-similar occurrence: same city, same family, same tears, but a different disease.

These stories illustrate a different kind of assemblage and call into question the morality of the lengths we go to in our efforts to cheat death. They bring to mind the troubling dualism of hope and truth for the terminally ill. Is it kinder to smile and pretend recovery is possible or to tell the terrible truth and ultimately lessen the length of suffering?

Ethical Considerations

We can explore these concerns from a deontological, or rule-based ethical perspective. If we consider the preservation of human life as a duty, it follows that we accept the negative consequences of such acts of preservation. "Kant argues that emotions, inclinations, and sentiment (which are subjective) do not play any role when your sole motivation is your duty" (p. 245, Zeuschner, 2001). This perspective may be a part of what leads medical practitioners and family members to put ailing relatives through batteries of painful, inconsequential tests and medical procedures during their final months, desperately clinging to life at any cost. While other factors certainly contribute, not the least of which is a fear of malpractice, examining the role of rule-based ethics in our decision-making under such circumstances may provide some insight into why we choose paths of suffering for our loved ones nearing death. It may also illuminate the kinds of choices that lead a family to replace the knees of a mongrel dog whose ability to run is critical to her owner's healthful assemblage, preventing future occurrences of disease.

In contrast, teleological considerations lead one to explore the ends achieved by such choices. For example, the Buddhist notion that a life free from suffering, *duhka* is to be desired (Zeuschner, 2001), might lead one to restore the dog's ability to experience the joy of running, but eschew painful modes of biomediation that prolong human life when suffering dominates the patient's experience. In the case of the canine, using biomediation to restore function meets a positive, generative end. This end is further strengthened when it is considered in context of the hybrid assemblage including a human being with emotional attachment to the dog and the run. While consequentialism supports great expense to restore canine function, in the case of human medical procedures, it might suggest different decisions. If we look at bio-mediations such as chemotherapy ports and dialysis machines from a consequentialist perspective, it becomes more difficult to argue that their use is a moral imperative. Instead, the choice of assemblage becomes a collective one, wherein families, doctors, and patients weigh continuation of suffering against short-term prolongation of life. Such situations beg the question, "What value do we place on each new day of lived experience, particularly if such experience is devoid of real meaning?"

The Antenarrative

Boje (2011a, 2011c, 2011d) describes antenarrative as a bet concerning future outcomes. He identifies four different kinds of antenarratives: linear (beginning-middle-end, deterministic), cyclical (repeating cycles), rhizomatic (multidirectional possibilities radiating from a temporal starting point), and spiral (carrying forward some aspects of past experience in fractal self-similarity but expanding outward as possibilities increase). Antenarratives are an important way to conceive of organizational and personal possibilities when assessing past events, current status, and future plans. These lived experiences push *Dasein* beyond the ontic experiences of outwardly coping to embrace a transformed authentic self (Heidegger, 1962). Such progression allows one to resume prior healthful assemblages and create new ones in the interest of promoting rhizomatic and spiral antenarrative possibilities (Boje, 2011c, 2011d).

When emerging from personal tragedy, people cope in many different ways. Grant (2009) suggests many people exit from what he calls "the dark night of the soul" with greater strength and resilience. This is my intent. My parents' linear narratives left me behind, the grieving unintended consequence. Diabetes kills. Cancer kills. I know the story, the empty grand narrative of smiling nurses who know it is too late but don't let on, of doctors who won't look you in the eye... Cyclical is not for me; I go to the gym and avoid sugar, my fingers firmly crossed, hoping I haven't breathed in a deadly fiber or two along the way. Rhizomatic possibilities are appealing, but I need direction. I choose the fractal spiral, self-similar in the ways I am like my parents but sufficiently different to forge my own path, which expands outward the more I remove myself temporally from loss. I actively choose my healthful assemblage, eschewing society's hopeful narrative of healing in favor of my own prevention-laden drugs of choice: endorphins, thinking deeply, and dog drool. These and other like elements comprise my dynamic lived assemblage, supporting a flourishing authentic self at the expense of the inauthentic narratives surrounding man's efforts to cheat death through technology (Heidegger, 1962).

Conclusion

This paper uses ontological stories to illustrate positive and negative lived experiences of post-humanist, bio-mediated assemblage while raising serious ethical questions. Chief among these is the role of medical biomediation in promoting life and in prolonging suffering. It calls into question what it means to promote the preservation and extension of life by artificial means, leading to ethical questions about what we should do, what lengths are acceptable, and when we consider such extensions to be more harmful than helpful. Consideration of these matters from a deontological and teleological perspective leads one to explore the effects of biomediation with a view towards Heidegger's (1962) concept of Being. In the end, we must choose between accepting the superficial (ontic) grand narrative that all is under control and the messier lived experiences (ontological) in which control is an absurdity.

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