

4. Wild Mathematics

Epistemic Wildness as Resistant World-making

We shall by morning
Inherit the earth.
Our foot's in the door.
Sylvia Plath, Mushrooms (1967), 34

4.1 Wild Mathematics as an Image of Thinking-Being for Rebirthing Worlds

This final chapter aims to be a beginning gesture, in moving toward the collective creation of *wild mathematics*: an image of thinking-being – as well as – a mode of thinking-being committed to re-birthing worlds.

I propose *wildness* as a guiding term for this endeavor in order to a) re-do the *order-wildness* binary that is so heavily and violently employed by colonial-patriarchal worlds and b) to name the vibrant messiness that is always already there and exceeds the *Mathematics-Rationality-Human* Continuum. Thus, what underlies my proposal of *wild mathematics* is a more general proposal of *epistemic wildness*: of a re-making of thinking-being that does not reference the continuum – a re-making of thinking-being that commits to the messiness of new worlds. New worlds are messy because it is precisely the continuum and its scripts i.e., the *Mathematics*-centric metric, which creates what we learn to recognize as order. To exceed the continuum and *Mathematics*-centric scripts, is to enter into messy complexity and wild potentiality. I propose epistemic wildness as a figure of resistance that aims to exceed rather than to reference what it resists – namely the *Mathematics-Rationality-Human* continuum and *Math-Man*-centric scripts.

The main objective of this chapter is to form a first proposal for *wild mathematics* as an image of thinking-being. I move through this endeavor by exploring six texts that I consider to be acts of epistemic resistance as well as theories

on epistemic resistance. My intellectual movements in this chapter are guided by three principles 1) thinking-with rather than ‘thinking about,’ 2) to learn-from rather than to ‘learn about,’ and 3) a commitment to intellectual debt – to always being indebted and in debt when thinking (and being). These three principles aim to re-do forms of hierarchy that are recognized as part of intellectuality in accordance with the continuum. In this sense, *wild mathematics* forms a movement beyond that of a counter-hegemonic strategy.

Each of my six explorations will generate insights about and characteristics of *wild mathematics* so that at the end of this chapter we will have created a proposal of what *wild mathematics* could be. These explorations are taken up in the form of what I call chapter-essays, which mix the genre of the essay with a conventional book chapter in non-complete, wild attempt to find a form that accounts for the intellectual movements of a thinking-with.

Exploration 1 with Audre Lorde *Mathematics as Distillation of Experience*

My first exploration is a reading of Audre Lorde’s essay (1985) *Poetry is not a Luxury*. This reading will form a movement of thinking-with Lorde’s understanding of poetry to help inform a notion and the practice of *wild mathematics* – a movement through which Lorde’s thought fills this notion with content. This chapter-essay provides a movement and an invitation to movement. My notions and propositions for *wild mathematics* are deliberately incomplete for they form an invitation, a starting point, and a framework; they are here to spark light and feeling – and to inspire collective creations and versions of *wild mathematics* and *epistemic wildness* more generally.

I move through this endeavor in four stages. First, I introduce Lorde’s core themes, terms, and thoughts in her essay *Poetry is not a Luxury*. Here I showcase and relate them to the question of epistemic resistance and epistemic wildness. Second, I take on the question of what Lorde’s propositions could mean for a notion and practice of *wild mathematics*. This part focuses on making *wild mathematics* realizable through and with Lorde’s notion of *poetry as a distillation of experience*. Third, I briefly propose possible ways to experiment with *mathematical practice as distillation of experience*. Fourth, I conclude with a comprehensive summary of characteristics of and inspirations for *wild mathematics* drawn from Lorde’s notion and practice of poetry.

So, let me *think-into* Lorde’s essay to begin this endeavor:

The title of the essay, *Poetry is not a luxury*, can be taken as the central point she is making and as an orientation for reading this short yet dense essay. Furthermore, with the line: *It is a vital necessity of our existence* (Lorde 2017, 8), Lorde is addressing *women* in their marginalization as *women* (Lorde 2017, 8). Her core argument is that there is a form of poetry that forms language, which is integral to survival and change and it is in precisely this sense that poetry is a necessity of survival and not a luxury (Lorde 2017, 10). To deepen our understanding of this thought is to understand the quality of the revolutionary power of poetry proposed by Lorde:

That distillation of experience from which true poetry springs births thought as dream births concept, as feeling births idea, as knowledge births (precedes) understanding.

Poetry is not a Luxury, 7

To Lorde poetry is *distillation of experience*; it is a practice that indulges in how life *feels*. And it is precisely this centering of feeling and feelings that forms the qualities Lorde considers forces of survival and change:

Sometimes we drug ourselves with dreams of new ideas. [...] But there are no new ideas still waiting in the wings to save us as women, as human. There are only old and forgotten ones, new combinations, extrapolations and recognitions from within ourselves, along with the renewed courage to try them out.

Poetry is not a luxury, 10

Lorde attributes the centering of thought, of thinking, of ideas to 'the white fathers' (Lorde 2017, 8) and thus to structures composed by colonial patriarchy. Most essential here is her plea to not get caught up in the fantasy that we are in need of 'new ideas' for survival and change. According to Lorde, we are in need of feeling the existing ideas differently – feeling them anew and remembering and recomposing what is there and has always been. The claim that in feeling(s) there lies revolutionary practice, and power lies at the core of Lorde's essay and of the notion and practice of poetry she puts forth:

For within structures defined by profit, by linear power, by institutional dehumanization, our feelings were not meant to survive. Kept around as unavoidable adjuncts or pleasant pastimes, feelings were meant to kneel to thought as we were meant to kneel to men. But women have survived. As poets.

Poetry is not a luxury, 11

Feeling is what has been conceptualized and shown through practice to be *the thing that's always less* and *the practice that is always lacking* – the thing inferior to *thought*. The script that evokes us to 'think rather than feel' is authored by the *Mathematics-Rationality-Human* continuum and by its logic of the binary as the alleged inferiority of feeling is conceptually birthed by the *Rationality-Emotionality* dualism and politically birthed by how dangerous feeling is to the *Mathematics-Man*-centric world.

Poetry for Lorde is a practice of feeling – of deepening, exploring, and expressing feelings in order to form language for what has had no language before:

And where that language does not yet exist, it is our poetry which helps to fashion it.

Poetry is not a luxury, 9

Lorde's intense advocacy for a practice of feeling is embedded into her warning to not let the glorification of thought fashioned by colonial-patriarchal worlds fashioned by the continuum take over. She speaks precisely of *living as a situation to be experienced and interacted with* rather than *living as a problem to be solved* (Lorde 2017, 8). What Lorde describes here as problem solving is a mode of thinking-being birthed by the *whiteness* and the *masculinity* of the *Mathematics*-centric world; the mode of problem solving and its universalization is birthed by the *Mathematics-Rationality-Human* continuum.

Poetry for Lorde is the practice that makes living into a situation, a practice, and an event to be experienced and interacted with. Poetry is the practice that sustains living precisely because it feels its way out and through it without seeking to *solve* or *think* (Lorde 2017, 8).

I believe there are six core solicitations and aspects of Lorde's essay that move in ways deeply interwoven with one another:

- 1) A movement against problem-solving, which is a movement for being-in-relation and experiencing how living is practiced and about finding a practice of thinking-being. It is about living differently to what the world of the continuum prescribes – differently to what structures oriented towards profit and linear modes of power suggest to us (Lorde 2017, 10);
- 2) An intense solicitation for feeling that takes the form of a plea as well as an encouragement to trust, deepen, explore feelings and to let them guide us – to trust and practice feeling (Lorde 2017, 8 f.);

- 3) A belief in survival and change is promoted through Lorde's. belief in changing dreams and ways of living in order to change ourselves, each other, and essentially the conditions of our living (Lorde 2017, 10–11);
- 4) A solicitation for courage and possibility, which is to be tasted, believed in, and accessed through a practice of feeling (Lorde 2017, 8 f.) as tasting possibilities gives us strength and courage that will sustain survival and change (Lorde 2017, 8–10);
- 5) A movement of language-making as, poetry, for Lorde, creates language. and it makes us know and inhabit the dimensions of our experience we have been encouraged to un-see by providing us with space and courage to make language where there has been only silence before (Lorde 2017, 10–11). This language-making is therefore a mode of thinking-being that fosters curiosity and courage to inhabit what is yet without words, without form; and
- 6) A plea to recognize possibility – to taste and realize and feel possibility through poetry (Lorde 2017, 10).

The following core insights move through Lorde's most fundamental claims and train of thought: poetry is not a luxury – rather is it a necessity of survival and change; and poetry moves as this necessity because it commits to feelings and experience (Lorde 2017, 8, 10). Through this commitment to feeling, poetry coins language, that then can express and charter 'revolutionary awareness and demand' (Lorde 2017, 10).

This Lordian account of poetry can be read as a form of epistemic resistance as it deliberately resists the logics of the *Mathematics-Rationality-Human* continuum that center *thinking* and devalue feeling. These structures have been deeply analyzed in anti-colonial and feminist works to show that the association of women and people of color with *feeling* rather than *thought* is integral to the *Mathematics-Rationality-Human* continuum and to the epistemically violent worlds birthed by it. Lordian poetry forms an *epistemic wildness* in its commitment to movements of re-membering and re-claiming the epistemic lives and resources that have been discarded due to the hegemony of binary notions of order. *Wildness* here refers to deliberate divergence from what is construed as thinking-being in the worlds of the continuum.

My proposal is to develop *wild mathematics* by forming a way of understanding mathematics that fundamentally leans on Lorde's thought on the necessity of poetry.

Lorde claims that poetry is not a luxury, but a vital necessity of survival because the language-making that poetry forms, is a vital necessity of survival (Lorde 2017, 8–9). I believe there can be forms of mathematical practice that are vital to survival in just this way and can thus form a practice of feeling and language-making that comes into itself through *wild mathematics* as a practice of thinking-being.

I propose *wild mathematics* as a commitment to a *distillation of experience* as Lorde proposes and practices it. I believe the core solicitations of Lorde's practice of poetry can be read as lessons for fashioning *wild mathematics* as both a notion and a practice being and of re-doing thinking in the following ways.

- 1) It can be understood as a movement against problem-solving and for being-in-relation and experiencing. Crucially Lorde's essay teaches me that *wild mathematics* cannot be and is not a *new idea*. *Wild mathematics* is a practice of re-doing, re-membering, re-collecting feelings, experiences, thoughts, and modes. It is a practice of re-doing mathematical practice into a practice of experiencing and being-in-relation with the situation that is living.
- 2) An intense solicitation for feeling as a central practice of *wild mathematics*. In this, mathematical practice itself shifts its form from that of problem-solving towards that of an event¹ in and of itself – an event of thinking-being. *wild mathematics* is a practice that is felt and experienced and it is a practice of deepening, and expressing, and exploring feelings.
- 3) *wild mathematics*, as a practice of exploring the deepest meanings of 'it feels right to me' (Lorde 2017, 9) is a belief in survival and change. It is a practice of experiencing possibility – the possibility of other worlds and of other mathematical practice feeling differently than it previously has felt. It is the possibility of feeling and being differently than the thinking-beings of the continuum, the possibility of speaking, the possibility of inhabiting modes of thinking-being different to those modes we have been told we need to choose from amongst continuum-based modes. *wild mathematics* is any mathematical practice that centers survival and change and forms a

1 My use of the notion of the event is based in process philosophy and leans on the work of Brian Massumi and Erin Manning (Manning and Massumi 2014) in emphasizing the process as a process rather than as a pathway arriving at place X as the notion of the event emphasizes the becoming.

space to sustain the situation that is living and changing how this situation feels.

- 4) A solicitation for courage and possibility comes from the revolutionary power of Lordean poetry because it makes its poets *less afraid*. Poetry, according to Lorde, provides courage, because possibilities can be tasted while “the old fears and warnings” are battled and felt too (Lorde 2017, 7 f.). So, *wild mathematics* is the mathematical practice we create that gives us courage because we can taste possibility; – because we taste what we can do –we taste the wildness that mathematics can be –we taste new thinking-beings –and through which we taste the existing ones anew.
- 5) A movement of language-making as poetry for Lorde, “helps give name to the nameless so it can be thought” (Lorde 2017, 8) and *wild mathematics* is committed to just this endeavor of language-making. *wild mathematics* is a form of language-making as well as a form of mathematical language-making, which commits to mathematics as a possible language.
- 6) A plea to recognize possibility as *wild mathematics* makes its practitioners taste themselves differently and inhabit their thinking-being differently. *wild mathematics* is a practice of tasting and touching oneself as possibility and it is a practice of tasting and touching the possibilities of mathematics and of worlds and modes of thinking-being different to those scripts the continuum has generated for us.

These general notes on *wild mathematics* need to be realized and created through re-imaginings and in experiments of and with wild-mathematical practice. This is no simple task and one that needs to be fulfilled collectively and continuously through spaces and modes that continue to be formed and moved and changed and lived. However, to give as concrete a vision for *wild mathematics* as I can, I will provide propositions for possible wild-mathematical experiments and practices for each of the aspects just discussed:

- 1) *Wild mathematics* against problem-solving takes at least two fundamental forms that decenter problem-solving as a mode. First, the mathematical quality of insolvability can be centered in a wild mathematical practice. Instead of a problem to be solved or a proof of falsity, mathematical insolvability could be made into an experience to be had. It could be explored how mathematical practice changes when insolvability is lovingly moved into the center of interest of mathematical thinking-being. Second, *wild mathematics* can center all mathematical modes and practices that are not

oriented towards forming problems and their solutions. A such, the core practice of *wild mathematics* could be to move these mathematical modes to the center of what it means to practice mathematics and to invent other modes like them.

- 2) *Wild mathematics* is a practice of feeling, which, as Lorde proposes, takes on many forms – there are the dimensions of deepening, of feeling, of committing to feeling, of exploring feeling, and of expressing feeling. Deepening feelings through mathematical practice could be any way of carving out time and space to feel by means of mathematical practice or expression. This could mean forming mathematical practice that accompanies or inspires one to be in touch with one's feelings. It could also mean forming a mathematical practice that expresses feelings in a way that deepens them. Or it could mean choosing or creating a mathematical practice that feels symbolic of either a feeling itself or of a situation to be felt.

Committing to feeling could mean deepening feeling or it could mean forming a mathematical practice that is designed to feel and/or that is moved by feeling and by intuition. Exploring feeling through wild mathematical practice could be any mathematical practice that deepens, explains or symbolizes a feeling, an experience, a situation felt. Expressing feelings in and through *wild mathematics* means giving mathematical language-making a feeling and stretching out what mathematical language-making includes so language-making can fit and expressing our feelings. The dimensions of expression, exploration, commitment, and deepening of feelings are as interwoven in wild mathematical practice as they are in Lorde's notion and practice of poetry. One example of these dimensions interwoven in mathematical language-making could be the formation of three interconnected equations I created in order to give mathematical expression to rape culture: $1+1\text{equals}2$ and $1+1\text{equals}0$ and $1+1\text{equals}1000$. The first equation describes the logic the survivor-victim is evoked to fulfill: *Give us proof and we will believe you* is a $1+1\text{equals}2$ logic. $1+1\text{equals}0$ describes the how proving the credibility requested of the survivor-victim is systemically unfulfillable. $1+1\text{equals}1000$ symbolizes the immensity of possibility that lies within and beyond the confinements of said unfulfillable credibility. It is precisely the simultaneity of all three equations that is a practice of feeling-with. These equations stem from a commitment to experience the situation of being a sexual assault survivor. These equa-

tions in their simultaneity deepen my feeling of confusion. They make me commit to it. They make me explore it.

- 3) *Wild mathematics* for survival and change is about sustaining living and changing living, which might seem like two different endeavors, but they can be highly entangled (as they are in Lorde's writing). There are many things mathematical practice can be that sustain living, e.g., mathematical practice as a motion of escapism can be deeply sustaining. Mathematical practice in most day-to-day applications can be sustaining. Mathematical practice as an experience of one's subjectivity can be sustaining, which is guided by the question: what would mathematical practice need to be for you to keep living when it is hardest to do so?
- 4) *Wild mathematics* can be a source of courage. Lorde's writing on the aspect of courage reveals how poetry makes her access things that would have otherwise scared her too deeply to be considered. Poetry is a space to dare and a space to feel more sheltered than other places so that new ways of feeling and thinking-being are suddenly possible, precisely because they are suddenly safe. What could mathematics do or need to be to form such a space? Can we make mathematical practice into a world that feels sheltering enough to provide the courage to dare? This is about learning how to make mathematical practice feel radically different than to what the *Mathematics-Rationality-Human* continuum has made it into – it is not a problem; it is not a test; it is a space and a temporality. How can we facilitate mathematics that feels like a warmly radical space?
- 5) *Wild mathematics* is a practice of language-making. Here again, *1+1equals2* and *1+1equalso* and *1+1equals1000* provide examples. This is mathematical language-making of a confusion and pain facilitated by the many-layered and many-colored violence myself and many other survivors know intimately. What do we need to do to re-member mathematical practice as a language that is for us to speak? A language that is already partly in existence and partly for us to make. How can we practice mathematics as a language never to be mastered and always to be made?
- 6) *Wild mathematics* is a practice of tasting possibility. Possible worlds are already part of the fabric of mathematical practices. Wild mathematical practice commits to mathematical language-making as a practice of imagination in a highly intuitive and deep sense of the word. A such, imagination is not “a practice of the head,” but as a radical commitment to where possibilities are felt. What can be felt through the knowledge that infinities are different sizes? What can be tasted and heard in drawing

Voronoi diagrams²? What possibilities are felt in studying chaos theory? Chaos Theory is a theory of unpredictability. It is a study of how drastically and radically systems can be forever changed by minor changes and minor gestures (see Manning 2016). Wildly studying chaos theory means committing to the political rhythms of this knowledge: the rhythms of possibility tasted through making mathematics wildly.

I believe there are three core lessons of Lorde's essay that should be carried into what *wild mathematics* means and is as an image and a mode of thinking-being:

- A) *Wild mathematics* is not a new idea, but a practice of making mathematics feel different. It is a practice of re-doing and re-collecting what mathematical language-making and practicing can be when we are committed to epistemic wilding, i.e., to intuitively and radically changing the epistemic makeup of our worlds – to change what does and does not count and to change what living is – to change our thinking-beings to what they always had the potential to become.
- B) *Wild mathematics* is a practice of feeling that is committed to the notion of distilling experience. wild mathematical practice comes into itself by believing in the worthiness of feeling and experience being distilled and by trusting in mathematical practice to bear the power to do this distilling.
- C) Problem-solving is a mode of thinking-being and a mode of mathing³. It is a mode of thinking and a mode of living that wild mathing and epistemic wilding radically moves beyond.

These Lordian lessons for *wild mathematics* as notion and practice will be carried into these next movements of thinking-with.

2 Voronoi diagrams are a way to part and explore spaces. For an accessible and practical explanation see D'Agostino 2020.

3 Through the term 'mathing' I emphasize that this is about a mathematical practice, a mathematical doing.

Exploration 2 with Hélène Cixous

Wild Mathematics as Writing

Hélène Cixous is an author and philosopher writing in the tradition of difference feminism⁴. Much of her work has been focused on how writing by *woman* is a mode of resistance. *Woman* here refers to a social position, as well as to an intrinsic force of *woman*, born from the disruption *woman* causes in phallogocentric worlds⁵ (Cixous 1976, 875 f.). Cixous' work is interwoven with matters of epistemic spheres and epistemic resistance. She considers how *woman* is made and positioned in phallogocentric systems and how she can re-do this making of herself (Cixous 1975, 880). I focus on her essay *The Laugh of the Medusa* because my thinking-with Cixous on the question of *wild mathematics* centers around considering *wild mathematics* as a practice of writing and this essay by Cixous centers the question of writing and the writing of *woman*.

Cixous' considerations in this essay are based on her analysis that the tradition of writing thus far has been heavily shaped by 'reason', which she understands as a deeply phallogocentric notion and mode (Cixous 1975, 879). Her expression *woman writing herself* refers to her proposition that there is urgent need for a different form of writing – a nonphallogocentric form of writing – a *woman writing* in that it begins with the difference of woman and that it writes and re-writes being-woman (Cixous 1975, 879) as it rewrites woman thinking-being. Such writing to Cixous is a mode of re-doing *woman* and re-doing her body and sexuality and what they have been made to endure. It is a writing very deeply connected to *woman* bodies and sexualities – a writing with a bodily dimension and a wildness to it: *We're stormy, and that which is ours breaks loose from us without our fearing any debilitation* (Cixous 1975, 878). Cixous imagines a form of writing that frees powers that have been oppressed, and that *woman* has been made to oppress in herself. The writing that frees these powers is *stormy* and makes *woman stormy*.

4 Difference feminism is a branch of feminism that advocates for a perspective that centers 'the difference of woman from man' as a revolutionary force. For more detailed accounts see Bray 2004, Sellers 1994, Cixous and Clement 1986.

5 'Phallogocentrism' refers to a mode of patriarchal dominance, centering logics of command, authority, and control.

Further she writes:

Censor the body and you censor breath and speech at the same time. Write your self. Your body must be heard. [...] To write. An act which will not only "realize" the decensored relation of woman to her sexuality [...]; it will give her back her goods, her pleasures, her organs, her immense bodily territories which have been kept under seal; it will tear her away from the superegoized structure in which she has always occupied the place reserved for the guilty (guilty of everything, guilty at every turn [...])—tear her away by means of this research, [...] this emancipation of the marvelous text of her self that she must urgently learn to speak. [...] We must kill the false woman who is preventing the live one from breathing. Inscribe the breath of the whole woman. *The Laugh of the Medusa*, 880

Here Cixous details the extensiveness of censoring and suppressing the body. She elaborates that this oppression suppresses breathing⁶ and with it –speaking. She speaks distinctly towards *woman*, when she says *Write your self*. With this practice of writing, she refers to a practice of making the body heard – of extending beyond the censorship placed on *woman bodies*. Cixous imagines a form of writing that un-does the censored relationship *woman* has to her sexuality – a writing that actualizes sexuality, body, and woman in a way that goes beyond phallogentric scripts and censorships. She writes that there are *immense bodily territories* to womanhood, and she imagines a form of writing that realizes these territories and makes us re-discover them – find them under the censorship placed on them. In phallogentrism, she continues, *woman* is the always-guilty and it is the *woman* writing that re-makes *woman* by tearing being-woman from this place of guilt. She understands the violence of phallogentrism to make a *false woman* – the guilty woman without her body and breath and speech. The *false woman* suppresses the live woman, and it is the doing of writing to give *woman* back her body and breath to make her the *live woman*. Accordingly, writing is how woman saves herself by giving herself breath and speech and writing is the act through which woman realizes – *feels* and *knows*

6 Questions of breath and sustaining breathing have grown to be crucial endeavors of Black Studies. One of many brilliant explorations here is put forth by Alexis Pauline Gumbs in her book *Undrowned* (Gumbs 2020). I will return to a wild-mathematical reading of *Undrowned* in other contexts but will leave this note for readers to explore their breathing and their mathematics and the work of Gumbs in case they have not encountered her already.

– the many powers taken from her. Writing actualizes her thinking-being and realizes her relation of beyondness to the *Mathematics-Rationality-Human* continuum.

So, let me propose *wild mathematics* as a practice that can do just that and be a practice of writing for the breath and bodies of *woman*:

- 1) *Wild mathematics* as *woman mathematics*: for Cixous there is a form of writing that is uniquely that of woman by means of centering all that is hers – her experience, her life, her body, her breath, her sex, and her speech. *Mathematics* moves interwoven with and parallel to phallogentric writing; it sleeps with *reason* and stabilizes phallogentric systems. So, *wild mathematics* needs a life as *woman mathematics* that is a mode of *woman writing* as Cixous describes it – a mathematical practice that centers her body and speech and that formulates a movement of making *woman* closer with herself with the thinking-being of her many bodies, and with her capacities and immensities. *Wild mathematics* commits to forming and finding practices that assist us as *woman* to ‘read the text of ourselves.’
- 2) *Wild mathematics* for the body: writing for Cixous is intrinsically and deeply interwoven with the body (Cixous 1975, 975). She writes that woman has been driven away from her body and her writing through the very same violence and by the very same system. As a result, both her body and her writing need to come alive together and can only do so together (Cixous 1975, 975).
So, if *wild mathematics* is committed to this form of writing – learns from it, wants it, does it – it is committed to the body. *Wild mathematics* then is committed to uncensoring the body – the blood, the sexual, the orgasm, and nonorgasm⁷. *Wild mathematics* is a home to *woman bodies* and centers them to see what happens next.
- 3) *Wild mathematics* for breathing: the suppression of writing is a suppression of breathing to Cixous. *Wild mathematics* as a practice of writing is a practice of breathing. It asks: What must mathematics be to foster breathing? And then it experiments – it believes in the breathing of the woman body as a

7 Sexuality and orgasm play a distinct role in Cixous' *the Laugh of the Medusa* as practices and symbols of ‘the newly born woman’ (Cixous 1976). With ‘nonorgasm’ I refer to all the modes of sexuality not moving as orgasms or as conventionally sexual practices.

re-doing of *Mathematics* and to be wildlymathematical⁸ is to be a thinking-being of beautiful immensity.

- 4) *Wild mathematics* for speaking: much like the dimension of the body and the breathing speech too is an integral part of *woman writing* according to Cixous. *Wild mathematics* wants the speaking woman and believes that there is something wild and something mathematical to be spoken by *woman*. *Wild mathematics* formulates itself through the endeavor to be part of the stormy speaking and to help make it.
- 5) *Wild mathematics* for re-making *woman-body* and *woman-sexuality*: The writing Cixous envisions, and practices re-makes *woman*, her body, and her sexuality. *Wild mathematics* too moves to re-do *woman* as it does not believe in the *guilty woman*; it believes in the *live woman* and wants the *live woman*. As Hottinger points out, *Mathematics* makes gender, it makes *woman* into the being other to *reason*, into a thinking-being other to *Mathematics* and contained and kept under a rock by the Mathematics-Rationality-Human continuum (Hottinger 2017, 46–47). *Wild mathematics* wants *woman* as a being not opposite but integral to itself – to its movements and formations.
- 6) *Wild mathematics* to subvert guilt: The *Mathematics*-centric world creates the *guilty woman* because it constitutes the continuum-based thinking-being that forms the figure of the *guilty woman* and that keeps *woman* guilty because she is made *other to thought*. The *Mathematics-Rationality-Human* continuum reproduces the logic that makes *woman* always-guilty, such as the notion of *proof* as it is used to make *woman* guilty in the context of sexual violence⁹. *Wild mathematics* chews away at the very systems – the logics and the *reason* – making *woman* guilty.
- 7) *Wild mathematics* as a practice of writing: when *woman* writes she re-makes writing. She makes writing into something different to the phallogocentric mode of writing governed by *reason*. *Wild mathematics* re-makes mathematics and re-makes writing by formulating *wild mathematics* as a practice of writing – a mode of written expression that centers *woman* and her breath.

8 I write *wildlymathematical* expression here to indicate the sheer inseparability of the mode of wildness with the proposed mathematical practice.

9 The Mathematics-centric notion of *proving* is the same notion of *proving* applied to demand unfulfillable criteria of evidence and credibility from victim-survivors. For a more detailed account see my paper *does one plus one equal two?*.

This creates a form of mathematical writing that moves beyond *reason* and beyond the *Mathematics-Rationality-Human* continuum.

I will now suggest mathematical experiments and modes to these qualities of *wild mathematics* learnt through Cixous:

- 1) *Wild mathematics* as *woman mathematics*: this aspect speaks to *wild mathematics* being committed to assisting us so that we can ‘read the text of ourselves.’ This can take many forms as any (mathematical) practice that makes woman feel her body, her strength, and her breath. This can mean fostering and centering mathematical expression that expresses being-woman in phallogocentric systems or that expresses the *live woman* or her body. It can mean experimenting with mathematical modes and practices and enlarging the meaning of what it is to *practice mathematics* until *woman* realizes a sense of herself and her body through the practice of a woman thinking-being. It can mean centering her body and her blood. –what does mathematics become when there is blood¹⁰?
- 2) *Wild mathematics* for the body: *wild mathematics* centers the body – especially bodies made *woman*. This centering of the body can take many shapes. It starts with the body of *wild mathematics* not being a specific body – it is not the still body or the male body or the white body. The bodies of *wild mathematics* are the bodies that want to *know* themselves – the bodies invested in their storms and wildness. *Wild mathematics* is the mathematical practice that gives space and expression to these bodies and to the thinking-being they birth. It centers–them in what it is to *practice mathematics* and finds out what this will look like.
- 3) *Wild mathematics* for breathing: this breathing is a bodily and an epistemic breathing¹¹. *Wild mathematics* is on a quest for mathematical modes, practices, and notions that foster breathing. This quest might begin with breathing more than with mathematics. What are the techniques that extend breath, calm breathing, or deepen it? What do these practices do to the body? What do these practices do to mathematics?
Wild mathematics might connect to relations of the breath and mathematical modes that already exist as many techniques for breathing, such as interval breathing, include a practice of counting – of counting series of

10 For an exploration of the epistemic texture to menstruation see Nana and Kather 2024.

11 For a detailed account on *epistemic breathing* see Weber 2024.

breathing (see e.g. Wilson 2024). This already is a mathematical practice of the breath. *Wild mathematics* will devote to such practices and create more.

- 4) *Wild mathematics* for speaking: this speaking is not only verbal speaking, but any mode of speech. *Wild mathematics* centers speech. This will take many forms. One of them could be to make mathematical practice itself into a form of speaking – a mode of expression. Another could be to center verbal speaking by making mathematical practice into a practice of reading aloud. *Wild mathematics* will also – most importantly – inspire and move to speak. It will be intrinsically interwoven with speech because it will be a force moving *woman* to speech.
- 5) *Wild mathematics* for re-making woman-body and woman-sexuality: *wild mathematics* can move to form expressions of woman-body and woman-sexuality. *wild mathematics* asks to be a part of a woman realizing her body and her sexuality by opening spaces for experiences of body and sexuality that overlap with mathematical practices and with mathematical thinking-beings.

This also might take the form of appropriating mathematical modes and practices for experiencing body and sexuality, such as infinity by asking: how can infinity be sensed in one's body and in one's sexuality? Creating practices that can do this is wild and it gives a sense of the immensity of bodies and of *woman* – through wild-mathematical practices of thinking-being.

- 6) *Wild mathematics* to subvert guilt: this dimension relies very heavily on the capacity of *wild mathematics* to change what it is *to prove* and to change what it is *to be woman*. As Cixous establishes, the place of *woman* in a phallogocentric world is the place of *the guilty*. This place of *woman* is fashioned through the *Mathematics*-centric notion of *proving* – as I have established in chapter two, and it is the continuum-based notion of proof that maintains and legitimizes the place of *the guilty* as the place of *woman* by evoking thinking-being unfulfillable to *woman*. So, remaking proving is a mode of remaking *the guilty* and remaking *woman*.
- 7) *Wild mathematics* as a practice of writing: wild mathematics re-makes writing and mathematics. It forms mathematical practice into a writing practice in making it a mode of expression and of forming sense – a sense of words, of worlds, of bodies – a sense of thinking-being. Writing in Cixous' sense moves from a position of oppression, so practicing *wild mathematics* as writing is to put those whose writing and bodies and sexualities have

been silenced – many of them *woman* – at the forefront of mathematical expression.

These movements of thinking-with Cixous towards *wild mathematics* are found in the following characteristics of *wild mathematics*:

- A) *Wild mathematics* is a practice of writing that changes what writing is by changing what *reasoning* is. In doing so, it changes the continuum and its scripts – both through re-making mathematics into writing as Cixous describes it and through the expression of oppressed bodies and voices.
- B) *Wild mathematics* is for body and sexuality. This is not meant on a conceptual level; rather *wild mathematics* fosters a sense of body and sexuality and senses of self in feeling-with bodies and sexualities.
- C) *Wild mathematics* re-makes woman. It wants for woman to become *the live woman* and stray far away from the *guilty woman*. This is partly accomplished through *wild mathematics* re-doing the *Mathematical* foundations of the guilty woman, such as *proving*.

Exploration 3 with Denise Ferreira da Silva

Wild Mathematics as a Re-Making of Value

In this second exploration I re-read an essay that has featured prominently throughout these last chapters: $1 \text{ (life)} \div 0 \text{ (blackness)} = \infty - \infty \text{ or } \infty / \infty$; *On Matter Beyond the Equation of Value* by Denise Ferreira da Silva. Much like in exploration 1, I will first recapitulate da Silva's equation and the core thoughts of her essay. Next, I will gather what there is to learn for forming *wild mathematics* through da Silva's essay and especially the equation that gives this essay its name. Third, I will outline possible wild-mathematical practices inspired by da Silva. Fourth, I will summarize the core thoughts and characteristics for building *wild mathematics* that stem from my reading of da Silva's essay.

My references to this paper this far have focused on da Silva's critique of *mathematical necessity*, as both a notion and as a mode, which is historically and presently utilized to uphold colonial and white forms of supremacy and dominance (da Silva 2017, 4). However, there is a second part to this paper that centers a thought experiment in the form of an equation. Throughout the first half of her essay, da Silva shows that Blackness has been and still is conceptually de-valued (da Silva 2017, 5). This is the starting point to her equation-thought-

experiment, which I have briefly referenced as a form of potential mathematical disobedience in chapter three. For the purpose of this chapter, however, I am focusing on how da Silva develops her equation in building a testament to the disruptive powers of ‘matter beyond the equation of value’ (that is Black life here).

da Silva situates her work and her equations in the theoretical and political movements of considering Blackness a disruptive force, which is always already there and never in opposition to whiteness, but rather underneath, in between, and beyond whiteness (da Silva 2017, 9). This mode understands Black life as a resistant life, in its non-normative capacity and with this resistant capacity comes epistemic resistance in the sense that the disruptive force of Blackness that da Silva summons, is a form of resistance against notions of *value*, *human life*, and *rationality* (da Silva 2017, 9 f.). In other words – a resistance against what I have called the *Mathematics-Rationality-Human* continuum. According to da Silva her thought-experiment-equation is, “designed to help the imagination break away from the enclosures of modern thought” (da Silva 2017, 1). This Equation of Value builds on da Silva’s previous definition of “life = 1” and “blackness = 0” (da Silva 2017, 9). Multiplication and division are applied to describe the relationship of effectivity (da Silva 2017, 9). Da Silva develops these definitions through different equations. However, to focus on da Silva’s resistant re-formation of value, I center the equation that constitutes the last part of her experiment, as well as the title of her essay:

$$f) 1 \text{ (life)} \div 0 \text{ (blackness)} = \infty - \infty \text{ or } \infty / \infty$$

[...] this procedure has no result because it is impossible to divide something by zero. I have chosen $\infty - \infty$ (infinity minus infinity) or ∞ / ∞ (infinity divided by infinity) to picture the result because it is undeterminable, it has no form [...]. It is neither life nor nonlife; it is content without form, or *materia prima* – that which has no value because it exists (as ∞) without form. [...] I claim a radical praxis of refusal to contain blackness in the dialectical form.

$$1 \text{ (life)} \div 0 \text{ (blackness)} = \infty - \infty \text{ or } \infty / \infty: \textit{On Matter Beyond the Equation of Value}, 9$$

Here da Silva displays the equation that her thought experiment ends with as an equation without result and without form. It does not deploy something that is determinable as life or nonlife. To resist a form resists containing a value or nonvalue¹². And it is blackness, which disrupts the Eurocentric system that

12 Da Silva draws from Moten 2003, Hartman 1997, and Spillers 1987 here.

seeks to attribute and negate value by means of *necessity*, by means of *effectivity* (da Silva 2017, 9 f.). It is resultingly this attribution and negation of value that forms and upholds the anti-Black systems that shape the politics and realities, in which 'Black lives don't matter' (da Silva 2017, 5).

So, we can learn about the scope of *wild mathematics* from da Silva. *wild mathematics* moves in relation to Blackness and thus in relation to re-forming value, to disrupting colonial systems of attribution as well as the negation of value. So, the guiding question here becomes how to form mathematical practices that chew tunnels into *value*. This is the scope and the legacy of what *wild mathematics* ought to do and of what *wild mathematics* has to learn from da Silva's essay. What follows now is a collection of impulses for *wild mathematics* derived from da Silva's *Equation of Value*:

- 1) Moving beyond *mathematical necessity*: da Silva made it clear that it is *mathematical necessity* from which notions and practices of causality derive that ultimately shape exclusive notions of *being-rational* and *being-human* through *Mathematics* as an image of thinking-being (da Silva 2017, 4, 6). Thus, mathematical notions, practices, and lives committed to wildness need to move their mathematics beyond a notion of *mathematical necessity*. *Wild mathematics* moves without *necessity* as a point of reference, which is to say wild mathematical practices do not move 'against mathematical necessity,' but rather in mathematical spaces where there is no meaningful existence of a notion of *mathematical necessity*.
- 2) Against causality and towards radical relationality: the notion of mathematical necessity informs the notion of causality, and it is the cause-and-effect-framework that produces binary notions and systems, essentialism, and informs universalized notions of being-human (da Silva 2017, 4, 6). Because it is precisely the notion of causality that is integral to forming notions that reproduce "when someone is human, then they X/they do not X" or "when someone is a woman, then they X/do not X." And while many exclusions certainly do not take the form of such sentences, we do know that what Fricker refers to as our hermeneutical resources – the interpretative resources that shape our day-to-day meaning-making – are informed through systemic stereotypes, exclusions, biased notions, and narratives (Fricker 2007, 156). And da Silva provides us with reflections necessary to realize that these constructions of social roles and biased narratives and notions deeply rely on the notion of causality in place and as an intellectual practice.

So, the mathematical practices of wildness exceed causality because a) causality is a form of order and order is what wildness does not strive for and because b) causality provides the basis for hegemonic notions and forms of essentialism. Instead, *wild mathematics* is committed to relationality: to the messiness and complexity of experiencing, seeing, feeling, and knowing relations between entities or situations or within entities or situations themselves. Rather than relying on and shaping frameworks of causality (like *Mathematics* does) *wild mathematics* centers relationality as its point of reference.

- 3) Moving beyond determinacy and re-doing value through this movement: the notion of value and practices of attributing/not-attributing value relies on the notion of determinacy for there is no attribution of value without notions of practices of determining value (da Silva 2017, 6 f.). Da Silva's essay moves through the ways in which causality, determinacy, and value are a) integral to one another and b) inextricably interwoven with *mathematical necessity* and thus with *Mathematics*. *Mathematical necessity* is an integral reference point for *causality* and *causality* is an integral reference point to *determinacy*, and *determinacy* is an integral reference point to *value*. So, moving beyond causality as discussed above is interwoven with moving beyond determinacy. When there is no causality-effect-form then there is no determinacy, no determination and no value that can be deduced through forms and practices of causality and determinacy. Therefore, moving beyond determinacy is a form of re-doing value.

This dimension of *wild mathematics* bears anti-capitalist potential as *wild mathematics* fosters wild economics and demands economics that do not reference linear processes of value-making through their practices and movements. Summoning *wild mathematics* to re-make markets is by no means a stretch as the phenomenon of performativity describes how mathematical models – for example as they are applied in the context of predicting financial markets – shapes said financial markets to move in increasing accordance with the model (Tarim/Gozluku et al. 2023, MacKenzie 2006, Mackenzie/Millo 2003). So, mathematical models bear the capacity to make and re-make economic movements. *Wild mathematics* re-makes value in relation to mathematical notions and practices as well as in relation to markets.

- 4) Embracing intricacies of mathematics with thinking, speaking, and doing are the intricacies da Silva details throughout her essay and these are the intricacies *wild mathematics* also commits to. As da Silva shows, *Mathematics*

bear the dimension of both being and shaping forms of thinking, speaking, and doing – shaping thinking-being. It is this power of mathematical notions, practices, and worlds, that *wild mathematics* curiously and radically fosters to re-do worlds with anti-hegemonic, nonlinear movements. So, *wild mathematics* is a mode of thinking, doing, and speaking that both shapes thinking, doing, and speaking as it deliberately moves through the radical inseparability of all three.

- 5) Letting *wild mathematics* foster *wild subjectivities* fosters dimensions of subjectivity. ‘The subject without properties’ is what da Silva calls the subject and the subjectivity at the heart of exclusive notions of reason, value, and the human. Striving for or assuming such a ‘subject without properties’ stems from a notion of subjectivity that is deeply informed by universalism, determinism, and *rationality*. *Wild mathematics* moves non-universally, non-deterministically, and non-rationally by refusing to make these notions into any form of reference. Taking into account da Silva’s considerations of the intricacies between these notions and a specific practice and notion of *subjectivity*, we can learn that *wild mathematics* will need to foster *wild subjectivities*, i.e., subjectivities that do not reference universalism, determinism, or *Rationality* – subjectivities that exceed the continuum.
- 6) Learning from Blackness: In da Silva’s essay Blackness is a disruptive force and a ‘matter beyond the equation of value, a ‘horizon of existence.’ In short, Blackness for da Silva is not a category, but a reference point and a revolutionary, disruptive force (da Silva 2017, 2). To enfold its own disruptive forces *wild mathematics* needs to learn from Blackness and become Black in the sense of becoming an entity that discloses ‘horizons of existence’ other than white and Western norms of existence – horizons of existence that exceed the thinking-being of the *Mathematics-Rationality-Human* continuum. Also, just like in da Silva’s work, Blackness is not a category, but a referent (da Silva 2017, 1–2). Learning from Blackness to fashion, learn, and re-call *wild mathematics* can never take the form of a ‘taking from’ Blackness or of an appropriation of Black thought and movements by white people. What it should mean, I believe, is a deep and honest appreciation of Blackness and how Black lives know and live. Forming and practicing *wild mathematics* as a horizon of existence entails straying from and disrupting any logic of epistemic dominance as modes of existence are not categories to be rated, but they form an incalculable multiplicity of situations to be experienced (to recall Lorde here). Black-

ness is a force of life precisely because it is disruptive to Eurocentric, continuum-based thinking-being. So *wild mathematics* should strive be a force of thinking, being, speaking, and doing and a force of mathematical life and thought precisely by being-beyond and in-between what these notions and practices already mean in systems dominated by patriarchy, whiteness, coloniality, and neurotypicality¹³ – dominated by the scripts of the *Mathematics-Rationality-Human* continuum.

To center mathematical practices and notions I will now suggest possible mathematical experiments or changes to mathematical practice that reflect each of these six lessons:

- 1) Moving beyond *mathematical necessity*: *wild mathematics* is mathematical practice and mathematical notion that does not have mathematical necessity as a reference point. This brings up considerations, questions, and experiments regarding what it is to mathematically prove or what the mathematical sign “=” (“to equal”) means. In particular, –two essential consequences for mathematical practice that derive from being-beyond mathematical necessity are that *Mathematical proving* is re-invented in *wild mathematics* and 2) it is re-called from those mathematical practices, that have never centered the notion of *mathematical necessity* in *mathematical proofs*¹⁴. Similarly, in *Mathematics* “=” describes a relationship of (*mathematical*) *necessity*. So, *wild mathematics* re-calls the meanings of “mathematical proving” and of “equaling” and it experiments with these notions and practices. *wild mathematics* re-calls and invents different versions of what it is ‘to prove’ and what it is ‘to equal.’
- 2) Against causality and towards radical relationality: I believe this lesson expresses itself in deep relation and in similar ways to what I have described in 1). Additionally, *wild mathematics* develops a focus on mathematical notions and practices that center relationality, such as modes of proving that rely on the relationality between mathematical entities or on the relationality between mathematical and non-mathematical entities. Centering re-

13 On the relations of patriarchy, whiteness, coloniality, and neurotypicality see e.g. Kather 2024, Price 2022, Manning 2020.

14 For an example of a practice of mathematical proving without *mathematical necessity* see Shulman 1996.

lationality can also take the form of creating mathematical expressions for relations in societal or political contexts.

- 3) Moving beyond determinacy and re-doing value through this movement can take many forms and certainly many more forms than I alone could hope to imagine (as, of course, goes for all of these suggestions). First, the movement beyond determinacy is connected to the notion of *mathematical consistency* and a striving towards such consistency. For now, we can establish that moving beyond determinacy may well take the form of practicing inconsistent mathematics.

Re-doing value is what I believe to be an effect of being-beyond determinacy in causality. However, re-making value and attribution of value within and through mathematical modes does pose intriguing practical questions. For example, when writing that “ $X=1$ ” is understood to ascribe a value to X . When *wild mathematics* re-makes value, what does that mean for definitions such as this one? Do they no longer exist? Or do they exist but shape-shift into a propositional definition, that itself can shape-shift?

- 4) Embracing intricacies of mathematics with thinking, speaking, and doing calls for deep re-inventions of what mathematical practice is and is not. It also calls for a re-doing of the notion that there are clear-cut differences between mathematical knowledges and non-mathematical knowledges and between mathematical practices and non-mathematical practices. *Wild mathematics* forms mathematical practices that think, speak, and do forms of mathematical thinking-being.

This can, will, and needs to take many forms. One of them consists in re-calling and learning mathematical practices that employ bodies in mathematical practices, such as finger counting¹⁵. This is one possible way to re-call the mathematical modes that never separated intellectual from bodily endeavors. Another mode might be to engage in mathematical practice as a form of speaking by employing mathematical modes of modes of personal expression.

- 5) Fostering the dimension of subjectivity in letting *wild mathematics* foster *wild subjectivities*: the most common way to be a subject is to move through the threads and lines and rules laid out by ‘the subject without properties’ – by attempting a sort of closeness to and performance of universalism, determinism, and rationalism. This is the sort of subjectivity fostered by

15 For more details on finger counting see Morrissey/Liu et al. 2016, Fischer/Brugger 2011 and Geary/Bow-Thomas et al. 1993.

Mathematics. I believe it is one of the trans-historical and yet continuous movements of an image of thinking-being that fosters subjectivity (or subjectivities).

So, *wild mathematics* too will take up the task of making, re-making, favoring, centering and de-centering subjectivity. So, I will briefly explore a) what these *wild subjectivities* are characterized by and b) how *wild mathematics* can foster wild subjectivities.

Wild subjectivities are wild in the sense that they are non-ordered. They are not opposed to order; they just do not keep order as a point of reference. *Wild subjectivities* are those subjectivities that move in, with, and through the in-betweens and beyonds of universalism, determinism, and rationalism as well as the in-betweens and beyonds of the *Mathematics-Rationality-Human* continuum.

- 6) Learning from Blackness: what *wild mathematics* can and ought to learn from Blackness is the movements and beings of a disruptive force, which – as da Silva phrases it – ‘discloses a new horizon of existence.’ This commitment can take many forms. One of them might consist of practicing *wild mathematics* as a form of existence and a mode of thinking-being. This ties in with the exclusions that the *Mathematics-Rationality-Human* continuum forms for they do not only move on the level of norming thinking but rather form an Image of thinking-being with an underbelly that moves to form rigid and exclusionary notions of being-human. Learning from Blackness means a) to move beyond and in-between systems of *Mathematics* – not against them – much like Blackness never simply moves against, but always beyond *whiteness* and b) to practice living that has not been established as *valuable*.

I believe the central question that is posed here is how to make *wild mathematics* into practices of living and practices of thinking-being: while also closing these mathematical modes and practices off to anything. Wild-mathematical practice will be disruptive, not because it tries to be, but by the very nature of its wildness and because disruption comes with modes and practices that are non-containable and non-calculable (in the way Manning employs the term of non-calculability, Manning 2020, 3 f. and 210 f.). This is what *wild mathematics* shares with Black life and where *wild mathematics* too needs the wisdom of survival that Blackness carries.

There are three core aspects that I believe da Silva's essay teaches us about *wild mathematics* – its characteristics of the image of thinking-being and its underbellies and currents:

- A) *Wild mathematics* moves beyond, in-between and underneath, any practices and notions of mathematical necessity. This brings with it the same beyondness in relation to determinacy and causality as these modes and notions are not points of reference to *wild mathematics* or to anything formed through its thinking-beings.
- B) *Wild mathematics* is re-doing value and with that re-doing the countless unspoken rules and currents that move to make some lives *less valuable* than others. As da Silva teaches us, this notion of value and its repercussions stem from the lives of determinacy, fashioned by the notion of *mathematical necessity*. So, to move mathematically without mathematical necessity as a point of reference is to abolish the notion of value and the practices of *evaluating* that it enjoins that have shaped the world we have known so far.
- C) *Wild mathematics* is a mode of living, a mode of thinking-being, a 'horizon of existence' (da Silva 2017, 2) and a disruptive force in its capacity of not being-capturable. Much like Blackness never simply moves against whiteness, *wild mathematics* too, is not against the *Mathematics-Rationality-Human* continuum but rather moves without the continuum as a reference point.

These lessons and characteristics of *wild mathematics* move with us into the next movement of thinking-with – a movement that centers the questions of being-human in relation to *wild mathematics*.

Exploration 4 with Sylvia Wynter

Being Human as Mathematical Practice

This exploration thinks-with Sylvia Wynter in order to deepen my considerations on *wild mathematics* in relation to *the human*. I will introduce Wynter's thought, drawing from her 2003 interview with ProudFlesh since this interview provides a comprehensive and unique walk through her decades of writing. Then, I will identify lessons for *wild mathematics* to then suggest mathematical experiments regarding these lessons and characteristics. The chapter concludes with the core characteristics of *wild mathematics* found through

Wynter. Wynter's work centers the re-making of a world deeply formed by the universalization of a particular genre of being human: *the human* of the *Man-Math*-centric worlds and *the human* of the *Mathematics-Rationality-Human* continuum. Wynter's work is an endeavor of epistemic resistance. Its point of ignition (*what is it to be human?*) is distinctly epistemic because it refers to the multi-layered consequences and the re-makings of an episteme¹⁶ – to speak through Foucault and Wynter.

As a writer, theorist, and activist Wynter shaped discourse on and struggles against anti-Black norms of being human. In her work “the Man” is the Western version of being human that has been universalized into the only genre of being human (e.g. Wynter 2003, Wynter 1994, Wynter 1984). Wynter believes the world to be “Man-centric” and advocates for a re-making of the world into a “human-centric” world:

Then we say, “How do we create a world?” I am arguing that you cannot do it in terms of “Man.” You cannot do it in the logic of the order of consciousness of “Man.”

PROUD FLESH INTER/VIEWS: SYLVIA WYNTER, 12

We are going to have to struggle for an entirely new definition of what it is to be human.

PROUD FLESH INTER/VIEWS: SYLVIA WYNTER, 15

Wynter argues that the Man-centric world moves through a specific Man-centric order of consciousness. Thus, to re-make the world into a human-centric world is to change the order of consciousness. Wynter's notion of ‘consciousness’ draws from W.E.B. Du Bois' notion of ‘double consciousness’ and it is deeply related to the second quote as in a colonial world being-human is being Man and therefore distinctly white. Du Bois established that this forms a conflict for Black people on the level of consciousness: the conflict between wanting and needing to be ‘human’ on the one hand and not wanting nor being able to negate one's own Blackness on the other hand (Du Bois 1994). So, when Wynter emphasizes the necessity of struggling for “an entirely new definition of what it is to be human” she too advocates for a different order of consciousness (see e.g. Wynter 2006 B, 17). Black Studies to Wynter is on the forefront of

16 Wynter takes up Foucault's thought on a regime of truth (Wynter 2006 B, 7 and Foucault 1979).

the very “battle against “Man” and for the “human”(Wynter 2006 B, 22). Wynter goes on to detail that this is the very reason that university departments attempt to rid themselves of Black Studies (Wynter 2006 B, 18 f.). This is because the very “body of knowledge” – which includes universities – centers around keeping the Man-centric world as it is (Wynter 2006 B, 6 f.). “Body of knowledge” therefore refers to educational systems as well as to wider logics and form of consciousness. ‘Condemnation’ is one integral aspect of the logic the Man-centric world according to Wynter, which depends on the selection of ‘an exceptional Black that serves as a proof that “all the Blacks in the prison are right to be there”¹⁷’ (Wynter 2006 B, 22).

The Man – the universalized genre of being human – is distinctly Western, distinctly male, and distinctly bourgeois (see e.g. Wynter 2006 B, 15, 22, 24). Wynter’s thought on *the Man* covers many dimensions and bears a materialist dimension that emphasizes the interwovenness of material conditions with genres of being (Wynter 2006 B, 24). Wynter is convinced of a multiplicity of genres of the human and advocates for a world that rids itself of *the Man* as its center in so far as *the Man* is the center of this world and his genre of being has become reference point for *Normalcy* (Wynter 2003, 3). This normalcy shapes how humans move through the world and which systems they foster, “as long as we continue to all want to be good men and women of the Western-bourgeois kind, wherever we are in the world, we will destroy the world” (Wynter 2003, 27). Following and insisting on Western-bourgeois genres of being is therefore what forms economic systems and environmental catastrophes.

Wynter’s legacy calls us to abolish the Man-centric rhythms, systems, and worlds to build human-centric ones instead. This change needs to be brought through what she calls a “a new order of consciousness” – a radical re-making of knowledge and consciousness itself. The notion of poesis is one of the practices she establishes as part of such a movement:

Essentially, they’re [Black poets and musicians] actually part of the process by which we are transforming the poesis of being. [...] Power is always linked to the poesis of being. [...] We now live in the poesis or autopoiesis of “Man.” How can we bring all the knowledge we have gained into the autopoiesis of

17 Wynter explains how Black men are systematically and disproportionately put and kept in prisons through the very workings of the prison system and the educational system (Wynter 2006 B, 11 f.)

the human?

PROUD FLESH INTER/VIEWS: SYLVIA WYNTER, 33

Wynter here points out that power is always linked with a formation – a poesis – of being. Thus, the current poesis is one of “Man” and what is needed is a formation, “a poesis of the human.” She suggests that this is exactly what Black poets and musicians are up to – they are re-doing consciousness through forming a poesis that “signifies repressed orders of cognition” (Wynter 2003, 32).

So, let me propose what *wild mathematics* and its making learn from Wynter:

- 1) *Wild mathematics* is to *feel—with*. Wynter describes how “we’re moving into another order of consciousness” when we feel something in our own flesh that we read about or see (Wynter 2003, 16). She suggests it is this *feel—with* that moves us into an order of consciousness that is not Man-centric – and not built through the *Mathematics-Rationality-Human* continuum.

So, what we, meaning those of us who are looking to make *wild mathematics* a mode of thinking-being, need to ask is how *wild mathematics* relates to the flesh and how *wild mathematics* can foster moments in which we *feel—with*? What does *wild mathematics* have to become so that it helps us to feel our flesh and to feel this flesh be moved despite not being itself physically touched?

Wild mathematics will foster ways of thinking-being and (mathematical) moments that open us to *feel—with*.

- 2) *Wild mathematics* re-makes what it is to be human. As I have argued in chapter two of this work, *Mathematics* is an integral part of the Man-centric order of consciousness and the Man-centric body of knowledge. Resultingly, *wild mathematics* has an active part in a) abolishing Man-centric Mathematics and b) re-making what it is to be human. The latter moves on the level of subjectivity. Political subjectivity, as Wynter points out, has long been preserved for those fitting the genre of *the Man* (Wynter 2003, 29). *Wild mathematics* re-makes *mathematical subjectivity* and, in doing so, *human subjectivity*.

Through these endeavors *wild mathematics* is indebted to Black Studies and moves with a constant need to learn from and with Black Studies as the forefront of struggles against *the Man* towards *the human* (Wynter 2003, 22). Re-making what it is to be human is deeply interwoven with the intellectual and practical recognition that many genres of being human exist; there-

fore, *wild mathematics* moves towards the wildness that arises through a genuine multiplicity of *how to be human*.

- 3) *Wild mathematics* makes a new order of consciousness. *wild mathematics* is related consciousness and commits itself to fostering wild orders of consciousness that take the place of Man-centric orders of consciousness. These wild orders of consciousness are dedicated to multiplicities of being and to a simultaneity of modes of thinking, being, and speaking. They move with wildness as their paradigm so they will have no interest in forming nor in ordering genres of being through hierarchy or universalization. Wildness in relation to consciousness refers to the nonorderability of the *feel—with* and the practice of being human due to the wild and dense multiplicity of human thinking-beings.
- 4) *Wild mathematics* re-writes “the body of knowledge.” The Man-centric world is the *Mathematics-centric* world, or the world fashioned by the *Mathematics-Rationality-Human* continuum. Therefore, re-doing *what it is to practice mathematics* is re-doing this body of knowledge. Furthermore, *wild mathematics* moves without binary modes and notions. This abolishing of binary modes is part of making a world without the ‘logic of condemnation,’ – and in refuting this logic, which essentially relies on dividing Black life into ‘worthy Black life’ (the “exceptional Black”) and ‘unworthy Black life’ (the disproportionate number of Black people in prisons in America). Moreover, academic disciplines uphold the Man so that re-making the body of knowledge means re-making academia. So, *wild mathematics* will be part of re-making academia and put an end to academic disciplines as they exist in their Man-centric manner.
- 5) *Wild mathematics* re-makes class. *wild mathematics* moves along the dimension of class struggle as part of its movements to re-fashion the human. The movements of *wild mathematics* center wild multiplicities of being-human that do not recognize class as an organizing factor.
- 6) *Wild mathematics* is a poesis of being human. *wild mathematics* makes formations of being human and cultivates mathematical practices as genres of being. The poesis of wildness forms nonordered consciousness and genres of being human that do not refer to the *Mathematics-Rationality-Human* continuum and its thinking-being. The poesis of *wild mathematics* makes being human into a distinctly nonorderly affair of the flesh that *feels—with*.

Let me now propose potential starting points for mathematical experiments and practices for each of these lessons:

- 1) *Wild mathematics* is for *feeling-with*. Where *Mathematics* moves in entanglement with 'rationality', *wild mathematics* moves in entanglement with 'the feeling flesh.' That is to say, *wild mathematics* is no longer primarily understood as a way of thinking, and it is not practiced as such. *wild mathematics* needs to become a way of feeling our flesh and *feeling-with* things allegedly 'outside' of our bodies. From the very beginning of thinking-into what *wild mathematics* can be, it was apparent that it moves drastically beyond binary modes and notions of thinking-being. This now takes on a new layer of meaning for if making the world human-centric is to *feel—with—as* Wynter describes it (e.g. to feel a bomb in our flesh that did not hit us), then what it takes is to do so is to re-do the notion and practice that there is something "outside of us." So, *wild mathematics* will join this movement and *feel—with* – it will foster it by chewing away at the binary notion of an "outside and an inside" to our bodies and to our flesh.
- 2) *Wild mathematics* re-makes what it is to be human. *Mathematics* constitutes an integral reference point for Westernized notions of being human (see e.g. Hottinger 2016, 8 f., 145 f.). So, *wild mathematics* can re-make what it is to be human by moving away from *the human* of the *Mathematics-Rationality-Human* continuum by exceeding the *Mathematics-centric human*.
- 3) *Wild mathematics* as ways of being (human): *wild mathematics* formulates itself in and through genres of being human, such as being-mathematically or being-wildly. These many genres of being always exist in plural and they are always in a state of coming-into-existence. The genres of being formulated through *wild mathematics* are never complete, never universal, and never singular, but always in relation with one another, the environment of the creatures who do the being, and with the process of coming into existence itself.

Wild mathematics re-writes "the body of knowledge" by re-writing mathematical notions and practices that constitute *the Man* and the practices birthed by continuum, such as *mathematical necessity*, *determinacy*, *consistency* or *binary*. Furthermore, as I have argued in detail earlier, I believe the *Mathematical* definition of *proving* to be an integral part of Westernized-male body of knowledge. So, re-writing the body of knowledge is to re-write what it is to prove. It is to make proving into a wild practice and to re-invent the notion "to equal" from one of *necessity* into one of *relationality*.

- 1) *Wild mathematics* re-makes class. *wild mathematics* fosters genres of thinking-being that do not produce hierarchies related to class. Furthermore, *wild mathematics* moves beyond notions of *mathematical necessity* and *causality*. Mathematically and wildly re-writing causality is a form of re-writing class because class, as a category, functions through notions and practices of causality. Class excludes because it is understood as a social category that can legitimately determine material circumstance. So, re-writing causality through *wild mathematics* re-writes class by breaking-open the notion and practice of such a determination.
- 2) *Wild mathematics* is a poesis of being human. *wild mathematics* can enfold its power to formulate genres of being human in-process through its poetic dimension in the Lordian sense. *wild mathematics* is a form of poetry that moves to formulate genres of *being human otherwise*. *wild mathematics* is a form of poetry as a deepening of experience, deepening to *feel-with* whatever we encounter and deepening the experience of the flesh as this will move us to new orders of consciousness and a poesis of *being human otherwise*.

I believe what *wild mathematics* has learned and derived from Wynter bears three core characteristics that need to be carried out in all following experiments and considerations of *wild mathematics*:

- A) *Wild mathematics* formulates genres of being human by moving as a poesis of *being human otherwise*, which commits to the feelings of the flesh and the relationality of different genres of thinking-being. *wild mathematics* is therefore indebted to Black Studies and devoted 'against the Man and towards the human.' So, while in many ways *wild mathematics* moves precisely not *against* but *beyond*, a case of againstness does characterize *wild mathematics* – an againstness that constitutes its devotion to be a notion, practice, and being that moves against *the Man* and Man-centric normalcy.
- B) *Wild mathematics* re-writes the body of knowledge and the order of consciousness by re-writing mathematics. Radically re-making what it is to think mathematically is to re-make what it is to think and to re-make what it is to think is to re-make what it is to be (human). This is the enterprise of *wild mathematics*: to partake in the movement of re-making consciousness and knowledge itself by means of re-making *what it is to practice mathematics* and thus to exceed the *Mathematics-Rationality-Human* continuum.

- C) *Wild mathematics* fosters the flesh and its capacity to *feel*—with. *wild mathematics* re-makes recognized boundaries and categories to give way to the feeling flesh not as a unifying power but as a string that interweaves different genres of being (human) and makes their radical relationality feel-able.

Thinking-with Wynter has made the urgency of positioning *wild mathematics* in a relation to the violently exclusive universalized genre of being (human) abundantly clear. So, the next exploration stay with this urgency of re-making what it is to be human through *wild mathematics* and think-with (and feel-with) Erin Manning.

Exploration 5 with Erin Manning

For more-than-human Bodyings and the Wildness of Relationality

Erin Manning has been writing on neurodiverse life and on norms of thinking-being for more than two decades. The thinking-with of this chapter focuses on the prelude and sixth chapter of her (2020) book *For a Pragmatics of the Useless*. *For a Pragmatics of the Useless* explores the relationship of Black life and neurodiverse life in great detail by considering neurodiverse life in relation to ‘the human.’ Thinking-with this exploration will provide another essential layer to exploring and establishing the relationship of *wild mathematics* to ‘the human.’ Her prelude as well as chapter six focus particularly strongly on incalculability and the relationship of neurodiverse life and of Black life to ‘the human.’

Manning’s considerations bear a dimension of epistemic resistance insofar as the forms of resistance to norms of being that she discusses are related to what it is to *think* (Manning 2020, 3 f., – 2016, 6 f.). Manning argues that there is a systemic centering of ‘the human’ presupposing whiteness and neurotypicality (Manning 2020, 226). As such, what she calls ‘more-than human tendencies of the body’ are the things bodies do or crave to do that do not fit the model of the neurotypical human, such as *stimming* (Manning 2020, 3 f., – 2016, 6 f.).

In *For a Pragmatics of the Useless* Manning draws from a model she introduced four years back in *The Minor Gesture* (2016): the ‘volition-intentionality-agency triad.’ This triad describes features of accounts of being in the world that believe in a causality and determinacy between a single being willing something, intending something, and then acting (see e.g. Manning 2016,

6 f.). Mannings concern here is that this model might further construct neurotypicality as ‘the measure of being’ (Manning 2020, 64).

Let us begin thinking-with her in a moment of the prelude, where Manning thinks-with Fred Moten on incalculability:

What remains incalculable for Moten is value itself, a value for modes of knowing unstratified, anexecutive. [...] The aim is never toward calculability, however. The aim is toward a practice that returns to the question of how the schizz cleaves experience to produce emergent collectivities that value existence differently, and how these minor socialities in turn enhance the unaccounted-for. What must remain incalculable [...] is the very question of the being of relation.

For a Pragmatics of the Useless, 12–13

Here Manning quotes Moten’s considerations of the incalculability of value – a value that refers to an unorganized, non-guiding mode of knowing. *The schizz* refers to an intervention into a process – a cut after which the process continues differently and distinctly – although this change is not brought on through a ‘subject decision,’ but by a movement that splits from ‘the normative relational’ (Manning, Massumi interviewed by Agostinho, Laberge 2019, 206). So, what Manning describes next is that here there is clearly no effort to move incalculability towards calculability, but rather an interest in ‘the schizz’ and its potentiality to make collectivities emerge that relate value and existence differently to one another. These *minor socialities* as Manning calls them need to remain incalculable and their ‘being of relation must remain incalculable.’

Manning argues for collectivities of being-in-relation and for practices of valuing existence to be made otherwise through these socialities. This call for these minor socialities becomes clearer throughout chapter six:

Sociality is perhaps the connection here, between Black life and neurodiverse life, sociality as an emergent quality of bodying, as an emergent force for the more-than that is life living.

For a Pragmatics of the Useless, 220

Manning suggests that there are docile and nondocile socialities. These are respectively: modes of sociality widely accepted as ‘human socialities’ and socialities that do not fit with the rigid and largely unspoken norms of ‘human sociality,’ insofar as they do not fit with the human sociality birthed by the con-

tinuum – such as Black life and neurodiverse life. She refers to these nondocile socialities – these Black and neurodiverse modes of life living as *more-than human*, to highlight their exceeding of the narrow white-neurotypical definition of *the human* and their exceeding of *the human* of the *Mathematics-Rationality-Human* continuum.

More-than-human bodies are those bodies whose lives cannot be captured by *the human*, i.e., those bodies and lives that exceed the logic of the single being and the logic of one (Manning 2020, 3 f.) and thus, those that exceed calculability. It is the white-neurotypical human that remains calculable. The more-than-human modes are the lives lived through nondocile socialities – *minor socialities*, which are lives lived through being in relation and thus resisting the logic of ‘being a single being’ (Manning 2020, 7 f. and Glissant 1997).

This deep affirmation of relationality can be put contextualized by re-calling Manning’s notion of autistic perception proposed in detail in *the Minor Gesture* (2016). Autistic perception, Manning outlines, strays from the neurotypical norm of analyzing and categorizing sensory input by perceiving in a mode of non-normative relationality (Manning 2020, -2016). So, affirming relationality and refusing the logic of ‘being a single being’ is to affirm neurodiverse life in its radical capacities to be life lived otherwise.

I suggest gathering the following impulses for *wild mathematics*:

- 1) *Wild mathematics* for nondocile socialities: *wild mathematics* fosters and builds minor socialities in Mannings sense and moves in a constant relationship of learning-from and feeling-with Black life and neurodiverse life. Practices of *wild mathematics* seek to a) give way and space to nondocile socialities that have always already been there as well as b) create modes of sociality not reliant on the white-neurotypical human and its bodyings. So, *wild mathematics* makes – and is itself – a multiplicity of modes of sociality: the nondocile socialities and the minor socialities. In these socialities lie no scripts that demand obedience, but rather movements of togetherness that are constantly being invented.
- 2) *Wild mathematics* as more-than-human mathematics: we know from da Silva and Wynter that *wild mathematics* is not a practice of producing the human in its Westernized-white-neurotypical form. Furthermore, with Manning we learn about the more-than-humanness of *wild mathematics* – about *wild mathematics* as a practice of living in more-than-human bodies and more-than-human thinking-beings. So, *wild mathematics* is committed to all modes that exceed the rigid norms of humanness; it fosters the

more-than-human modes by fostering the mathematical modes that are more-than-*Mathematics*. *Wild mathematics* is all that carves out spaces and modes for more-than *Mathematics* and more-than *the human*.

- 3) *Wild mathematics* for more-than-human bodyings: *wild mathematics* does not use the body that moves according to the *human* scripts – the continuum-based scripts as a point of reference. Rather, *wild mathematics* commits to nondocile and more-than-human bodies and bodyings. It forms mathematical practice and mathematical wildness that invites all bodies and all bodyings and that moves with ever-lasting curiosity about the body, which is not made docile. So, *wild mathematics* moves with a commitment to the body and nestles in the more-than-human lives of bodies.
- 4) *Wild mathematics* for relationality: *wild mathematics* does not move with 1 as its reference point as it is not in the business of committing to single beings. *Wild mathematics* is an image of thinking-being devoted to relationality – to the chaos and wildness, and the nonorder of relationality. Living *mathematically wild* is to be-in-relation with the more-than *Mathematics* and *the human*. Living *mathematically wild* is to form modes of perception, thinking, and living that *feel-with* relationality.
- 5) *Wild mathematics* for incalculability: *wild mathematical* practice is committed to incalculability. It is mathematical movement not interested in calculability, but in accounting for the lives of incalculability and for lives made incalculable. *Wild mathematics* itself remains incalculable as part of its devotion to its own wildness as its wild episteme is the incalculable body of knowledge and the modes not accounted for by whiteness or neurotypicality. *Wild mathematics* is a) itself incalculable, b) invested in incalculability as an integral string of *wild mathematics* as an image of thinking-being and c) devoted to incalculability in its practices.
- 6) *Wild mathematics* as a mode of autistic living is very deeply tied to the relationality and incalculability of *wild mathematics*. Autistic perception moves as a mode of being-in-relation. *Wild mathematics* moves in this mode as well and furthermore carves out spaces for autistic traits, modes, and bodyings in mathematical thinking-beings. This is because being autistic is a way of being wild, of perceiving wildly – as in nonorderly according to the scripts of neurotypicality nor according to the scripts of the *Mathematics-Rationality-Human* continuum. So, autistic thinking-being is always infused with a wildness in knowing and perceiving – with a more-than-humanness in what is seen and lived and spoken. *wild mathematics* can be a manner of autistic living and a mode of being autistic.

Wild mathematics knows the many autistic minor socialities and it knows autistic lives and histories. *Wild mathematics* learns from autistic wildness, carves out spaces, invents modes of autistic thinking-being, and values autistic perception in its movements of mathematical thinking-being.

I will now form more practice-based propositions for (mathematical) experiments related to these newly found aspects of *wild mathematics*:

- 1) *Wild mathematics* for nondocile socialities is deeply related to changing *what it is to practice mathematics*. *Mathematics* suggests mathematical practice to be a solitary affair that is filled with codes and orders of masculinity and whiteness and with scripts of the *Mathematics-Rationality-Human* continuum. *Wild mathematics* forms mathematical practice into affairs of minor sociality. *Wild mathematics* is practiced collectively and learns from Black life and neurodiverse life. It is a practice of living and surviving. *wild mathematics* re-invents what qualifies as a valuable life by abolishing the *Mathematical* basis of white-neurotypical definitions of value (namely *mathematical necessity* and *calculability*) and with this *wild mathematics* becomes a practice of living and a practice of nondocile minor socialities.

- 2) *Wild mathematics* as more-than-human mathematical practice: *Mathematics* is deeply human-centered and even assumes *Mathematics* to be a characteristic of 'being human' as a distinctive and defining character of 'the human species' (see e.g. Hottinger 2017, 12 or Brooks 2021, 4).

Wild mathematics does not move in this logic of species-distinction; it is neither in the business of categorizing beings into species nor of believing mathematical practice to be connected to being a particular sort of creature. Rather, *wild mathematics* identifies with more-than-human thinking-beings: it recognizes the number sense of animals as mathematical practice (see e.g. Messina/Potrich 2021, Brannon 2005, Verguts and Fias 2004) or crip time (see e.g. Kupperts 2014, McRuer 2018, Samuels 2017).

Wild mathematics is the mathematical practice that is more-than *Mathematics*, and it is a form of living more-than the human. This can take many shapes, but above all, demands a committed orientation of wild mathematical practices towards more-than-human modes and bodies – to finding and forming more-than-human modes and experimenting with what they might mean mathematically as well as how they keep changing the notion of *wild mathematics* itself.

- 3) *Wild mathematics* for more-than-human bodyings: centering more-than-human bodyings can take many forms. One of them could be to consider stimming as a potential part of mathematical practice. For example, by re-calling, as well as making mathematical practices that actively work with the body in a way that can function as a practice of stimming and as a mathematical practice, e.g., finger counting – a method of counting through bodily activity of the fingers (Morrissey/Liu et al. 2016, Fischer/Brugger 2011, Geary/Bow-Thomas et al. 1993). These movements can at the same time be a form of stimming and counting. To me this is a wonderful example of mathematical practice that moves with and for more-than-human bodyings and a wild mathematics that recalls bodily mathematical modes to invent new ones.
- 4) *Wild mathematics* for relationality: *wild mathematical* practice moves in the logic of relationality, which is to exceed ‘the logic of one.’ Straying from ‘the logic of one’ is to re-invent notions and practices of ‘to prove’ and ‘to equal.’ Rather than these mathematical modes establishing a determinate relationship – a relationship of necessity as in ‘only one,’ only one possibility, only one outcome – they need to be re-invented into a state of wildness and of wild relationality.
- 5) *Wild mathematics* for incalculability: *wild mathematics* is interested in the mathematical modes that irritate the mode of *calculability* and attributions of value, such as consideration of the different sizes of infinities. By means of their different sizes they evade practices of attributing one value and confuse images of calculability and of univocality.
Wild mathematics nestles in the incalculability within Mathematics while moving to remain incalculable itself by inventing modes that center and foster the incalculable. *Wild mathematics* is the mathematical practice that does not count/does not do counting. This could take the form of relating to numbers like animals do – with a ‘number sense,’ i.e., an intuition for quantities not based in counting (Messina/Potrich et al. 2021, Verguts/Fias 2005, Brannon 2004).
- 6) *Wild mathematics* as a mode of autistic living: one of many possible practices here is that of mathematical stimming as outlined in 5. Practicing *wild mathematics* in relation to autistic life mainly takes the form of studying autistic traits, modes of perception, modes of sociality, and modes of living in order to learn autistic wildness and to learn to practice autistic wildness mathematically. This can take the form of expressing autistic traits or of studying autistic thinking-being or perceptions though mathematical

modes of communication or expression. Or it could take the form of making *wild mathematics* into a potential reference point for autistic socialities.

I propose to carry forward four core characteristics of *wild mathematics*:

- A) *Wild mathematics* is more-than-human in its devotion to more-than Mathematics and the more-than of the human. *Wild mathematical* practice moves with more-than-human bodyings and fosters (mathematical) curiosity in the more-than-human tendencies of the body.
- B) *Wild mathematics* is wildly relational; it moves with relationality as the core notion in its image of thinking-being and practices of living.
- C) *Wild mathematics* remains incalculable and fosters the incalculable; and thereby, re-doing the logics that place value differently on different lives.
- D) *Wild mathematics* is autistic in three dimensions: a) it learns from autistic modes and from autistic wildness, b) it forms spaces and invents modes of autistic living, and c) it values autistic perception in its movements of thinking-being.

Exploration 6 with Gayatri Spivak

Wildmathematical Worlds

This final movement of thinking-with comes into itself with decolonial theorist Gayatri Chakravorti Spivak and the founding figure of *epistemic violence* as a term, discourse, and movement. Her (1988) essay *Can the Subaltern Speak?* is understood as the foundational text for the concept of *epistemic violence* as well as questions of subaltern expression and resistance to epistemic violence.

As I have established early on in this work, my understanding of epistemic violence draws especially heavily from Spivak. She forms the notion to establish that knowledge itself is shaped by power, e.g. through pre-existing frameworks, narratives, or modes of representation. Her notion of “the subaltern” refers to a wide range of people marginalized through their race, gender, class, or along other axes. However, *Can the Subaltern Speak?* focuses primarily on Western colonialism and the narratives and forms of violence that stabilize systems of Western colonialism, such as Western economic power. An important example in her essay refers to different names and narratives given to

particular forms of feminicide¹⁸ in India: one is a Western narrative of protection, criminalizing the man of color and objectifying the harmed woman, and the other negates there was any violence committed (Spivak 1988, 93). Spivak writes that these two forms of naming reproduce logics that legitimize each other and move to erase any possibility for the woman in question to speak (Spivak 1988, 93). Moreover, she writes:

Imperialism's (or globalization's) image as the establisher of the good society is marked by the espousal of the woman as object of protection from her own kind.

Can the Subaltern Speak?, 94

Spivak problematizes the Western self-narration of in which they have been the only ones that have established 'a good society' and shows how through this narrative wide-ranging forms of domination can be legitimized by through production of morality itself. This is because the very idea of *what is good* – according to Western standards, effectively inscribes a Western-colonial perspective into ideas of morality and of 'a good society.' This colonized morality bares teeth in notions of 'protection' (as has been recently explored in detail by Dorlin 2020) as 'protecting women' becomes a colonial narrative told only from a distinctly Western perspective in order to make woman of color into 'the thing that needs saving,' the man of color into 'the thing women need protection from,' and the global South into a world that 'requires Western intervention.'

Spivak closes her essay with the following words:

The subaltern cannot speak. There is no virtue in global laundry lists with 'woman' as a pious item. Representation has not withered away. The female intellectual as intellectual has a circumscribed task which she must not disown with a flourish.

Can the Subaltern Speak?, 104

Through her verdict *the subaltern cannot speak* Spivak emphasizes the radical and depth of epistemic violence: colonality moves in the very logic of representation and of speaking. This situation establishes what Spivak here refers to as

18 'Feminicide' is used to name killings of women that are committed distinctly due to patriarchal logics and systems.

a *task as an intellectual*: a self-reflexivity of those in relative power, a call to acknowledge and explore one's own involvement in pre-existing frameworks entailing epistemic violence.

I suggest the following impulses for *wild mathematics* through thinking-with Spivak:

- 1) *Wild mathematics* as a re-invention of knowledge itself: The *Mathematics-Rationality-Human* continuum builds and legitimizes patriarchal and Western-colonial bodies of knowledge. Re-making *Mathematics* – as *wild mathematics* re-writes knowledge. So, *wild mathematics* moves to change what it is to know through changing what it is to *practice mathematics* and what it is to *know mathematically*.
- 2) *Wild mathematics* as a re-do of representation as a logic: Through her example of ritual killings of Indian women, Spivak shows how the very logic of representation does a disservice to the women in question and even to 'the female body' (Spivak 1988, 99). An essential dynamic of this narrative and violence of representation is connected to the two forms of naming it – the two narratives in question being opposing names/narratives, which stabilize one another by forming two poles. It is the movement between these two poles that silence the woman burned (Spivak 1988, 93). So, this violence of representation, as Spivak makes visible, moves with the logic of the binary. This is where *wild mathematics* can partake in re-doing representation as a logic as *wild mathematics* moves to re-do the logic of the binary and with this can move to re-do the logic of representation.
- 3) *Wild mathematics* as re-making subjectivity: In her example, Spivak brings up how the very notion of 'free choice' and 'subjectivity' arise through patriarchal-colonial logic¹⁹ (Spivak 1988, 99). Thanks to Hottinger, we know that this is the exclusionary subjectivity built through the *Mathematics-Rationality-Human* continuum. *Wild mathematics* re-makes what it is to practice mathematics and with that re-makes mathematical subjectivity and subjectivity as a general notion.
- 4) *Wild mathematics* as self-reflexivity: *Wild mathematics* tends to the task and the special responsibility Spivak emphasizes that 'the intellectuals,' and the relatively privileged to have. This is to say that while *wild mathematics* moves as a disruptive force it does not believe itself untouched by the colonial-

19 The colonial narratives built into notions of 'subjectivity' and 'free will' have been explored extensively by Saidiya Hartman in her (1997) book *Scenes of Subjection*.

patriarchal making by the world of the continuum and it responds to this world by making modes and collectivities that foster self-reflexivity as Spivak imagines.

- 5) *Wild mathematics* as subaltern expression: *wild mathematics* is devoted to moving from those perspectives that have been relegated to the margins as these are the wild perspectives – the ones that cause disruption to the *Mathematics*-centric world.
- 6) *Wild mathematics* as re-making ‘the good’: fostering epistemic violence through notions of morality works when ‘the good’ is conceptualized to be a universal, ahistoric category so that it can be inhabited and universalized through one dominant perspective. This dynamic moves with what I have called *the logic of the binary* as well as *the logic of one* in which a logic of a good-bad-binary and *the logic of one* – in terms of universalization – are both birthed by the *Mathematics-Rationality-Human* continuum. *Wild mathematics* re-makes the logic of the binary as well as the logic of one by moving in the more-than spaces to these logics. With this *wild mathematics* can move to partake in re-doing morality and the epistemic violence it fosters.
- 7) *Wild mathematics* for *wild economics*: Spivak is uncompromising in emphasizing the interwovenness of Western economic power and Western narrative power – how one fashions, formulates, strengthens, and sustains the other. As I have established before, even though it is not the central focus of this work, I am convinced that the *Mathematics*-centric world has a material, economic dimension that manifests and sustains itself through a *Mathematics*-centric economics and financial market. So, *wild mathematics* aims for wild economics and its economic dimension is anti-capitalist. With this, *wild mathematics* re-makes narrative powers and their economic and material bases.

I propose the following mathematical interventions in relation to learnings-with-Spivak:

- 1) *Wild mathematics* to re-invent knowledge itself: *Wild mathematics* re-makes what it is to *think mathematically* and thus re-makes knowledge. I have provided more detailed examples of what this can look like so I will not go into detail here. To summarize, this re-writing of knowledge very crucially entails an un-doing of *the logic of the binary*, *the logic of one*, *the logic of calculability*, and a re-writing of the notion of *proving*.

- 2) *Wild mathematics* as a re-do of representation as a logic: *Wild mathematics* partakes in re-doing of the logic of representation. It does so through centering nonbinary, inconsistent mathematical modes, and moving without two-value systems or modes as a reference point.
- 3) *Wild mathematics* as re-making subjectivity: *wild mathematics* makes wild subjectivity, which is disruptive, more-than-human subjectivity. By exceeding the *Mathematics*-centric metric *wild mathematics* exceeds *the human* and *human*-centric subjectivity. By changing what it is to practice mathematics, new subjectivities are made and subjectivities other to the *human*-centric are re-called.
- 4) *Wild mathematics* as self-reflexivity: *wild mathematics* moves as a form of reflexivity – it knows the lives of epistemic violence closely and it fosters subjectivities that want to know their internalized, pre-existing frameworks and their violent potential. *Wild mathematics* fosters collectivities that form such spaces of reflexivity and it strives to appropriate mathematical modes for this purpose by asking: how can theorems, practices, and notions in the realm of the mathematical be found and founded to formulate tools for self-reflexivity? This could take the form of using *wild mathematics* as a mode of expression or communication in order to communicate perspectives, experiences, position, and dynamics one might have been/be part of.
- 5) *Wild mathematics* as subaltern expression: *wild mathematics* moves from the margins; it looks, and speaks, and breathes from within and from the outskirts – the margins of histories, worlds, and textbooks. Practicing wild mathematics as a form of subaltern expression means that a) *wild mathematics* comes into itself as a mode of expression and communication and strays from logics of epistemic domination, and b) *wild mathematics* centers most the voices from the margins in movements of that support and listen to their mathematical and nonmathematical speaking as well as their inbetweens and beyonds.
- 6) *Wild mathematics* as re-making ‘the good’: as discussed before, this aspect primarily moves through *wild mathematics* – through its sensing of the incalculable, nonbinary, nonuniversal by centering, experimenting, and inventing mathematical modes that exceed consistency, binary, and universalism.
- 7) *Wild mathematics* for *wild economics*: *wild mathematics* embraces mathematical performativity as a phenomenon that could realize epistemic wildness in financial markets through the means of *wild mathematics*. This does not however mean that *wild mathematics* moves with economic systems in

mind – it does not! What it does mean is that *wild mathematics* believes in unknowingly disruptive and powerful dimensions and ramifications to mathematical models and to *wild mathematical* models in particular. So, *wild mathematics* moves to re-call and invent mathematical models that foster epistemic wildness – that is unordered frameworks and modes. And it does so with a trusting and hopeful intuition for the relationalities connecting these models to economic and material worlds.

I believe there are three final core characteristics learnt-with-Spivak for *wild mathematics*:

- A) *Wild mathematics* moves for and with subaltern expression by centering perspectives from the margins of the *Mathematics*-centric world and making *wild mathematics* into a mode of expression for these worlds and their words.
- B) *Wild mathematics* re-makes knowledge itself by re-making what it is to think mathematically.
- C) *Wild mathematics* re-makes *subjectivity* by re-making mathematical subjectivity into a *wildmathematical subjectivity* that fosters other wild subjectivities.

4.2 Moving Mathematically towards Epistemic Wildness

Wild mathematics is an image of thinking-being that moves against, underneath, and beyond the grain of the *Mathematics-Rationality-Human* continuum and moves to re-make the *Mathematics*-centric world.

Through this movement *wild mathematics* is interwoven with a wider impulse towards what I call *epistemic wildness*. *wildness* here implies a) a re-claiming of frameworks that have been made to work towards domination and towards the upkeeping of hegemonic worlds²⁰, and b) a devotion to that which is deemed non-orderly in the *Mathematics-human*-centric worlds fashioned by the continuum. And with this comes a devotion to and trust in the disruptive force of the nonorderly, the wild epistemi.

20 For detailed accounts of the role the notions of 'wildness' played and continues to play in colonial-patriarchal worlds, see Pepperell 2023, Halberstam 2014, or Estés 1995.

The first two chapters of this thesis have established the transhistorical continua of violence made and upheld by the *Mathematics-Rationality-Human* continuum. I theorize these findings as a call to place re-makings of mathematical practices and notions at one of the forefronts of epistemic resistance – at one of the forefronts of epistemic wildness. So, *moving mathematically* refers to a political-epistemological movement towards *epistemic wildness* that forms its movement with a constant – implicit and explicit – interwovenness with *wild mathematical modes*. The nonseparation of the two words emphasizes the inseparability of movements towards epistemic wildness and movements towards *wild mathematics*. Much like the players of the *Mathematics-Rationality-Human* Continuum, epistemic wildness and *wild mathematics* too build a continuum – a continuum of resistance, a continuum of wild, and of more-than-human thinking-being.

The role of *epistemic wildness* and *wild mathematics* is to re-do what it is to think and what it is to be. Through the six endeavors of thinking-with these chapters formed eight crucial characteristics of *wild mathematics* as an image of thinking-being. Resultingly, at the very heart of the lives of *wild mathematics* lie the following motions and aspects:

- A) *Wild mathematics* moves beyond and in-between mathematical necessity by affecting a re-doing of determinacy, and with that a re-doing value and attributions of value.
- B) *Wild mathematics* is a practice for the body, of the body, and towards the wild body – such as the more-than-human body, the stinging body, and the uncaged woman body.
- C) *Wild mathematics* is a mode of being, fostering, and inventing collectivities of minor sociality.
- D) *Wild mathematics* is radically relational – never moving with binarism as a mode. *Wild mathematics* is – – to borrow words from Erin Manning – ‘always more than one’.
- E) *Wild mathematics* re-makes what it is to be human and to be a subject by re-making *what it is to practice mathematics*.
- F) *Wild mathematics* is a practice of feeling and feeling-with. It is never a practice in the mode of ‘problem-solving’ or ‘the rational.’
- G) *Wild mathematics* distills experience, communicates, and expresses.
- H) *Wild mathematics* is indebted to Black Studies, to Black life and movements, to decolonial and decolonial-feminist movements, and neurodiverse thinking-beings.

Wild mathematics is not a counter-concept to *Mathematics*, but rather it is what has always lived in the margins of the *Mathematics*-centric world. *wild mathematics* invents and nurtures these (mathematical) creatures of the margins so that we can re-make all our worlds and inhabit our more-than-human thinking-beings and our ways of wildness.