Six Ways of Looking at Fractal Mechanics

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Abstract

In this creative nonfiction essay, I traverse through permutations of “fractal mechanics” as a means of processing experiences of oppression and imagining revolutionary futures. I introduce fractal mechanics as a method for thinking through how “the institution,” broadly understood, travels and transmutes from physical structure localized in place to a set of internalized rule sets that bind themselves to transinstitutionalized “host bodies”—a NeoLiberation. Through a series of vignettes illustrating violent experiences of “inclusion,” I explore how the institution is reproduced in neoliberal constructions of inclusion, liberation, and justice. I then integrate critiques of liberation within neoliberal frames with crip imaginings of justice-in-relation to explicate how fractal mechanics can be understood not only as a method of oppression but also a method for revolution. I close with a series of imaginaries that encourage us to prefigure, or dream, a fractal politic of intercommunal connection.

Keywords

critical disability studies, crip technoscience, disability justice, neoliberalism, inclusionism

Introduction

In this creative non-fiction essay, I evoke the fractal (refer to Figure 1) as a tool for thinking through the interrelation of oppression and liberation as experienced by bodies living through moments of social transformation-in-process. I build on the tradition of crip technoscience (Hamraie and Fritsch 2019), which explores the

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interstices of disabled ontology and technology as sites for understanding and reimagining sociotechnical systems and relations. Activist scholar Adrienne Maree Brown has also used fractals to describe the nested and interconnected nature of social movements—“*what we practice at the small scale sets the patterns for the whole system*” (2017, 41, emphasis original). This project seeks to name invisibilized mechanics of social relations between disabled people and neoliberal systems of inclusion,¹ after Sara Ahmed’s (2012) phenomenological practice of the description of systems. In so doing, I hope to provide a means to “learn *how not to produce what we inherit*” (Ahmed 2012, 173, emphasis original).

In the spirit of Alison Kafer’s (2019) “Crip Kin, Manifesting,” which explores the fraught relationships between disabled bodies and the technologies that simultaneously complicate and support their life, the fractal is imagined both as a mechanic of oppressive relations and reimagined as a mechanic for liberative relations. Though I begin by demonstrating the fractal nature of oppressive systems, I follow with fractal mechanics for manifesting crip kinships. Here, Karen Barad’s (2007) deployment of diffraction is a useful frame for understanding such dialectical entanglements, both those that obfuscate and illuminate multiplicities. Correspondingly, this description of fractal mechanics is a means of understanding “the feeling of coming up against the same thing, *wherever you come up against it*” (Ahmed 2012, 175, emphasis original), in both the sense of entrapment and collective liberation.

First, I describe a series of violent experiences in the name of inclusion. Later, I will illustrate how this violence is produced when attempting to force justice into capitalist formations. In the section that follows, I describe how the mathematical form of fractals, particularly their mechanisms of recursion and seeding, can be deployed as a technoscientific lens for understanding the connections between overt and subtle forms of disability deprivation and their cultural virality. I then crip this technoscience, in the sense of Hamraie and Fritsch (2019), by imagining these same mechanisms in service of community-building and revolution-making. Finally, I explore the application of radical implantation and fractal mechanics to the project of crippling relations, community, and futurity.

Figure 1: A slope-Newton fractal in blues, purples, and pinks. The fractal set can be described as recursively interlinked chaining triads. Image created by author with Ultra Fractal 6.03.

Ground Truth

In computer science and mathematics, “ground truth” refers to data collected via direct observation. It is used as a very literal “reality check.” A variable in the collected data can be emptied and a prediction model can be applied to regenerate the emptied set from other variables. If the results of this prediction and the ground truth are the same, then the predictive model may function in other datasets for which no direct observation data exists. The following experiences represent ground truth data collected from direct experiences. I draw upon the work of other disability studies scholars, social commentators, and activists to identify the sociocultural mechanisms at play that allow us to generalize the experiences of these vignettes to other contexts.

It is self-evident to me, as an Autistic person, one who has a family history of involuntary institutionalization, the ways in which institutional power survives the dissolution of its physicality. It is self-evident to me, as a critic of behaviorism, the ways in which the institution can be built into a community, reified in endless permutations, and even programmed into individual bodyminds. But it is not enough to tell you a story that shows that it is happening; I must also explain the underlying mechanics, the metaphysics of Transinstitutional Recursion.

Epistemic exploitation is a phenomenon that occurs when someone from a marginalized position is coerced into educating their oppressor about the nature of their oppression in order to prove to actors across hegemonical difference that their experiences are real, that they matter, and that the audience they are explaining themselves to are culpable (Berenstain 2016). Epistemic exploitation

“masquerades as a necessary and even epistemically virtuous form of intellectual engagement” (Berenstein 2016, 517). This exploitation is a form of labor, one which devastates the energy of the already oppressed for the benefit of the privileged’s personal growth, or merely their satisfaction.

To demonstrate how the dynamics of institutional power, coercion, control, and surveillance maintain their efficacy beyond walls, fences, glass, bars, and within even and especially self-proclaimed progressive programs, we begin our investigation of the mechanics of transinstitutionalization with an exercise in Epistemic Self-Exploitation. I submit myself to this violation out of a desire to build community through vulnerability.

Vignettes of Violence

Vignette 1: The young women stand by their posters in the gallery. They are situated between a poster on the legacy of the sheltered workshop and the resistance of the disability community to one side and, on the other, a poster by undergraduate special education students about barriers to service access for “Adults with ASD².” Their own posters are of themselves. Their portraits, smiling. Their bullet points, describing. Their futures, absent. They stand, uncannily still, eyes deflected—on display. They have been *included*. They know, now that they are here, that they are here to be observed—not to be witnessed.

Vignette 2: He enters the auditorium. His body, familiarly unruly, comfortingly uncanny. I am entangled with cables, cursing the projector blustering about absent conference IT staff. His access needs are well known. His AAC³ is not a surprise. But the conference would not provide tech support, and he has been *included*. Equity is not justice.

Vignette 3: We begin our panel. A strategic, calculated, and artful assault on the state of special education and education technology. We neuroqueer cripp critics, masterful if uncanny orators, stand opposite a rookery of nonplussed vultures—special educators and their brood, here to observe autism “in the wild.” Our own people, our crip people, absent. We have been *included*.

Vignette 4: We sit in the back of the ballroom. We pass notes like cheeky school children. We are in Autistic Space. Noises spill from his sinuses, filling the rafters on opalescent waves—sonorous, sublime. “Shhh,” they turn their vulture necks. Craning to see. Who dares to (neuro)queer this crip time? No Tourette’s, no unruly bodies. They only want us here if we can be quiet. Apparently, we are not *includable*.

Outro

Nestled between the lines in these vignettes— these vaudevillian vicissitudes— sleeps an uncomfortable truth. The neoliberal machine has come for inclusion.

Always watching, surveilling, assaying—neoliberalism snatches up our resistances. Categorized, analyzed, defined, discretized. Labeled. Branded. Repackaged. Capitalized.

A radical movement becomes a social movement. A social movement becomes a policy. A policy becomes a program. A program becomes an industry.

“We will be inclusive,” You say. “We will be welcoming,” You say. “We will empower you,” You say. I say, “Who is We?”

Inclusion has a flaw, you see. One that Neoliberalism has found easy to exploit. A software vulnerability, or perhaps a feature. Inclusion, unfortunately, does not necessitate the abdication of power. You offer me a seat. But it is still your table.

We are empowered to conform. We are welcomed to be observed. We are liberated into a NeoliberalLiberation.

Thanks. I hate it.

These vignettes and this petulant ode are drawn and quartered from my own experiences of inclusionism and exploitation in kairotic⁴ conference spaces. There is much here that demands explanation. Or rather there is much here that has had explanation demanded of it. Of me. I invite you to resist desires for the normative logics of linear exposition. Neuroqueer rhetoric meanders, enfolds, recurs (Yergeau 2017; Rodas 2018)—follow and flow with the echoes, ricochets, hyperconnections, and perseverations.

Fractal Mechanics: Iteration, Permutation, Transformation

To process these experiences, crystalize these arguments, and illustrate new possibilities, I deploy metaphors from computer science and mathematics as a permutation of crip technoscience. The theory and practice of crip technoscience imagines disabled people as sites of “possibility, adaptation, and creative reflection” (Hamraie and Fritsch 2019, 1) and refuses “to treat access as an issue of technical compliance or rehabilitation” (Nelson, Shew, and Stevens 2019, 22). Crip technoscience is informed by cripistemologies—a fluid network of understandings of disability that are driven not only by a lived experience of disablement but also

a resistant interpretation of that embodied relationship to society (Johnson and McRuer 2014). In the spirit of crip technoscience, I define a collection of fractal mechanics that describe the continuous reshaping of social movements—namely, neoliberalism, disability justice, and prefigurative politics. Finally, I explore the application of radical implantation and fractal mechanics to the project of crippling relations toward communal revolution.

Fractals are structures of recursion built of latticed repetitions of microstructures that intrinsically shape their superstructures. They are infinitely expansive and infinitely contractive. Turtles all the way down, in all dimensions. Fractals are studied in mathematics, art, and computer science; fractals occur in nature; and I argue fractals occur in communal thought and action. The institution is a fractal structure. A core structure is reproduced in infinite permutations such that you can remove the person from the institution, but the institution may be built into the community, into the people, into the person. Institutions all the way down, in all dimensions. Transinstitutionalization (Haley 2017; Morrissey and Goldman 1986) is what happens when we think we have dismantled the institution because we have moved locations, but the fractal, the structure of coercive and containing power, remains intact and recurs.

The elision of this process is aided in part by a cultural pursuit of utopic (eugenic) futurity. Kafer (2013) discusses how the political centrality of the child—always already white, cisheteronormative, and able-bodied—serves to seed a pattern of “endless deferral” (29) for which attention and accountability to the here and now are sacrificed at the altar of better, smarter, stronger, more resilient, healthier, ablebodeminded futures. Futurity drives prenatal screening, selective abortion, sterilization, institutionalization, detection, early intervention, cure, surgical normalization, behavior modification, and so on. The institution is a site of deviant collection, correction, and erasure. A fractal structure, the tasks of collection and correction can be trans-planted (seeded) in other structures, systems, and individual bodies. This seeding, this transinstitutionalization, occurs because futurity has arrested the popular imagination and foreclosed the possibility of a disabled, cripqueer future.

The Foucauldian concept of “perverse implantation” (Foucault 1978) allows us to theorize how constructed categories are manifested, implanted, seeded, within bodies as the will-to-knowledge generates definitions and categorizations of embodied experiences (Princep 2012)—sexualities, genders, races, disabilities, and so on. The intellectual, statistical, and eugenic pursuit of a norm in the modern era has seeded complex assemblages of normality and deviance-defect-divergence within every body (living and dead, past present and future) as it comes into contact with categorical knowledges (Tremain 2017, 59–64). In fractals, the seed contains the pattern which is repeated in recursive multi-dimensional complexity. Therefore, seeding is both the mechanism by which

fractals (such as the institution) are implanted within systems (structures, organizations, and bodies) as well as the mechanism by which a fractal structure can be edited—recursively, in all dimensions, instantaneously—a revolution.

Six Ways of Looking at Fractal Mechanics

In the previous section, I introduced fractals as a metaphor for power relations that transcend explicit boundaries of physical borders, buildings, systems, and time. Next, I connect a series of interlocking mechanisms that generate transinstitutionalization from inclusionism. Then, I imagine implantation as a mechanism for seeding fractal power relations, describing neoliberalism as a fractal seed driving toward a futurity that denies disability to take root. Here, I will distinguish between operations of futurity in service of transinstitutionalization and revolution. Finally, I interrogate popular understandings of justice to arrive at a working definition which presents justice as collective action rather than as an outcome. The collective action of disability justice (Berne et al. 2020) emerges as an algorithm, or technology of resistance, that can implant altered fractal structures in viral, pervasive, micro-, and macro-revolutions. Revolutions all the way down, in all dimensions.

Fractal Mechanics Are Inclusionist Mechanics

Across college campuses, academic conferences, and research labs, “inclusion” has become the new yardstick by which to measure an institution’s integrity and service to the public. Once a rallying cry for disability advocates and activists, it has been enfolded into public service and private industry alike. What happens to the actual people who are passed like manufactured goods through this assembly line of inclusion? What is it like to be disabled while Included in this neoliberal cooptation of justice?

In Vignette 1, the Autistic women, or “Adults with ASD,” are students in a post-secondary transition program. They were included in an undergraduate research poster presentation session. The violence of this inclusion is evident in the content of their self-narrating posters and in their sandwiched position between posters that demonstrate the historical context of sheltered workshops on one side, and their subjectivity as the object of research and intervention on the other side. They are quite literally placed in epistemic, ontological, and physical space on a continuum of transinstitutionalization. From sheltered workshop, to exploitative “opportunity” program, to research subjects for intervention and normalization, this experience is a snapshot in time, a moment frozen as their bodies are conveyed on an assembly line of inclusion: segregation as charity, inclusion as charity, assimilation as solution.

This exploitation is common in such transition programs for disabled youth entering adulthood. Now money can be generated from foundations and families to produce the facade of a college experience in the name of inclusion. Special ID

badges, special course registration codes, special residences, special programs to “find your passion” via volunteer work—disabled students are quite literally used for free community labor in exchange for a false college program that prepares them to transition into low-wage labor. It’s an unsettling deflection of the intent of inclusion. It manifests an invisible yet palpable mesh that tensors and suspends its subjects precariously between the institution and the community.

Figure 2: Graphic representations of Inclusion vs. Exclusion, Segregation, and Integration. From <http://web.archive.org/web/20210204145136/https://www.thinkinclusive.us/inclusion-exclusion-segregation-integration-different/> Creator Unknown. If a reader knows who created the image, please contact editor@catalystjournal.org so that credit can be given.

This graphic from ThinkInclusion.us went viral on the internet and underwent numerous permutations. One adaptation was labeled, “Reality, most places,” and was illustrated by combinations of all four prior structures: a large circle containing green and divergent dots, excluding other divergent dots, containing multiple sites of divergent integration, and a site of segregation. This “Reality” illustration is useful for understanding the complex, contiguous, and simultaneous existence of multiple experiences of oppression. These community-generated variations illustrate both the varying ways that society sorts bodies as well as the subtleties with which some ways of sorting can be constructed to look like other ways. Hegemonical actors can intentionally label one social order as another for the benefit of neoliberal capitalism.

Some scholars have become skeptical of the efficacy of inclusion as activism as they come across sites of its violent transformation into neoliberal schemes. Ahmed (2012) traverses the complicated and nuanced relations between “Diversity Workers” and their institutions, calling attention to the ways that “the very promise of inclusion can be a concealment and thus extension of exclusion” (178). David Mitchell and Sharon Snyder (2015) describe “inclusionism” as a framework for defining, achieving, and proclaiming inclusion under the

prerequisites of ablenationalism and supercrip narratives of overcoming (36). Sara María Acevedo (2018) elaborates, “Disabled people are worthy of inclusion as long as they conform or assimilate to the norm standards of the majority... [Inclusionism reinforces the managerial ‘handling’ of disabled bodies primarily through medical, juridical, and charity channels” (286, 302).

In their critique of inclusion, their intention is not to return to sites of explicit institutionalization. They express pain as their hopes for justice have been tainted by the capitalist perseveration upon indexical procedures and positivistic measurements. Inclusionism manifests as the violent processes of inclusion-via-normalization, and inclusion for the sake of judicial rights-based criteria satisfaction. To these scholars, the concept of inclusion has been too easily coopted by neoliberal mechanics—fractal seeds of institutional power take root and destroy movements from the inside out.

Fractal Mechanics Are Neoliberal Mechanics

Other scholars have lamented the mechanisms by which neoliberalism consumes activist discourse and co-opts it for production (access Harvey 2007). Nirmala Erevelles (2011) weaves together the manners in which disability and race are mutually constituted such that neoliberalism will use one against the other, always forcing those who live at the intersections of both further into the margins. Robert McRuer (2018) discusses the commodification of disability identity in *Crip Times*. His explications of a neoliberal “austerity of representation” illuminate the insipid mechanics of turning movements into memes, and memes into t-shirts, extinguishing movements into capitalist consumptive silence (2018, 55). Inclusion as a movement is rapidly progressing toward this violent extinguishment.

The experiences illustrated in the vignettes above can be understood through Rebecca Mallett and Katherine Runswick-Cole’s (2012) concept of the “commodification of autism.” They describe the commodification of autism as the social and cultural objectification of autism as an abstracted “thing” instantiated within individual bodies (Mallett and Runswick-Cole 2012). Conceptualized as an entity separate from the person who carries it, autism is traded between social actors—almost never the autistic people themselves, but their parents, carers, therapists, and teachers. Autism is exchanged—a problem for a solution, a disease for a cure, a behavior for an extinction burst, a burden for a relief. The falsified “autism epidemic” is a neoliberal project to manufacture a market for autism cure (Broderick and Roscigno 2021). This cure is sometimes manifested as genetic research, sometimes behavioral program, sometimes containment via institutionalization. But there are other, non-curative, not-overtly-eugenical markets generated by this commodification of difference.

The commodification of autism (and, as Mallett and Runswick-Cole note, all disability) generates a thing to exclude, and thus a thing to (re)include as a neoliberal solution that ignores the foundations of ableism that create systems of

exclusion in the first place. As Ahmed states, “the promise of inclusion can be offered in a way that negates a point about exclusion” (2012, 178). Disability commodification creates an urgency for inclusion that belies its intention as a social justice project and transforms it into charity. Diversity and inclusion are emptied of their goals and transformed into a neoliberal performance of intent without substance.

Wendy Larner (2000) breaks neoliberalism down into three interlocking branches of policy, ideology, and governmentality in order to illustrate its expansiveness and its pervasive power in simultaneously restructuring society and popular thought. The policy branch is described as the globalization of market capital and the privatization of the welfare state, the ideology branch demolishes popular understandings of social commitments to collective care by instilling fantasies of individual self-responsibility, and the governmentality branch elides a process of the intensification of state power over individual lives while presenting itself as a dissolution of state control. This three-pronged understanding of neoliberalism is useful for grappling with how seemingly disconnected projects, diverse in hegemonical origin and scale, can be operating toward such eerily interconnected effects as the consolidation of capital, the dissolution of democratic efficacy, cultural dispossession, and intensification of social and material oppression.

Larner implores readers not to affix neoliberalism to any one point on the political spectrum, and indeed we have seen that neoliberal machinations occur just as effectively on the left as the right. While Larner does not believe that a single description of the philosophical mechanics of neoliberalism is possible nor fruitful, I find that imagining the diversity of neoliberal projects as fragments of a fractal structure helps us perceive which elements of neoliberalism recur through each manifestation.

In this paper, neoliberalism is a container for a mechanic of political transformation that declares an intent toward progress but results in oppression, devastation, and even death. The actors of neoliberal transformation projects are often of a hegemonical positionality—assemblages of white, upper-class, able-bodied, and cisheteronormative. Neoliberal mechanics are the numerical, statistical, proceduralized, measurable, positivist mathematics upheld as neutral and unbiased by the hegemonical actors of neoliberal projects (Larner 2003). The byproduct of neoliberal projects is an intensification or reification of oppression of marginalized subjectivity—assemblages of BIPOC, impoverished, disabled, and queer. Such projects generally result in new permutations of oppression by operating on one aspect of marginality without considering co-constitutional factors that ripple through adjacent and intersected marginalities.

Fractal Mechanics Are Transinstitutional Mechanics

When we proceduralize social good, with new ways to categorize, define, index, optimize, and measure success, we produce and reproduce pervasive, fractalized sites of transinstitutionalization. Once described simply as the act of displacing subjects from one institution into another (Morrissey and Goldman 1986), the social, cultural, and rhetorical constructions of disability can be perceived as an ubiquitous interlocking set of “open-air” institutions: systems that tensor and warp bodies to fit incomplete and incongruent definitions; structures that suspend and dangle and threaten an unresolvable precarity (access also Haley 2017). The institution is always “in transit” as it follows the stigmatized body wherever it goes.

NeoLiberation, concatenated from NeoliberalLiberation in the preceding ode, is a portmanteau of *Neoliberal* and *Liberation*. The “camel case” comes from naming conventions in computer programming and is an intentional visible and aural signification of the word’s hybridity. Just as “inclusionism” is a necessary neologism to encapsulate manifestations of perverse inclusion, NeoLiberation represents neoliberal perversions of liberation. I present NeoLiberation as a complimentary concept to inclusionism. If inclusionism occurs when we commodify difference, NeoLiberation occurs when we commodify liberation. Liberation becomes some “thing” that can be traded, negotiated, bargained, forestalled, and delivered. NeoLiberation describes the violence enacted by presenting inclusionism as liberation, and NeoLiberation as justice. It is recursive, fractal, managerial, and inhumane.

Each vignette presented above reverberates with the violence of the fractal power relations of inclusionism, transinstitutionalization, and NeoLiberation:

In Vignette 1, the virtuousness of inclusion(ism) fails to challenge the “natural” exclusion of autistic and I/DD⁵ students. Recursively, their posters manifest the transinstitutional in their self-exhibition, like a hall of mirrors, they display themselves as they are on display. They narrate a NeoLiberated future graduation from a program that has reinforced presumptions of their incompetence and denied them the opportunity to participate in emancipatory research. The program coordinators are performing virtue through the inclusion(ism) and (Neo)Liberation of these students-as-exhibit.

In Vignette 3, the panelists have come to challenge, to criptique, the status quo of special education, but our efforts are undermined by the voyeurism of the attendees. They expected a hall of mirrors, “reformed autistics,” like Temple Grandin, come to thank them for their hard work. We were included as equally qualified presenters. But we were powerless to move those that came to “watch” rather than to learn. The panel became an exhibit, an institution, the ring of

nonplussed special educators loomed rigidly like iron bars. Is this what it feels like to be free?

In Vignette 4, the illusion of our inclusion is shattered. We are welcome to present, but not to participate. Our unruly bodies are offensive. Our neuro-plasticity-spasticity is rude. The involution of our intention is (dis)invited.

And what of Vignette 2? Where the AAC-using panelist is nearly rendered unable to present because despite the declaration of his disability, despite the clarity of his accommodation needs, despite the duty implicit in his inclusion to ensure him access? Inclusionism invited him but denied him IT support because “no one else would be given it.” NeoLiberation was proud to have him on the program but was ready to blame him if access barriers silenced his voice.

I say again, equity is not justice. Equality of opportunity and equality of resources still leave the postsecondary students on display, the panelists on display, the AAC-using panelist vulnerable to silencing—the included are still vulnerable to exclusion (Nusbaum 2013; Ahmed 2012).

Fractal Mechanics Are Communal Mechanics

In their Fractal Many-festo for trans and disabled collectivity, Maier, Hsu, Cedillo, and Yergeau (2020) ask, “What if fractals also structure social worlds, historical and rhetorical forces, and struggles for power?” Both “earlier” and “later” (or back/forward, up/down...) in this text, I attempt to illustrate that they very much do. But like Maier et al., I also recognize that that the mechanisms of this structuring have no inherent moral valence. This is not to say that fractals can be imagined as a neutral technology. To understand tools as neutral is to believe they can be isolated from their users. Such a disentanglement can never be materially true. As Maier et al. (2020) say, “we are all implicated.” What I mean instead, is that a fractal understanding of social worlds enables us to simultaneously comprehend how oppressive structures proliferate while also being able to imagine how revolutionary structures can be propagated—specifically through infiltration, subversion, perversion, and implantation.

A fractal understanding of society, culture, community, and self requires recognition that any rendering is but a snapshot, a cross-section, an extracted layer of something that is “always-in-process” (Maier et al. 2020). Maier et al. devote their many-festo to another question, “What would it mean to regard coalition as fractal—as the ongoing re-examination and renegotiation of communal boundaries?” Brown (2017) already regards coalition as fractal, theorizing a decentralized intercommunal “emergent strategy” as a form of potential revolution that resists prescriptivism (95), manifesting throughout micro to macro registers akin to the dynamics of flocking.

The many-festo and emergent strategy bring to mind the work of Huey P. Newton (2019) and his formulation of intercommunalism (193–212). Newton establishes three key points—that “everything is in a constant state of change” (193), that there is a moral imperative to act under the assumption of a material world and prioritize attention to material consequences, and that such an attention requires a mode of thinking that directly connects with the constant state of change. Solidarity cannot be achieved prescriptively (Newton 2019, 195), and requires thoughtful, personal engagement with the struggles of other communities and appreciation for points of intercommunal connection and tension. Newton describes an ideology of dialectical materialism that allows the Black Panther movement to think and organize and act with an understanding rooted in a fluctuating, interconnected, interdependent world. Intercommunalism—an understanding of communities as distributed, entangled with one another, and engaged in a constant materialist dialectic—provided a way to understand mechanisms of oppression via globalization and imagine revolution and liberation without relying on nation-states and authoritarian models of governance.

Figure 3: An illustration of a “perverse” implantation or radical infiltration of a fractal seed editing the larger fractal network, imagined here as a sort of reterritorialization. Though computationally such a transformation is instantaneous, this illustration is more akin to the mutation of a fractal organism, such as a fern or moss. This composition is derived from three works by graphic artist Jason Kaehler (kaelerplanet.com), with his permission.

In brief, the metonymy of the fractal may be a useful technology for perceiving dialectical materialism in motion, but more importantly it may be helpful for understanding people as collective agents of change within fractal systems. Justice must be figured as collective action because it is impossible to bind it to time. You cannot prescribe justice—each step diffracts the world, edits the seed,

creates a new echo. We are always at step zero in a new world and must act with the understanding that each moment is a practice of worldbuilding (Figure 3).

Fractal Mechanics Are Justice Mechanics

An image created by Craig Froehle (2016) underwent several viral permutations similar to the Inclusion meme from thinkinclusive.us. In his original, one side shows three people of varying heights each standing on one wooden crate (Figure 4). Only the tallest two people can see over the fence to view the baseball game in the background. On the other side, the boxes have been rearranged to give two to the shortest person, one to the middle, and none to the tallest. All three people can now see over the fence. Froehle's image was originally intended to demonstrate two different ways of thinking about equality, and the two very distinct material consequences of such differences in interpretation. In an early iteration, the side where all three people had one box is labeled "equality," while the other side, where everyone can see over the fence, is labeled "equity. This image was intended to illustrate that equality of opportunity rarely results in *equity*, or the equality of outcomes.

Figure 4: Craig Froehle's original image showing two divergent interpretations of "equality."

Future iterations of the image reinforced the concept that *sameness* and *fairness* have very different results. The same system can leave different people in different states of oppression. Variations on the image proliferate (Froehle 2016), and eventually, one emerges with the equality illustration on the left, equity in the middle, and finally, *liberation* on the right, where there is no longer any fence at all, and no boxes. In this version of liberty, there are no barriers, and thus there are no accommodations.

Other iterations replace the equity label with *justice*. It seems a great number of people felt that equity was either synonymous with justice, or that the image labeled equity was more accurately described as justice. In any case, there is agreement that equality is neither equity nor justice nor liberation. But if equality

is none of these, and liberation is also somehow a progression of equity and/or justice, then what *is* equity, and what *is* justice?

Martha C. Nussbaum (1993) delinks justice from notions of legality—law, order, penalty, retribution. She describes how retributive notions of justice often deflect consequences from the original perpetrators to proxies. Flowing from her analysis, retribution may be thought of as a manifestation of “punitive implantation.” The classification of context-void, lawful (normative) consequence seeds the fractal of vengeance, crime and punishment—a recursive injustice. Justice, then, requires the context-sensitive application of equity in communion with mercy.

If equality is everyone living in the balance of their desire, and equity is everyone having the resources they need to reach the state of equality, then justice is the dismantling of the barriers that seed this state of need in the first place. Barriers implant states of deficit, inequity, injustice. Liberation is a consequence of justice. Equality alone can masquerade as justice in the presumption that everyone desires the same opportunities. Equity alone can masquerade as justice in the delivery of resources without the deconstruction of barriers. Liberation alone, NeoLiberation, masquerades as justice when we are released from bondage into new sites of oppression. Transinstitutionalization and NeoLiberation work in tandem.

How do we imagine algorithms for fighting the neoliberal perversions of justice? Disability activists such as Patricia Berne, Mia Mingus, Leah Lakshmi Piepzna-Samarasinha, and others describe disability justice, access intimacy, and prefigurative politics as tools of collective resistance, liberation, and love. Disability justice centers intersectionality, interdependence, and collective action through a responsibility and accountability to cross-movement solidarities (Berne et al. 2020). Disability Justice was born of a need to pull the Disability Rights Movement out of its white-centric reverie. “Disability Justice asserts that ableism helps make racism, christian supremacy, sexism, and queer- and transphobia possible, and that all those systems of oppression are locked up tight” (Piepzna-Samarasinha 2018, 22).

Where Disability Rights are often imagined as justice-through-legally-recognized-equality-of-opportunity, Disability Justice recognizes how the process of law itself can be an access barrier, and how the enforcement of law is inequitable across intersections. Further, Disability Justice contests the naturalization and normalization of what is considered desirable opportunity. Disability Rights advances access through litigious criteria satisfaction. Access becomes a series of procedures and checkboxes, accommodation and justification—logistics (Mingus 2011b).

When our liberation is imagined as logistical, we become vulnerable to NeoLiberation. Inclusion(ism) and diversity masquerade as access, equity, and justice. Instead, access intimacy “moves the work of access out of the realm of only logistics and into the realm of relationships and understanding disabled people as humans, not burdens” (Mingus 2011a). Access intimacy is a tool of disability justice and of collective liberation because it calls upon a collective sense of belonging and worth—it is a “hermeneutics of love” (Sandoval 2000).

To disability activists, justice isn't something that is given or bestowed, nor even taken. It is something that is forged—it is the *loving act* of forging collective liberation. Such loving acts, as Brown (2017) attests, require a fractal politic of living our revolutionary desires from the micro to macro registers of our relations (45). To sow the seeds of a collective, radical, revolutionary, loving justice, we have to dream disabled futures. “Precognitive politics is a fancy term for the idea of imagining and building the world we want to see now. It’s waking up and acting as if the revolution has happened” (Piepzn-Samarasinha 2018, 149). Precognitive politics crip futurity. Seeded by our collective prefiguration, we rewrite the fractals, alter the shape, like a viral contagion implantation. Micro-revolutions all the way down, in all dimensions.

Fractal Mechanics Are Revolution Mechanics

The fractal metaphor for the dialectical mechanics of oppression (via neoliberalism) and of revolution (via intercommunal solidarity) can be regarded as a manifestation of Barad’s theorizations of diffraction and entanglement. I make this manifestation clear in the following articulation of disabled embodiment as a site of diffraction and disabled community as a practice of diffracting.

Barad’s (2007) work enables us to understand scientific measurement and observation as engaged in a dialectic of interpretation and perception. Just as the medical gaze constructs the boundaries and definitions of organs and their functions, the embodied-self (particularly the embodied experience of being disabled or ill) rebels against tidy circumscriptions of functional norms. A disabled nervous system both highlights the boundaries of the medical delineation of the nervous system while at the same time, proving through its “malfunction” that this delineation is insufficient. The Disabled Body embodies outliers, “constantly eludes that judgment, flees and becomes destratified, decoded, deterritorialized” (Deleuze and Guattari 2005, 40). Disabled bodies embody those conditions and contradictions of material being that medical textbooks would prefer did not exist. They resist measurement, break encoded norms, and make plain the diffracted entanglement of medical conceit with disablement.

Diffraction is not just a phenomenon, it is also a practice, an action, and can be an intent. For example, in computer vision, a diffraction pattern is an intentional deployment of a known diffraction in the measurement of light to encode the surfaces of the material world into digital approximations. If diffraction is the

phenomenon of measurement determining how reality is perceived, then diffraction patterns are the practice of using this "bug" "anomaly" "flaw" to create new ways of being. Crip technoscience (Hamraie and Fritsch 2019) may be a practice of intentionally diffracting one's onto-epistemic essence with the matter, measurement, and meaning of mechanical and digital strata. A crip technoscientific practice of intercommunal justice-forging through a fractal politic intentionally harnesses the diffraction of a cyborg embodiment to create and become new meanings-in-relation—to edit fractal seeds at all registers of relation.

Vignettes of Revolution

The following vignettes imagine communities engaged in fractal relations of disability community through crip technoscientific practices. These stories illustrate a fractal politic in the spirit of Adrienne Maree Brown (2017), "practicing at a small scale what we most want to see at the universal level" (17). Disabled people are inherently distributed and dispersed throughout multiply intersecting and enmeshing communities. As such, we invent unique ways of inter-relating across space and time.

Vignette A: Ames and Oli live on opposite sides of the country. Separated by thousands of miles, they are connected digitally and spiritually by shared affinities—crip and queer kinship found buried like tubers in the comment sections of sprawling webs of "mutual connections."

Ames: Hey

Oli: Hey!

Ames: Tag yourself, I'm executive dysfunction.

Oli: lol mood

Ames: yeah. But I really need to eat.

--incoming video call from Oli--

Ames: "Ha. Why did you call me?"

Oli: "Because we both need to eat. Let's make lunch together."

Ames and Oli are both neurodivergent and struggle with executive function—those cognitive processes that help you get from goal to action. Though their connection is "only" digital, this networked

connection is no less embodied. Together, they can yoke their movements, “borrowing praxis” (Asasumasu 2015) and giving each other mutual care. By feeding themselves, they feed each other.

Vignette B: Every day, we check the board. We look for the names, the hospitals, the room numbers. We build the phone scripts. This one needs access to their AAC. That one needs the staff to follow the correct plan of care. That one over there needs dozens of angry phone calls to badger an admin into releasing a patient back to their community, instead of the home. The system, #BreakoutBot,⁶ looks up the admin phone numbers. The text messages go out. Like dandelion seeds. Thousands of angry, tired, loving crips dial in. “We are not disposable. Let my people go.”

Vignette C: They got tired of the Zoom rooms long ago. Everyone said no, no you have to stay connected. Though they missed each other’s company dearly, they missed the absence of migraines more. It’s not that video calls aren’t “good enough” compared to other conversations...It’s just that...maybe the talking was never actually the point.

Motor planning is ball of talkers explanation but i think that language of relation rallies people to think about objects as important and initiating movement. People think that pace is in the body by answering to amazing environment but movement is always in relation to the world so motor language is not right but relation is fostering the collaborating.
– Adam Wolfond

Instead, they exchange envelopes. No, not letters. They gave up words long ago. Exhausting things, words. Instead, they send crushed flowers, an interesting stone, papers etched with the skin of damp twigs...What does it mean when you send a flower and they send a stone? Well it’s not just the flower, and it’s not just the stone. The flower was purple, with white and blue too. The stone has sparkles, flint quartz, and lapis lazuli. The twigs were from the creek, where other stones were found. Maybe next week, they’ll exchange things that are round. For one it was a reminder that the earth makes beauty. For another a testament that the earth holds memory. The meanings are co-constructed, the practice collaborative. This, too, is conversation.

Conclusion: Fractals Are Interrelated, Entangled, Intercommunal

I have used fractals as a metaphor for how institutional rhetoric and power relations survive the deconstruction of walls. Transinstitutionalization is possible because the institution is a fractal structure of power relations. Through the epistemic viscera of my own experiences of inclusionism, I illustrated that NeoLiberation is what happens when transinstitutional fractal shards remain in the roots of liberative projects. I have imagined Foucauldian implantation as a mechanism for rewriting fractal seeds to produce rapid and prolific transformation, both oppressive and liberative. If futurity is a fractal, neoliberalism seeds future-without-disability and disability justice crips futurity by seeding future-as-disabled. Using disability justice, intercommunalism, and crip technoscience, I imagine crip projects that manifest disabled futures through the prefigurative politics of validating disabled life in the here and now.

The neoliberal fractal seed distorts radical practice—diversity becomes tokenism, inclusion becomes inclusionism, access becomes accommodation, justice becomes logistics, liberation becomes NeoLiberation. But the hopeless nightmare of co-optation is not the whole story. Implantation is not just a technology of oppression; it is a technology of revolution. Though “mainstream” programs often get progress wrong, the effort still forms infrastructure. Fractal proliferation makes rapid transformation possible. Tokenism and inclusionism can become insurgency. As insurgents, we transform accommodation into collective access, and logistics into love. To dream prefigurative dreams, we wake up every day and imagine co-optation as a gift of infrastructure for daily corruption. All your fractals are belong to us (Dubs, n.d.).

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Notes

¹ This paper will rely on Wendy Larner’s (2000) formulation of neoliberalism, expanded in the section “Fractal Mechanics Are Neoliberal Mechanics.”

² Autism Spectrum Disorder.

³ Augmentative and Alternative Communication.

⁴ Kairotic spaces are high-stakes interactions that privilege normative communication at the expense of marginalized folk (Price 2011).

⁵Intellectual/Developmental Disability.

⁶Fictional. For now.

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