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## MOVING MATERIALITY: PEOPLE, TOOLS, AND THIS *THING* CALLED DISABILITY

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**ABSTRACT:** This body is wheelchair-bound. Not in the sense of the ableist idiom, but literally: bound to a nine-pound titanium frame through Velcro and ratchet straps ripped from snowboards. This wheelchair is body-bound, bound to the flick of a hip against strapping, pulling through plastic and metal and rubber and gravity and wood, into a tilt onto one wheel. This metal, this flesh, this materiality is bound, too, by rhythm and soundscape: chairs crashing; prodding questions; polite onlookers, silent; the percussive thud of wheels on uneven terrain. It is bound to the gaze of audience and reader and performer and lover. It is bound with the discourses of (dis)ability,

in(ter)dependence, materiality and boundedness. This essay too, is wheelchair-body-bound. It is bound to explorations of previous works on the practices, discourses, and materialities of the wheelchair. It is bound by the authors' personal narratives of living, playing, moving and thinking with, in and through various wheelchairs and other technologies of (im)mobility. It is bound through critical artistic engagement: bound with thinking and, literally, dancing through the ways that flesh-chair-discourse-power bind in the form of a subject, or an articulation, or an assemblage. Finally, this essay is bound through an unabashed and unbounded passion for the exploration of the local, specific, strategic, accidental, and creative ways that one may remake or even re-imagine the bonding of their tools, communities, ideas, bodies, and mobilities.

**KEYWORDS:** Critical disability studies; Material culture; Crip theory; Mobility; Performance-based research; Arts-based research

We begin in silence. Lindsay plants Danielle's oxygen canister in the front-center of the lecture theatre, leaves, and promptly returns pushing Danielle and their wheelchair. Lindsay stops at the canister, places it in a netted sling under the wheelchair, wraps the nasal cannula around Danielle's ears, turns the oxygen on, and walks away, disinterested. She begins to read from a clipboard.

"What disability do you have?" she asks. As though disability lives in and derives from the materiality of a body. As though disability equates to diagnosis. As though disability is betrayed by tools.

Danielle looks around, a grin of mischief growing. They drop to the ground, pull at the oxygen cord that tethers their breath to their wheelchair. Their hand pulls at the transparent tubing, playfully guiding the seemingly disembodied chair into large circles around their expanding and contracting body. Lindsay suddenly notices Danielle. She returns to Danielle, exasperated. She stops the circling wheelchair and lifts a shamed Danielle back into their chair. Lindsay starts walking in circles around Danielle. Danielle watches as the circles become increasingly erratic.

"What disability do you have?" Danielle asks. As though disability equates to diagnosis. As though it is something to possess. Something that one has, like a wheelchair. Or that one can hold, like a pill bottle.

Lindsay keeps circling Danielle, speeding up wildly. Danielle begins throwing pill bottles to her. Lindsay catches the first couple, and slows down to a drowsy trudge. Danielle continues to throw pill bottles: first to, then at, her. Lindsay's speed wavers in fits and starts. She no longer catches the pill bottles. She collapses and huddles into the floor.

To have and to hold, or to hold and then have? Like a thing: disability and its materialities. We hold x-rays, medical charts, and prescriptions to have access to services and basic rights. We

have unequal opportunities to hold a job, a degree, a home, a sense of dignity. These are materialities of disability. To have and to hold, till death do us part?

Lindsay collects herself off of the floor and begins to put on her make up. Danielle wheels over to the corner and begins to collect and assemble their wheelchairs and crutches.

DANIELLE: It happened yesterday, and the day before that. It will happen every day, like some ritualize their makeup or their clothes. Every time I leave my home, I choose between different kinds of mobilities: each at the expense of the other. Every day, I choose between physical mobility, social mobility, and political mobilization.

The choice is as complicated and as simple as this: Do I wheel? Do I walk? Do I crutch? And, dare I move back and forth between these different ways of mobilizing?

## Material Culture

Lindsay pushes Danielle's wheelchair into the center of a lecture theatre. This seems like an easy enough scene to read. Danielle must be disabled. Lindsay must be their able-bodied helper. The wheelchair must be a tool Lindsay can use to help Danielle mobilize *despite* their disability.

Material culture can help us to look deeper into this scene, into design, and importantly, into our own cultural assumptions and understandings (Moser, 2005, 2006; Warnier, 2009; Winance, 2006). Even the most surface material culture reading of this scene enables us to understand the wheelchair as a cultural product, popularized in Europe and North America for use by veterans of the first and second World Wars (Tremblay, 1996; Tremblay, Campbell, & Hudson, 2005). They were initially designed to be pushed from behind, in straight lines, on smooth, flat surfaces: perfect for being pushed by nurses in hospital hallways. The design of the majority of wheelchairs has not changed much since those first prototypes. They are still most functional for ambulators to mobilize the chair user, within institutional settings. Embedded in our material objects, are a whole host of cultural assumptions and understandings regarding disability, mobility, and materiality.

***“Embedded in our material objects, are a whole host of cultural assumptions and understandings regarding disability, mobility, and materiality.”***

One of our points of exploration of this article is how not all tools of disability and mobility come in easily recognized forms. We depend upon countless objects in any given day (such as cars, cell phones, chairs, pills, make-up), and yet we do not usually recognize these objects as tools. Why is Danielle's wheelchair regarded as a tool, and specifically a tool of both disability and mobility? Why, on the other hand, are Lindsay's makeup or pills not read in this way? Lindsay's "tools" offer particular kinds of mobility; they enable Lindsay to dance, to continue studying or working, and to avoid being read as lazy or crazy. Not only are these "tools" not read as tools of disability, they also do not render Lindsay readable as disabled: if anything, they are designed to render her unreadable as such...unless, of course, you come across the bottle of pills.

A second point that we explore is how cultural understandings and artifacts serve to *materialize* disability. What, for example, are the *material effects* of differentiation, diagnosis, and design? We argue, herein, that certain understandings of disability lead to the production of corresponding material effects: material objects (wheelchair, crutches, medications); material alteration of bodies (amputation, involuntary sterilization); and material living conditions (higher rates of unemployment, poverty, and sexual abuse [Council of Canadians with Disabilities, 2007; Hughes & Avoke, 2010; Wisconsin Coalition Against Sexual Assault, 2003]). In other words, cultural understandings of disability materialize in ways that can limit and/or facilitate the physical, social, and political mobility of those whose bodies are deemed disabled.

Throughout this article, we engage with material culture as a flexible, dynamic, and explicitly political lens (Moser, 2005, 2006; Winance, 2006) for broadening and multiplying our understandings of the relationships between people, tools, disability, and mobility. Further, we mobilize MacGregor Wise's (2005) four ways of understanding the relationship between humans and tools, in order to explore how each of these relate to contemporary understandings of, and engagements with, disability and mobility. First, we explore the idea that people and tools are entirely separate and separable, and we read this alongside dominant medical models of disability. Second, we explore the idea that different people use different tools in differing ways within different contexts, and discuss this idea in relation to the social model of disability. Third, we consider how people, tools, ideas, and power can be articulated together into specific kinds of relationships, and we explore how these articulations can be read in relation to cultural models of disability. Finally, we introduce the Deleuzian concept of assemblage (Deleuze & Guattari, 1987; Wise, 2005), and imagine how this might shift our understandings of tools, people, and disability. Our goal, here, is to compel some curiosity about the ways that we, as a culture, perform and design disability in our everyday lives: through our tools, structures, work, communities, understandings, and through their material effects. Our goal is to use the art-research-activism intersections to

explore ways that different kinds of understandings and communities might encourage us, and even move us, to design and practice disability otherwise.

## Process

This article is based on numerous iterations of an arts-based research performance that we developed over two years, performing at conferences on Material Culture and Mobility Studies (Peers & Eales, 2012, 2013). Our intention, in developing these performances, was to center embodied knowledge in our theoretical discussions of disability and tool use. We did this not by using our bodies to explicate or exemplify theories, but rather, to engage iteratively with theories that resonated and pulled at the performance art, dance work, and spoken word we were creating. We created by moving through embodied experiences of disability and madness together, and playfully taking seriously the generative creativity that such experiences enable (Chandler, 2012). Here we follow Celeste Snowber

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(2012) in centering movement-based art as a way of both exploring and creating knowledges that arise from the body. Specifically in relation to disability and madness, we have found creative movement-based research to be fruitful in explicating and integrating embodied disability and Mad experience with theory (Eales & Peers, 2013).

This engagement with the art of living and performing disability together is deeply tied to crip aesthetics, theories, and community practice (Kafer, 2013; Peers, Brittain, & McRuer, 2012): three formations that are deeply entwined in general, and in this article specifically. The term “crip,” refers not to someone who *is* disabled, but rather, to *how* some people *do* disability in ways that, to quote Kelly Fritsch (2013): “both destabilize it as a concept and open up desire for what it disrupts” (intro.). Crip is thus, at its heart, a set of embodied practices or performances.<sup>1</sup> This set of destabilizing and desiring theory-practices are key to the creation of crip community, which is a kind of social formation that “is enacted through mutual motivation or desire to dwell with disability, a desire which is antagonistic to the normative desire to cure or kill disability” (Chandler, 2012, para. 2). Crip community, like this project, is based on desirous practices, destabilizing performances, and creative collaborations.

Arts-based research, we argue, is well-situated to engage with the generativity of crip experiences and communities. It holds exciting potential to not only theorize what such

embody-and-mind-ments disrupt when generatively creating together, but also can act as a disruption itself. Robert McRuer (Peers, Brittain, & McRuer, 2012), for example, describes crip theory as a:

critical cultural practice that has been developed in a lot of queer communities, by artists, activists, and academics, writers of all kinds, poets, painters ... generat[ing] visions of the body and desire and community that are in excess of attempts to contain and manage us. (p. 148-149)

That is, McRuer explicitly argues that the disruptive practices emerging out of art-research-activism combinations are at the heart of crip theorizing.

Thus, we engage herein with the generative tensions between artistic, activist, and research-based knowledge creation as a way of creating and performing crip theory and crip community. We use it as a means of honoring the artistic practices and aesthetics that are employed by crip communities to create and disrupt disability knowledges, to generatively re-imagine and re-make disability, and to share, practice, and perform these knowledges together.

The predicament, however, of creating through deeply embodied, movement-based, arts-based research is how to (re)present it within written academic publications. This article is our attempt to re-perform an iteration of these crip performances on the page. We do so by weaving together art (performance-derived writing, performative writing, images, evocative visual description of these images, and poetry), and academic theorizing about material culture, mobility, and disability. Although, in our creation practice, these elements were deeply intertwined, iteratively influencing each other, we have chosen, here, to represent these sections in different ways on the page: a way to tease apart what each enables alone and in combination. Thus, we have chosen to use a different font for the sections where art does the work of theorizing, including where we use artistic writing to visually describe the images that accompany this article. We encourage you to read for the creative space where these sections meet: what do these – perhaps disjointed – sections do when situated in relation to one another?

White tape marks rectangles on the floor. A blanket to retreat to. An air mattress to take the weight of heavy breath. Two legs from the knees down. Two pill bottles askew. An empty wheelchair in profile. Scattered materials of performance.



*Figure 1.* A panoramic photograph of a stage. Photo credit: Magdalena Olszanowski

## Performing Walking

Danielle stands up out of their chair. They and Lindsay begin walking in opposing figure eights, greeting each other casually each time their paths cross.

To walk is to pass. To become strangely visible, yet at the same time unnoticeable, to passersby. To walk is to be seen as able, to be read as intelligible, to be spoken to as intelligent. Walking is the ultimate tool of social mobility.

Danielle begins to show fatigue, tiredly slumping against a desk when Lindsay walks away from them, and then abruptly standing, when Lindsay walks towards them.

To walk is to choose social mobility over physical mobility. Bipedal ambulation, for some of us, is awkward, tiring, precarious. The only physical mobility that walking offers is that which is taken away from wheelchair users by stairs or curbs or other physical barriers dreamed up by the ever-creative minds of architects and landscapers.

The choice to walk is also to choose social mobility over activist mobilization. It is to choose the perpetuation of dangerous silences over the perpetual political danger of being “outed.” We both know what it is like to pass. We are sometimes read as able, and this passing leaves us with little space to question or disrupt. It leaves little opportunity to make inaccessibility obvious. It leaves little room to mess with onlookers’ expectations. The choice to pass as able

is to forfeit political mobilization, to mobilize socially as able, and to mobilize physically (and sometimes politically) in the most disabling of ways.

## The Tools of Able-bodiedness

What might it mean to think of walking as a form of passing? On one level, passing can be read as a kind of ruse: to pass oneself off as one thing when one is *really* another. In this case, one might imagine that the ruse is that of Danielle passing as “able-bodied” when they are *really* disabled. This assumes, however, that both disability and able-bodiedness exist. What if able-bodiedness, itself, were the ruse? What if all able-bodied people are simply *passing* as able-bodied, for a given moment in time?

These are questions taken up in Robert McRuer’s (2006) groundbreaking text, *Crip Theory: Cultural Signs of Queerness and Disability*. McRuer acknowledges the existence of human diversity, but understands the categories of both disability and able-bodiedness as phenomena that are not naturally occurring in bodies. He argues that able-bodiedness, in particular, is not only culturally produced but compulsively reproduced: hence his in-depth analysis of *compulsory able-bodiedness*.

**“What might it mean to think of walking as a form of passing?”**

McRuer (2006) argues that there is a naturalized assumption that all bodies are, by default, able-bodied, unless proven otherwise. Furthermore, this assumption extends to the imperative that “able-bodied identities, able-bodied perspectives are preferable and what we all, collectively, are aiming for” (p. 9). As such, McRuer argues, we are all constantly performing as though we are able-bodied, that is, seeking to *pass* as subjects who are free from disability, in good health, independent, and able to be (re)productive within contemporary capitalist labor structures. It is precisely this *passing* that makes walking so socially mobilizing for Danielle. Simply through the act of bipedal ambulation, they are assumed to be able-bodied, and they are accepted as a productive, independent, and non-disabled member of their community.

Like Danielle, however, most of us (if not all of us) fail miserably at our performances of able-bodiedness. Many of those reading this article, for example, likely identify themselves as able-bodied. Yet, how many of you have recently sprained an ankle, favored an old injury, or woken up with stiff or sore muscles? Who among you “depend” on glasses or contact lenses or insulin or other medications to navigate your world? Who among you cannot run a 10 km route, or perform a couple of dozen chin-ups, or hear in perfect pitch, or discern between the smells of three different vintages of a Merlot? Who among you,

honestly, can perform able-bodiedness even somewhat adequately, day in and day out? And yet, many of you still *pass* as able-bodied: you identify as such, you are assumed to be such, and your social mobility (that is, your capacity to navigate social relationships and expectations without consistently being excluded, singled out, or marginalized) depends on you being recognized as such.

To this end, McRuer re-works Judith Butler's (1990) "gender trouble" into the concept "ability trouble," meaning "not the so-called problem of disability but the inevitable impossibility, even as it is made compulsory, of an able-bodied identity" (p. 10). Amidst this constant ability trouble, how can so many of us obviously failed able-bodies *pass*? McRuer (2006) argues that disability is produced for this exact purpose: to be the "obvious" and "naturalized" failed other against which we can judge our own failed performances as passably able-bodied, and furthermore, against which we can see our bodies and subjectivities as more normal, desirable, and socially preferable. As McRuer argues, "A system of compulsory able-bodiedness repeatedly demands that people with disabilities embody for others an affirmative answer to the unspoken question, 'Yes, but in the end, wouldn't you rather be more like me?'" (p. 10).

Importantly, McRuer (2006) understands compulsory able-bodiedness as inextricably linked to, and mutually constitutive of, other contemporary structures of oppression and subjugation, such as compulsory heterosexuality, white supremacy, imperialism, and neo-liberal globalized capitalism. It is not so much that these examples can find parallels in other forms of oppression, but rather, McRuer is interested in how the performance of compulsory able-bodiedness is often structurally supportive of, if not absolutely intertwined with, performances of gender normativity, misogyny, heteronormativity, and whiteness.

Returning to the question that began this section: what might it mean to think of walking as a form of passing, rather than a natural act? Might this way of thinking allow us to recognize the tools, or props, of "passing" in much the same way as we might recognize the tools that come to signify disability? How might such a lens shift our ways of understanding cars, coffee, muscle shirts, contact lenses, exercise facilities, energy drinks, bikes, high-heeled shoes, yoga lofts, nicotine, cell phones, rollerblades, team jerseys, dance studios (up a flight of stairs no less...), and crutches? Compulsory able-bodiedness, we argue, is designed into (and reproduced through) a whole variety of cultural materialities, including the tools of disability and able-bodiedness. We argue that able-bodiedness and disability are both reproduced by the stories that we have about different *kinds* of tools, and the relationships we imagine that different *kinds* of people might have to them.

## Performing Crutching

Danielle grabs their forearm crutches and begins crutching in figure eights. Lindsay walks in opposing figure eights.

DANIELLE: To crutch is to puzzle all onlookers. Crutches beg questions, and people feel comfortable asking them.

Lindsay inquisitively greets Danielle with questions each time their paths cross.

LINDSAY: What happened? What's wrong?

DANIELLE: They are not coding me as disabled, but injured. These questions lead to more choices. Choice #1: lie. I twisted my ankle/ tore my ligament/ caught my foot in a blender. There will be laughter, a sharing of stories, and a questioning of when I will be better. Lies are social Vaseline, until you show up next week in a wheelchair.

LINDSAY: What did you do to yourself?

DANIELLE: Choice #2: explain that I have this disease. The result: social awkwardness, apologies, even tears, often silence. Disease is able-speak for death.

LINDSAY: I didn't mean to...

DANIELLE: . . .they often reply, followed by silence. I used to fill the awkward gaps, now I just wonder how the sentence was meant to end...

LINDSAY: I didn't mean to remind you...I didn't mean to bring up the unspeakable...I didn't mean to break the silence, if I had known I would have just looked away.

DANIELLE: To crutch is to puzzle, is to beg questions, is to constantly be choosing. There is physical mobility in crutching. They enable with stairs, longer stands, short strolls. The social

mobility is awkward, at best. But where there are questions there are opportunities for political mobilization. To crutch is to constantly choose between the social mobility of a lie, and the activist potential of the pregnant pause.

### Person/Tool Divide, Able-bodied/Disability Divide

Deleuzian scholar MacGregor Wise (2005) argues that human-technology relationships (and therefore humans and technology themselves) have tended to be theorized in one of three ways. “The most common formulation,” he argues, “posits the human and the technological as specific things that are completely different and that could act on one another” (p. 81). One could argue that the tools of able-bodiedness, through this common lens, are understood as separate and separable from able-bodied humans: we sit on a chair, or we use a chair to climb up on, but we do not understand ourselves as confined by, defined through, or dependent upon this chair.

Wise goes on to argue, however, that “those who hold this view, then, get rather uneasy when technologies and human beings begin to merge” (2005, p. 81). Tools of disability, as opposed to tools of able-bodiedness, seem to create this uneasiness of a technology merging with humanity. As opposed to sitting on a chair, or using it to stand on, a person is perceived to be *confined* to a wheelchair, or at best, sitting *in* one. The wheelchair seemingly traps a human body within a technological cage of (im)mobility. It seemingly melds with, and defines, the person. This may explain the liminality of the crutch user: on the one hand, seemingly dependent on the tool, and at the same time, not yet merged with technology. The crutch is discardable; it is temporary; it is seemingly separate and separable.

The able-bodied/disability divide is reified by this perceived human-technology divide (or the lack thereof): Those appropriately performing able-bodiedness *comfortably use* technology, and those who fail to perform able-bodiedness (the disabled) *are uncomfortably dependent* upon technology. They are dependent upon technology in order to approximate, or to be read as attempting to approximate, able-bodied ideals.

This view of tool dependence fits with dominant medical models of disability (Linton, 1998; Snyder & Mitchell, 2006). Medical perspectives read any unwillingness or inability to perform able-bodiedness as a problem stemming from a lack in the mind or body of an individual (as opposed to the violence and impossibility of compulsory abled-bodiedness or the desire of an individual to politically resist this compulsion). Within the medical model of disability, tools are designed to compensate for, and are the necessary solution to, this bodily lack.

This way of understanding human-technology-disability relationships materializes in the disability tools that are designed by medical experts for us. For example, the Everest and Jennings wheelchair (Tremblay, 1996) is a one-size-fits-all technology designed for an able-bodied caregiver to mobilize a problematic body lacking ambulation capacities. The Everest and Jennings wheelchair therefore, is designed as a tool of physical mobility, with little regard for the social and political mobilization it may produce or restrict.

### People/Tools/Disability in Context

The second formulation of human-technology relationships that Wise (2005) offers is a contextual reading: “[t]echnologies are not separate from their context, and nor are human beings. We cannot, then, consider a technology in isolation; it is always in use in context somewhere” (p. 82). It is relatively easy to understand the tools of able-bodiedness, such as eyewear, in this contextual sense. Danielle’s father uses one cheap pair of glasses only for reading. Lindsay’s grandmother has a dozen expensive pairs matched to each favorite outfit. Our friend opts for contact lenses during sports, and wears the same thick-rimmed glasses the rest of the time. Different people use different tools in different ways for different local and specific contexts.

It is much harder, we argue, for most people to imagine that one might substitute between different wheelchairs, or amongst wheelchairs and crutches, for similarly personal and contextual reasons as with eye wear. Danielle often chooses between their tools, for example, to get the most functional physical mobility for specific contexts (required speed, longevity in the chair, and topography of terrain). In other contexts, Danielle chooses their tools with social or political mobility in mind, including the social mobility afforded by dressing well (which tool goes best with which tie?).

This contextual reading of disability tools dovetails well with social models of disability (Charlton, 1998; Oliver, 1990). Whereas medical models construct the “problem” of disability as being in people’s bodies, social models construct the problem of disability as embedded in specific social contexts: such as the architecture, attitudes, and policies that marginalize and/or exclude those with non-normate physical, intellectual, or sensory capacities (non-problematic differences called *impairments*) (Oliver, 1990). The solutions to disability, within this model, must emerge from those who have experienced these specific disabling contexts: an idea best epitomized by the disability movement motto “nothing about us without us” (Charlton, 1998).

Designing from both the contextual and social models, we argue, is significantly different than designing from medical models of bodily lack and dependence. Social-contextual models demand that we design *by* or *with*, rather than *for*, disabled<sup>2</sup> people. They

demand that we design tools not (only) with the physical mobility of impaired bodies in mind, but also with a keen sense of the specific and changing disabling physical and social contexts that the chair-user might encounter.

This difference becomes evident if we contrast the Everest and Jennings wheelchair (discussed above), with the Elevation wheelchair (PDG Mobility, 2017a). The Elevation is a lightweight, adjustable, ergonomic, manual wheelchair, designed by wheelchair users for self-propulsion in a variety of different settings. It also has the added feature of enabling the user to stand themselves up within their chair. The chair is designed with both impairment and social disablement in mind. A PowerPoint presentation on PDG Mobility's website (2017b) claims that the Elevation wheelchair may reduce pressure sores, increase cardiovascular function, and reduce over-use injuries (impairment), as well as increasing independence by helping users to, for example, reach high shelves and socialize with people at a more eye-to-eye level (disability). Whereas the Everest and Jennings is functional for physical mobilization within very limited contexts, the Elevation offers more highly contextualized physical mobility (designed for speed on smooth sidewalks yet comfort for rough terrain and "curb-hopping;" option of sitting low for easier wheeling or sitting high for reaching tall shelves). The Elevation is also designed for greater social mobility. It enables wheelchair users to engage with seemingly able-bodied people in more normative and socially expected ways (i.e. looking them eye-to-eye, or "standing" to face to an ambulating partner, as depicted in the PowerPoint presentation).

Contextually-designed tools, such as the Elevation, seem to offer greater physical and social mobility, but do they also offer greater political mobility? One could argue that they do: that they enable chair-users to venture out into more spaces in the community, which may in turn draw attention to issues of inaccessibility. The greater physical mobility offered by these tools may also help to challenge stereotypes of inability. This distancing from inability, however, may also be the root of their political downfall.

It is generally the responsibility of each individual wheelchair user to acquire,<sup>3</sup> adapt, use, and mobilize their tools in order to "overcome" the disabling, inaccessible structures and attitudes of society. In typical neo-liberal fashion (McRuer, 2006), an increasing variety of tools enable each individual to be a good consumer (buying lots of equipment), to be a more productive citizen (more able to work and live independently), and to increasingly (and compulsively) approximate the movements and capacities of able-bodiedness. Society (and its disabling political structures) need not change.

## Performing Wheeling

Danielle transfers to their wheelchair and adeptly wheels in figure eights. Lindsay walks in opposing figure eights, awkwardly staring sometimes at, and sometimes away from, Danielle each time they pass each other.

DANIELLE: To wheel is to beg pity. It means a day filled with stares: staring at me, staring at the chair, and my personal favorite, staring away. There is nothing like a wheelchair to make people realize how interesting their shoe has become. They will stare for hours, at or away, but they will not speak (at least not to you). They will speak to their child...

Lindsay clumsily evades Danielle and addresses random members of the audience

LINDSAY: Don't stare!

DANIELLE: They will speak to my girlfriend...

LINDSAY: Are you her attendant?

DANIELLE: They will speak to my friends ...

LINDSAY: Can she get on the plane by herself?

DANIELLE: They will generally not ask what happened. Questions are for crutchers. Wheelchair is able-speak for (worse than) death. I remember my grandma always telling me...

LINDSAY: Wear your seatbelt or you will end up dead...or worse, in a wheelchair!

DANIELLE: To wheel is to be able to "walk" for miles, to carry heavy things like my oxygen tank, to hold my lover's hand, and to dance. It is the extreme of physical mobility for me. But wheeling means choosing the snowless routes, the stairless restaurants, and the thickest of skins. This physical mobility comes at a price: the surrendering of social mobility and the

hindering of political mobilization. There are no questions to queer: the wheels convict me as crippled.

## Articulated Relationships

A third way to understand human-technology relationships, argues Wise (2005), is articulation: “the idea that different elements can be connected (articulated) or disconnected in order to create unities or identities” (p. 83). These different elements can include a wide variety of tools, bodies, discourses, and practices, and importantly, these articulations are constantly shifting and changing.

This perspective has already informed some material culture research on disability tools (Moser, 2005, 2006; Warnier, 2009; Winance, 2006). As Warnier (2009) argues, articulation allows us to understand subjectivity differently: “a subject may be a subject-with-his-embodied-fountain-pen writing an article, or a subject-cum-Boeing 707 in the action of piloting” (p. 465). In this model, technology (such as a pen or wheelchair) is always already an articulation, as is every human.

Power is central to this theory of articulation in two ways. First, Wise (2005) argues, “To articulate, to make or break connections between objects, between ideas, between objects and ideas, takes power” (p. 83). For example, to add an ergonomic backrest to the Danielle-pushing-own-wheelchair articulation, Danielle must navigate and negotiate with a wide range of gatekeepers: doctors, occupational therapists, local service providers, provincial and private insurance agents, as well as navigating all of the policies, procedures, discourses, and budgets that govern each of these gatekeepers.

Second, “power designates certain of these articulations as dominant and others as subordinate” (Slack, as quoted in Wise, 2005, p. 83). As demonstrated in the performance pieces thus far, the Danielle-awkwardly-walking articulation creates greater social mobility because it most closely approximates compulsory able-bodiedness. This articulation is privileged over Danielle-crutching-read-as-injured, and certainly over Danielle-wheeling-read-as-disabled, because the walking articulation meshes most easily with dominant discourses of independence, with pervasive architectural structures, and with normative expectations of ability and productivity.

The articulation model corresponds well with cultural models of disability (McRuer, 2006; Snyder & Mitchell, 2006). Cultural models regard disability, impairment, and able-bodiedness all as socially and politically constructed through discourses, materialities, and relations of power. Cultural models consider each of these categories, and the subjects they categorize, as always already articulations.

In this way, the articulation model, and the cultural models of disability, provides a lens through which to mount important political critiques, and to challenge existing disabling articulations (such as compulsory able-bodiedness). These models offer new ways of distinguishing between different forms of mobility, and of recognizing the trade-offs and consequences for each. These models enable us to collapse the distinctions between the human and non-human, the tools of able-bodiedness and the tools of disability, and thus potentially the distinction between able-bodiedness and disability itself. Cultural and articulation models can help us understand how disability and able-bodiedness are designed into, and through, our material worlds. However, it is unclear how this model of articulation can help us to design disability otherwise. Critique is incredibly politically useful, but is that all we have?

### **Assembling Disability Otherwise**

Wise (2005) argues that Deleuze and Guattari's concept of assemblage can be used first, to expand on the articulation model, and second, to move from political critique to explorations of agency.

First, for Wise, "assemblages are not just things, practices and signs articulated into a formation, but also qualities, affects, speeds and densities" (2005, p. 84). Our understanding of the Danielle-wheelchair-backrest formation, or the Lindsay-pill-(almost)-passing formation, can be infinitely and creatively expanded by considering even just the two qualities of speed and density, the qualities: of a spinning wheel, of a swaying limp, of a lazy day, of a manic thought, of a heavy emotion, of a scribbled word, of a labored breath. Disability comes to be recognizable in Danielle and Lindsay only when these forms and qualities of movement mobilize with, across, and against the standardized vectors and temporal structures of: a term; an allotment for a test; a rhythmic bipedal gait; a flashing white man at a cross-walk; the cadence of normate conversation. The imposition of normative structures of time and movement upon formations with alternative cadences and mobilities can easily return us to questions of power and subjugation, but Deleuze and Guattari (1987), and therefore Wise, take this in another direction entirely.

Wise goes on to argue: "assemblages work through flows of agency rather than specific practices of power" (2005, p. 84). So, while the concept of articulation leads us, importantly, to recognize and critique the ways that power creates and subjugates Danielle-wheelchair-backrest or Lindsay-pill-(almost)-passing, Deleuze and Guattari turn our attention to "what the assemblage does: how it shapes space, transforms behavior... bothers, emotes" (Wise 2005, p. 84). It unpacks how the backrest entering the assemblage, for example, evokes shifts in: speed and agility; ease and length of breath; discomfort of

onlookers; bubbles of isolation that form, grow, and retract; fears about being read as more disabled; disability identity; imaginative and creative capacity; compulsions of able-bodiedness; pleasures and perversions; relationships and points of connection; center of gravity; sense of self; sense of other(ness).

In other words, Deleuze and Guattari (1987) understand an assemblage neither by what it is (the specifics of the human or tool), nor by what is done to it (power relationships), but rather, by what it *does* (e.g., the ways it mobilizes, materializes, imagines, connects, and creates). What is crucial is that Deleuze and Guattari do not judge an assemblage by its approximation to a norm or an ideal of doing (e.g., how *well* can you ambulate?). On the contrary, an assemblage is understood through how it might move, act, feel, breathe, imagine, create, relate, assemble, disassemble, reassemble, explore, and desire *otherwise* (e.g., how might we move outside of bipedal ambulation, and what might that movement do?).

Danielle transfers, assembling with/as a sleek titanium basketball wheelchair. Ratchet straps disassembled from snowboards pull thigh into rock hard cushion, tighter, and tighter still. With a flick of a wrist on angled wheel the assemblage spins with impossible speed and ease. A leather ball pinned against the bottom of the wheel, pulls ball around and up against gravity, to the wheel's apex. The ball bounces behind and around, as though on a string. The assemblage spins on a dime, and pulls hip through ratchet strap through plastic and metal and rubber and gravity and wood, into a tilt onto one wheel... and floats.

**“How might the assemblage enable us to re-imagine design?”**

How might the assemblage enable us to re-imagine design? We propose Danielle's basketball wheelchair as a prime example. Wheelchair basketball emerged from the same Western post-war cultural context as the Everest and Jennings wheelchair (Strohkendl, 1996). It began as a modified version of the ambulatory game, played in standard hospital-issue wheelchairs such as the Everest and Jennings. Yet, over time, the assemblage that was the wheelchair basketball community, the logics of competitive sport, the discourses of disability, and the particular movement patterns and qualities of the athletes shifted the sport, its strategic and aesthetic patterns and vectors, and the materiality of the sporting equipment. What emerged from this assemblage was not equipment designed to emulate the vertical jump, the lateral defensive movement, and the squeaky-shoed, contact-shirking, face-to-face experience of ambulatory basketball. Rather, the assemblage re-imagined and designed equipment and sport that moved entirely otherwise: the diagonal vectors of a ratchet-on-hip-pulled tilt; the curved

trajectory of a cambered wheel backed in upon an opponent; the acceleration of a spin and the jarring stop of crashing metallic bumper on bumper; the smells of burning rubber, the sounds of crashing metal, and the sting of worn down hands. This assemblage designs and *does* qualities of movement, sensations and affects in ways that cannot be entirely explained by the political compulsion towards normativity. These movements and affects and materialities have emerged out of the sheer creative possibility of this assemblage: after all, that is what assemblages can *do*.

Danielle carves tracks into the carpeted floor: spirals, parallels, stops. Danielle's hand-becoming-wheel-becoming-hand reaches for forearm crutches, and then moves to hand-becoming-crutch-becoming-Lindsay's-hand as the crutches change possession to lengthen Lindsay's arms by three feet. Lindsay pushes down into the crutches, becoming a bridge. Danielle weaves and ducks, cutting figure eights around the arm-turned-crutches and legs of Lindsay. Light glints off beads of sweat dripping down the black metallic coating of armed-crutches. Danielle pauses under the Lindsay bridge, which slowly collapses. The rubber wheels take all of their combined weight, moving with deep squeaks and slowed determination. Danielle-folded-over-knees-in-wheelchair presses up against Lindsay's-back-with-crutch-arms-extended. Supported, Lindsay hangs in the air, floats.

This weightlessness pushes air from both Danielle's wheels and lungs.

Lindsay rolls off of Danielle's back-and-chair, crutch arms slicing the air in a curving arch above their heads. Danielle melts from chair to the ground, expanding onto one side, stretching into an inflated air mattress in the center of the lecture theatre floor. The chair continues on without them, spiraling backwards with renewed lightness and diminishing momentum, unknown destination. Lindsay rolls to kneeling behind Danielle-on-mat, palms them with one hand on either side and wraps her fingers to lace between Danielle's ribs. Lindsay and Danielle meld into a collective breathing sculpture, collectively directing time through inhalation. Palms squeezing exhalation to an audible wheeze from Danielle's lips. The audience fuses with this breathing assemblage, casting heat, warmth, and silence over this intimate scene, painting Lindsay and Danielle's cheeks with a faint blush.



Figure 2: Danielle and Lindsay share an intimate look as they dance. Photo credit: Marc J. Chalifoux.

The stage is awash in purple light.

Danielle, in a polka-dot collared shirt, tilts up on one wheel and leans in with their weight balanced on Lindsay's hip.

Lindsay, in a blue flower dress and leggings, leans in as well, in dynamic supportive connection.

Getting into this tilt and balancing there is a collaborative act of sharing not only weight, but vector, speed, tension, and affect.

### Performing Otherness Otherwise

Danielle and Lindsay move in opposing figure eights, greeting each other warmly, eyes connecting intently.

DANIELLE: It was yesterday, or the day before that. Perhaps it will be today, or the day after that. It will start like everyday, like some ritualize their makeup or their clothes. I will decide between passing, puzzling, or pitying. I will choose, in each sacrificial moment, between my mobilities. I will choose my battles, and I will choose to choose.

Lindsay and Danielle stop, facing each other, looking at each other intently.

LINDSAY: Because you never know which day someone will surprise you.

Lindsay places a foot onto the footplate of Danielle's wheelchair. Danielle palms the small of Lindsay's back, drawing all of Lindsay's weight up onto the front of the chair. Their eyes lock.

LINDSAY: They will choose to ask the hard questions, to witness the hard answers, and to play across the borders of otherness.

Lindsay places her other foot on top of Danielle's wheel. The wheel turns with Lindsay's weight, lowering her onto Danielle's lap. We wrap ourselves around each other, passionately and intimately.

LINDSAY: And in the eclipsed moment of that mutual choosing, that intimate becoming, the structures of immobility and disability collapse into a certain kind of freedom.

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## NOTES

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<sup>1</sup> Importantly, similar terminology and concepts of generativity and desirability have emerged around Madness, Neurodivergence, and have long been embraced in Deaf communities (Gannon, 2011; McWade, Milton, & Beresford, 2015).

<sup>2</sup> “Disabled” is used, here, in a social model sense: it refers to people with impairments who have been disabled by their social contexts (Oliver, 1990).

<sup>3</sup> Most insurance and health care funding sources have stringent restrictions on which types of wheelchairs can be ordered by which types of bodies. “Specialized” wheelchairs, such as the Elevation, would not be financially accessible to most wheelchair users.