2021

Inviting Inquiry: A Pattern Language for Learning Spaces

Kate Walters

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A Pattern Language for Learning Spaces

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Where I'm From

I want to begin with a word on positionality. I am writing this book from the intersection of many identities, and I take guidance from Patricia Hill Collins to make note of this in my own writing. Collins stresses that it is important for authors to recognize their own subjectivities[1]. So, I want to note here some of the identities that I hold, particularly because they impact the way I learn about, think about, and write about liberation and liberatory practices.

I am a young cis-gendered woman. I am also White, able-bodied, middle-class, college educated, and a citizen of my home country. I am much more than these things, but identities like these give me certain types of power in society and they inform the various experiences and biases that I am bringing to this book.

This book is inspired by the liberation politics of authors like James Baldwin and Paulo Freire, but I want to acknowledge that I cannot

determine what is liberating for people who are not me. In particular, I cannot determine what is liberating for people who are oppressed by social systems that I benefit from in some ways—namely, racism. I don't want to pretend that this book is an act of liberation for anyone except perhaps myself. But I do hope that this book evokes deeper thought about the learning spaces that you, reader, are a part of. I hope that this book is a point of connection between each of our experiences and the possibilities for liberating change.

To move beyond just a statement of positionality, I would also like to include a preface drawn from Michelle Cassandra Johnson's book *Skill in Action*[2], an interactive book about the intersections of Yoga and social justice. Johnson begins her book with a poem entitled *Where I'm From*, and later facilitates a practice for the reader to write their own version of this poem. Below is my own version of *Where I'm From*, which I wrote when I read Johnson's book for the first time.

I decided to include it here because, as you will see in the following pages, this project has everything to do with putting language to our own visceral experiences, and recognizing that all of those experiences, no matter how small, contribute to the life of the spaces around us. This poem describes a few of my own experiences, some of which are very small indeed, and all of which I am bringing with me to this book. I have decided not to edit this poem before printing it here.

Where I'm From

I am from cast iron skillets,
From Ball canning jars and King Arthur flour

I am from leftover bottle caps
Sturdy, colorful,
They were hats for a stone St. Francis of Assisi

I'm from the big magnolia tree which
Wasn't really all that big but felt it

I am from music and from strong
Women
From Lynda and from Cora and from Ardelle

I'm from dinners that last until
You can't sit in your chair any longer,
From dishes left soaking in the sink

I am from hot pavement and dry sawdust

I am from
        With the Father and the Son
        She is worshipped and glorified
And from Grace, which doesn't make me special

I am from the basement of a half-built
Home in the Arkansas woods,

From whole wheat biscuits and Jessica brownies.
In a way I am from Jessica, though she isn't here
To know all the ways in which we are alike

I am from flakes of lichen on pine trees that we called
Paprika
Whenever we needed spices for our imaginary soup.

What is this book?

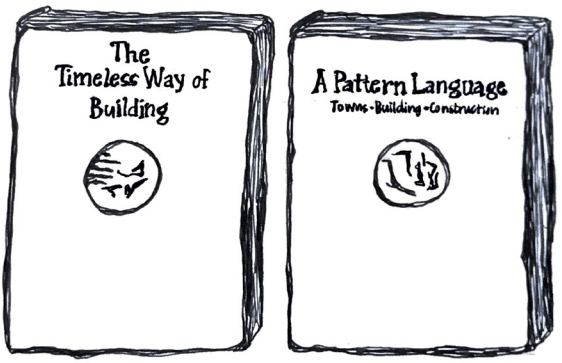
"Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other."

-Paulo Freire[1]

If we asked ourselves the question, *what does a good learning space look like?* we would probably have a lot to say. Each of us might say something different, recalling our own positive experiences or things we've read on the matter. We might say that it looks like an endless stack of books, or a small student-teacher ratio, or an airy room with high ceilings. We would probably have a lot to say, but we would be hard pressed to describe a universally "good" learning space—because we would disagree on a lot, and we would all be right. I would be right for the space I am picturing in my head, and you would be right for the space you are picturing in your head.

That's okay. For each learning space has a unique set of forces acting upon it. The land it sits upon, the history of that land, the impact of the surrounding environment on that land; the people within the space, the people who built the space, the people who will continue to interact with the space. These forces are strong, and they make each place different from any other.

The idea that no two spaces are the same is not a new one. It may even feel like inherent knowledge. But when this simple concept was presented to me in the books *The Timeless Way of Building* and *A Pattern Language*[2], it sparked much bigger ideas and, eventually, it sparked this project.



I acquired *A Pattern Language* on my eighteenth birthday. It was a gift from my dad—a rite of passage of sorts, from a carpenter to his daughter with an emerging interest in construction and design. So, from the moment I first held *A Pattern Language* in my hands, it held particular importance in my life. In a way, it symbolized where I came from and where I might go.

I will return to *A Pattern Language* later in this chapter, diving deeper into its format and contents. But for now, know that *A Pattern Language* is a toolkit of sorts: something that people can utilize to construct their own spaces. It's a large book, filled with hundreds of examples of elements that make spaces come alive, both

tangible and intangible. For people like my dad, who have devoted some of their lives to the structural details of spaces, *A Pattern Language* is a beautiful book that highlights how these details are related to much bigger ideas about the built environments in which we live.

Since that birthday, several years ago now, I've read bits and pieces of *A Pattern Language* at leisure. Never the whole thing. It's a book that's easy to pick up and put down. And when I found myself unexpectedly living with my parents again last spring and summer, I picked it up. I read more of the philosophical introduction than I'd read before, and I picked up its prequel, too—*The Timeless Way of Building*. The writing struck me in a way that it never quite had before. Page 164 of *The Timeless Way* reads:

> "Every house along a road must be shaped by
> a different person familiar with the different
> forces peculiar to that place."

The authors could have said something like *no two houses are quite the same*, but this sentence goes a step beyond that. This sentence **places us in the story of that space.** It gives us a picture of a road and says you—yes, *you*—are the best person for the job of shaping this space. You, the person who may or may not have the knowledge of a carpenter or a planner or an engineer, will make this space what it is. Just by existing in it and experiencing all of the forces acting upon it, *you* hold expertise on how to bring it to life.

In the world of educational theory, this validation of "non-expert" knowledge is a key part of radical pedagogy, as presented by Paulo Freire in *Pedagogy of the Oppressed*[3]. In this book, Freire calls us to get rid of the dominant "banking education," in which classrooms are merely sites of information deposits from teacher to student. Instead, he argues, we should practice a radical "problem-posing education," in which knowledge is passed in both directions: students are learning from the knowledge that teachers bring, and teachers are learning from the knowledge that students bring. In problem-posing education, students and teachers alike build off of their own knowledge and work to develop a "critical consciousness"—an ability to look critically at the world, its social systems, and how we exist within it all.

With Freire's radical pedagogy, classrooms shouldn't just be places where students learn how to solve the world's solvable problems; classrooms should be places where knowledge is always changing, because new problems are being posed all the time. And, as Freire puts it, "liberation is a praxis: the action and reflection of men and women upon their world in order to transform it."[4] Classrooms should be sites of *praxis*. Sites of liberation.

If *The Timeless Way of Building* places us in the story of our spaces as active, knowledgeable participants, Freire's problem-posing pedagogy does the same for students in classrooms. These texts encourage a shift in perspective which we can take to that original question, *what does a good learning space look like?* Perhaps the answer does not lie in outside expertise; perhaps we should be turning to the learning spaces that we find ourselves in every day, and to the problems that we can pose within those spaces.

What if we truly saw what *The Timeless Way* asks us to see: that everyone within a learning space—including ourselves—has an active role in shaping that space? We would, I think, be able to harness incredible power for positive change, beginning with our own spaces. And the process could look something like Freire's definition

of praxis.

Creating quality spaces (spaces that feel whole, healthy, alive) is not something we can force, according to *The Timeless Way*:

> "...quality in buildings and in towns cannot be made but only generated, indirectly, by the ordinary actions of the people, just as a flower cannot be made but only generated from the seed."[5]

Generating quality is not a one-time event. It is not even a two- or three-time event. It is a continuous action, a way of paying attention and using our small actions to speak to the problems that we pose. The metaphor of the flower here also humbles us somewhat; it reminds us that what makes something beautiful is rarely possible to calculate. The work of creating beautiful, good, lively learning spaces is not work that will be orchestrated. It is work that will happen on the tiny scale of our individual lives, because that is the scale we are capable of working at.

Yes, and...

And I must acknowledge another truth. Another more difficult truth, which coexists with this hopeful one. That is: the spaces which we find ourselves living and working and playing in are not random. There are huge disparities in the environmental health of different spaces—especially schools—and those disparities fall along lines of race and socioeconomic status. Schools with predominantly non-White and lowerincome students are far more likely to be in buildings that aren't heated in the winter or have mold growing on the walls[6].

Though "the ordinary actions of the people" may have the power to make a space feel alive, nothing will change the fact that "the people" are all working from different starting points. It might be much

easier to make a space feel good if it already has, say, clean air and water. Not all spaces do. And that is important to recognize.

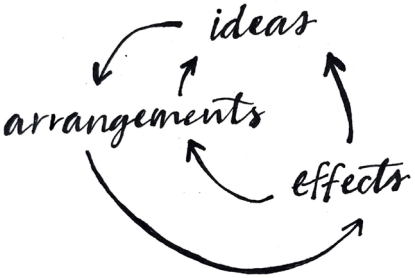
What I want to stress here is *not* that beauty can't be found in learning spaces that lack certain resources. I want to stress that, if our small actions are going to improve the health of our own spaces, we must consider the ways in which those spaces suffer from or contribute to much larger environmental inequities. Taking a critical look at our own spaces means taking a critical look at how they are situated within the environment, and within the systems of exploitation that affect our environment.

A group called Design Systems for Social Intervention recently published a book about the role of our own small actions in addressing systemic issues and creating positive change in the world. The book, entitled *Ideas Arrangements Effects*, brings social justice work to a human scale by framing social problems as the result of ideas, which are manifested in material and social arrangements of the world, and in turn produce effects that impact our daily lives. This Ideas-Arrangements-Effects ("I-A-E") framework is more cyclical than linear. A change in any part impacts all the others, and the authors emphasize that we are part of this cycle. They argue that when we intervene at the arrangement level, in ways big and small, we can create drastic change in the ideas and effects that permeate our world. The book begins with an invocation to do so:

"We start by inviting you, our reader and

> ally, to see yourself as a world builder. Too often, we limit ourselves to reacting to the constant crises of the world as it is.... we believe that those of us who care deeply about social justice need to proactively see ourselves as creators of the world that we are fighting for. We believe that rearranging the social is a powerful tool for this."[8]

This invitation shares the spatial focus of Alexander et al. and the sociopolitical focus of Freire, again **placing us in the story of our spaces.** Returning again to our question about good learning spaces, we might find that the process of learning and developing critical consciousness looks something like the cycle of I-A-E, where we are constantly posing problems, rearranging, noting effects, and changing ideas.



So: how might we actually connect our own experiences, obstacles, and identities to the physical world around us? It starts, I believe, with language. Language is a powerful tool—one that is deeply personal and wholly entangled with the world around us. My own conceptualization of "language" and "literacy" has expanded greatly over the past several years of my life. The writing of Freire again played an important role in that.

Freire's concept of literacy, as presented in the book *Literacy: Reading the Word & the World*, ties together our use of reading and writing and our visceral experience of the world[9]. He argues

that "reading the world"—that is, using all of our senses to notice what is going on around us—must precede and directly relate to our learning to read and write with language. Language is a tool for understanding and sharing our own sense of the world. And most importantly, he argues, language is a tool for emancipation from oppressive systems. Literacy (which Friere defines as reading and writing in one's own language) is a process that allows people to learn their own histories, name their own experiences, and ultimately build collective power, moving towards liberation.

James Baldwin adds to this conception of language as a tool for liberation. His essay, "If Black English Isn't a Language, Then Tell Me, What Is?" defends the legitimacy of Black English as a language by going to the root of language itself. He writes:

> "People evolve a language in order to describe and thus control their circumstances, or in order not to be submerged by a reality that they cannot articulate.... [different people] each have very different realities to articulate, or control."[10]

In other words, language is how we name our experiences, not in order to conform to them but in order to control them. Language is how we shape the spaces we exist in. Language is how we **place ourselves in the story of our spaces.** It is how we bring our complex identities to the world, and it is how we will articulate our critical consciousness of the social conditions that formed those identities. It is through language that we will work towards liberation.

It is Freire and Baldwin's definitions of language that I carry with me to pattern languages.

The original pattern language—the one written into a book handed to me on my 18th birthday—is one of infinitely many. In the book *A Pattern Language*, Alexander et al. define pattern languages

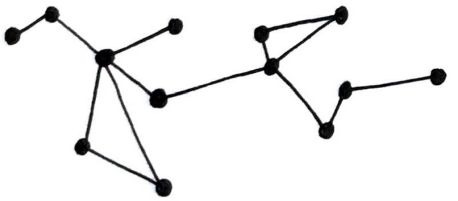
as a toolkit for ordinary people to actively shape their own spaces. Instead of being made up of words and grammar structures like standard languages, pattern languages are made up of patterns that show up in our experiences of space. Alexander et al.'s pattern language looks specifically at patterns that show up in spaces which make us feel alive.

Recognizing that even the smallest details of our spaces are related to the buildings, towns, cities that they lie in, *A Pattern Language* includes both very practical construction knowledge (like pattern no. 220, ROOF VAULTS or pattern no. 240, HALF-INCH TRIM[11]) and very big planning ideals (like pattern no. 29, DENSITY RINGS or pattern no. 10, MAGIC OF THE CITY[12]). These patterns are not simply a list of examples; they are the rules of a language. They are linked to one another throughout the book, giving readers a sense of how the patterns connect to one another. Take for example this excerpt from pattern no. 63, DANCING IN THE STREET:

> "Place the bandstand in a pocket of activity, toward the edge of a square or a promenade—ACTIVITY POCKETS (124); make it a room, defined by trellises and columns—PUBLIC OUTDOOR ROOM (69); build FOOD STANDS (93) around the bandstand; and for dancing, maybe colored canvas canopies, which reach our over portions of the street, and make the street, or parts of it, into a great, half-open tent—CANVAS ROOFS (244) . . . "[13]

If readers go to each of the patterns referenced here, there are links to more patterns. The book is a web of ideas. Alexander et al. encourage readers to draw their own connections between patterns as they apply them to their own spaces. Because each space is unique (and will require different combinations of patterns) users can generate infinitely many new ideas from a single pattern language.

So, in practice, using Alexander et al.'s *Pattern Language* looks something like this: (a) noting a space you inhabit that could feel more alive (b) looking carefully at the details of that space, (c) reading *A Pattern Language* and marking which patterns apply to that space, (d) following the links in the book to connect the patterns to even more patterns, some of which may exist on quite a large scale, (e) implementing the patterns in your own space, shaping what you can and making connections to those bigger patterns which you cannot implement alone, but which your small actions may contribute to.



I am drawn to the tangible, spatial format of *A Pattern Language*. I am drawn to the way in which it is more of a network than a linear path. I am drawn to its faith that our small actions really do matter for structural change. I am drawn to its combination of the material and the ideological, to the way in which it is entirely practical and beautifully poetic. I am drawn to its simplicity and its specificity. I am drawn to the fact that it isn't meant to be comprehensive.

I take inspiration from the book *A Pattern Language*. But I want to take the concept of pattern languages in a different direction.

I want to honor Baldwin's teachings that language is a precious part of identity and must allow us to articulate our own reality. I want to explore how language can be liberating if it stems from our own visceral experiences, as Freire teaches. I want to explore how pattern languages—and all their focus on *drawing connections*—might help us see where our lives are intertwined with others. And, in seeing this interconnectedness, work toward the goal of liberation that Baldwin and Freire dedicated their lives to.

How can we use pattern languages to this end? How can we define a pattern language so that it is not a prescriptive set of answers to spatial problems, but rather is a tool for us to describe our experiences, make connections, and communicate with each other? How can we define a pattern language that helps us **place ourselves in the story of our spaces?**

In the current project, I define pattern languages as a form of praxis. Praxis, as Freire wrote, is about continuous action and reflection. It is also about self-inquiry. About looking critically at the impact of our own actions and the impact of systems of oppression on all of our lives. It is about turning inwards so that we may open ourselves up to the other people that share our spaces. Maybe, by learning how to place ourselves in the story of our spaces, we will begin to see all of the realities that coexist there.

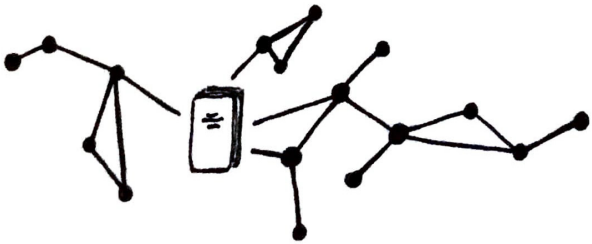
As I redefine pattern languages in this way, I must also reconsider patterns themselves. The patterns included in this book stem from experiences from my own life, and they are patterns because they exist more than once, in more than one place. There's something about the different instances of a pattern that string them together as a *pattern* rather than just a series of events. Some common thread that says, "Hey, there it is again—there's that idea that keeps showing up." My patterns are patterns because they've kept showing up. Maybe in other people's writing, maybe in multiple experiences of my own. I wish I had the time and space in this book to include all of the patterns that I've noticed, but in the following pages are a few that felt important to me.

In this project, I set out to apply this new definition of pattern languages to learning spaces specifically. I want to ask: what patterns show up in *learning spaces* that make us feel alive? What visceral experiences can I put language to, in order to understand them more fully myself and share them with others?

The book you're holding now is a personal answer to these ques-

tions, in the format of my own pattern language.

It is an autobiography of sorts. A web of stories rooted in my own visceral experiences of the world but connected to ideas that are bigger than me. This book is one way for me to begin articulating my reality so that you, reader, might also begin to articulate your own. Reading this book isn't just an act of taking in information about me; it is an act of making connections between the words I've written here and the experiences of your own life (whether they align with or diverge entirely from mine).



As this project has evolved, my understanding of who I'm writing for has also evolved. This is an undergraduate senior project, so I started out with the assumption that my primary audience would be experts in the fields of Education and Urban Studies—the two subjects I am majoring in. Soon, though, I realized that though I may be writing from *within* the academy, I don't necessarily need to be writing *for* the academy. As I began formulating ideas and coming up with a vision for format, I kept coming back to this deep feeling that I want anyone to be able to read this. More specifically, I want people who have not studied Education or Urban Studies to be able to read this. What motivates me most is the idea that this project could be a bridge between the academic fields that I am writing from and the daily lives of people, including myself.

As I clarified my audience, I also came to realize that the purpose of my pattern language as I have defined it here is not the same purpose that Alexander et al.'s pattern language held. Partially because mine is not nearly as robust as theirs, but also because I am

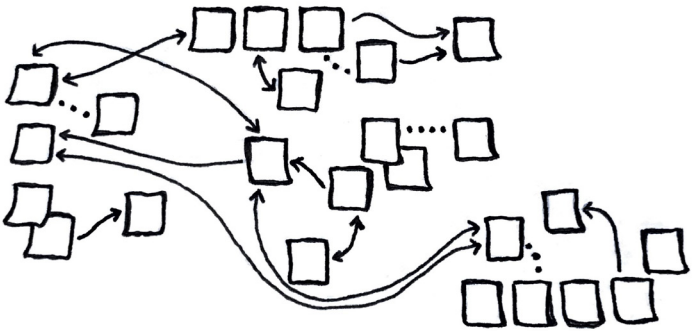
working from a different, less prescriptive definition of pattern languages. Unlike Alexander et al., I do not see my pattern language as a set of solutions to be put into action by readers. My patterns, as you will see, are stories. They speak to the same thing that Alexander et al.'s patterns speak to: the details that make us feel alive in certain spaces. But they are not instructional.

So, I hope that this book might empower you, reader—by bringing attention to some ways in which you can (and do) shape the learning spaces you inhabit. But my pattern language does not have all the answers for doing so. It is only meant to be a spark. The ultimate purpose of language may be to make action possible, but it starts with simply putting words to experiences and sharing them with others. I don't expect this book to change the world. But I hope that it can be a point of connection between small stories and big ideas. Or, at the very least, a point of connection between you, reader, and me.

Summary of the Language

This pattern language is not linear. As is the nature of all pattern languages, the patterns themselves are linked together in more of a web than a straight path. There are several links connecting certain ideas in each pattern to other patterns. You will notice that, in this pattern language, these links appear in the margins as red numbers. Each pattern has a corresponding number, found on its title page and in the summary below. For example, pattern number (2) is *dirty hands*. If you see a (2) in the margin of a page, that's a sign that the text next to the (2) is related to the pattern *dirty hands*. I have created these links based on how I see my own patterns connecting to each other. If you're intrigued by how I've connected one pattern to another, follow the links! Some themes might emerge for you—and you might see more connections that I haven't seen.

So: the patterns in this pattern language don't need to be read in any particular order. But of course, as this is a book, I must arrange the patterns in *some* order. So, below is a summary of the patterns that make up this book. Consider this summary to be something like a table of contents. Keep in mind that, from my end, the process of turning this language into a book looked something like this:



Seriously. I used lots of sticky notes and dry erase markers to organize my web of ideas. So, I encourage you, reader, to lean into the web! Jump between patterns as you read. Follow the links in the margins of each chapter to other chapters that spark your interest. Mark pages to return to later. Skip chapters. Do what feels right. And of course, if you get lost, you can return to this summary for direction.

If you're interested in engaging with my pattern language in a way that's more guided, you can also use the set of cards that accompanies this book. I suggest that you begin by reading the first three chapters of this book: *Where I'm From*, *What is this book?*, and *Summary of the Language*. (In fact, you may have already done so, if you started from the beginning and made it this far!) Then, shuffle up the cards, pick one, and follow where it leads you.

Nine of the cards correspond to particular patterns, marked by the number of the pattern and a drawing. If you pick one of these cards, flip to the pattern that is indicated. Read the questions on the back

of the card and read the chapter with the questions in mind (again, following links within the chapter if you're so inclined!) You'll notice that the questions for each pattern are the same. I encourage you to think about how your answers vary from pattern to pattern. I also encourage you to *write out* your answers to the questions. Thinking about a prompt is a good exercise, but writing can be a really useful tool for digging deeper into our own thoughts.

The 10th card in the stack asks you to "bring to mind a learning space that you are a part of" rather than flip to a particular pattern chapter. If you pick this card, I again encourage you to write down the thoughts that the questions spark in you. Depending on when you draw this card—whether it's after you've read all of the patterns or before you've read any at all—you might have very different responses to the questions. If this intrigues you, consider answering these questions at the beginning of your reading and then again at the end of your reading (without looking back at your first set of answers). Then see how they compare! However you end up using these cards, I hope that they serve you as a tangible spark for inquiry. Something to make your engagement with this book more meaningful (and maybe even more fun).

So: let's return to the driving question behind this book: *what patterns show up in learning spaces that make us feel alive?* The present pattern language is a personal response to this question, rooted in my own experiences of learning spaces. In my own life, **I have felt alive in learning spaces with...**

...walking classrooms (1),
...dirty hands (2),
...infinite solutions (3),

...many ways to sit (4),
...invitations (5),
...creation [functional] (6),
...creation [social] (7),
...embodied acts of understanding (8),
...open doors (9).

This list of nine things is far from comprehensive. I could keep adding to this book for the rest of my life, finding more patterns and changing existing ones. In fact, as I was creating this pattern language, I intended to include many more patterns. Some of them I even outlined extensively. I didn't have time to write them all before my deadline of binding this book, but my working list is as follows:

...subjects that delight us,
...moments of standing up for each other,
...care, prioritized,
...healing bodies,
...coalitions,
...check-ins,
...counternarratives,
...spontaneous *communitas,*
...a culture of inquiry,
...honesty about attention spans,
...healthy independence,
...many ways to succeed,
...food sovereignty,
...beauty.

At the end of the day, pattern languages aren't meant to be comprehensive. In fact, their specificity is what makes them useful. Pattern languages help us look at the *details* of our experiences—and articulate them by connecting them to other ideas, experiences, and people. Our pattern languages are always evolving, as we are always having new experiences.

And so, here follows my pattern language for learning spaces. An incomplete pattern language that is true for me, here, now. I invite you to use this language with me by making connections between my stories and yours. We are all carrying our own pattern languages with us. This is one that I've decided to bring tangibly into the world, hoping that it may be used to do what all languages help us do: make connections with each other and with the world around us.

The Language: Patterns

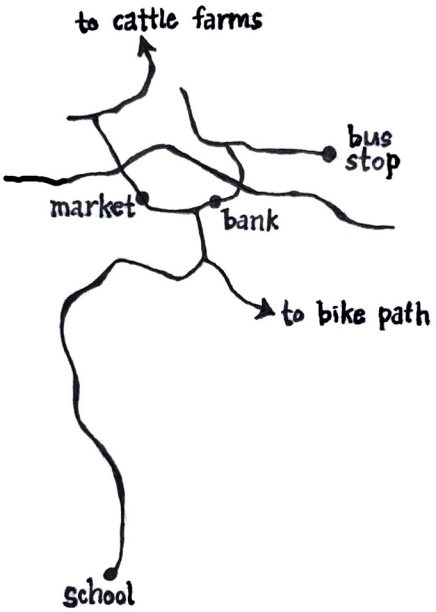
walking classrooms (1)

"Walking allows us to be in our bodies and in the world without being made busy by them."
—Rebecca Solnit [1]

In the winter of 2020, I worked as a teaching assistant at a public school in rural Ireland. Each Wednesday afternoon, I spent several hours with a class of three students, ages 11, 12, and 13. One of those afternoons, we walked into town—a journey of about 15 minutes (a bit longer on the return, when the kids realized that if they walked slower, their field trip would last longer).

The first stop on our trip was the bank, where two employees gave us a short presentation, and the students asked questions they'd prepared from their recent classroom unit on money. Our next stop was the supermarket, a familiar place for the students to put their newly acquired financial skills to the test: they were assigned a shopping list and a budget, and they worked together to weigh their

options at the store. Once they had worked through their shopping list, the kids helped their teacher pick out and purchase some supplies for the classroom.



So many aspects of that afternoon trip felt life-giving. The walk itself gave us time for spontaneous talking, a release from the more formal question-and-answer format of the classroom. It also gave us time to stretch our legs after hours of sitting at desks, and the (4)
chance to review rules of traffic and pedestrian safety. While we were in town, the students were able to apply things they'd learned (6)
in class to the real world around them. And, frankly, they were more willing to listen to what professional bank tellers had to say about money than they were to listen to their teacher.

Our trip revealed to me a simple but often disregarded truth: there are people all around us from whom we can learn. Yet usually our (9)
schools, places we have set aside just for the act of learning, don't actually reflect this. Schools tend to reduce the outside world to the *stuff* that can be brought into the walls of a classroom.

Perhaps one of the most harmful effects of this reduction is that, in
(3) the act of reducing, many people are left out. And not at random. School curriculums tend to be created by people with power, so they tend to reflect the lives and teachings of those people. People who may or may not resemble those in a particular school. People who may or may not have something to teach a group of students about what it's like to live in *their* world. There are people all around us from whom we can learn, yet our curriculums often imply that there are only a select few.

I must pause to note that standardized (or universalized or nationalized) curriculums are not necessarily bad in and of themselves. All of my own K-12 schooling was in the public schools of Arkansas, a state that knows all too well what it is like to be trailing behind the rest of the country when it comes to education. Regional disparities are very real, and national curriculums are often suggested as a response to that.

So, here, I don't intend to pit universal against local. Rather, I want to consider how a distinct type of learning emerges when our classrooms extend beyond the walls that contain them. I return to that Wednesday afternoon, and ask:

What happens when we open up our classrooms to include that vibrant, complicated world buzzing around us?

The learning that happened on our walk that afternoon felt so full of life. It *was* full of life. It was full of lots of lives. We were learning from and with so many different people—each of whom had things to teach us about living in this particular place. Things that textbooks wouldn't be able to teach, because the authors of those textbooks do not live in this place.

We were connecting with our neighbors, and we were doing so by

moving spatially, bodily through the very world that we were learning about. (8)

This experience was made possible by the physical aspects of the place we were in. The proximity of the school and the town center; the density of the town itself; the sidewalks that lined the journey there; the brisk breeze coming off the Atlantic as we walked along the coast; the warm classroom to return to at the end of the day. Each of these things—which we experienced viscerally, in our own bodies—connected our learning to the real world.

So, here's to walking. To whatever "walking" may look like for any particular human body moving through the world. Here's to moving through this world with one another. Encountering one another. Regarding one another. Learning from one another. And, in all of this, connecting with one another—and with the sacred space we are sharing, even if only for a brief moment in the life of one very small corner of the world. (4) (9)

dirty hands (2)

"Sadly, if you search on the internet for 'dirty hands,' you find that it is a metaphor for guilt and shame in the perpetration of horrific acts. How naive I am as a simple craftsman! I thought having dirty hands was a sign of labor and effort in wood, metal, or clay or of the planting and nurture of living things. I guess I've been hanging out with the right people..."

-Doug Stowe [1]

Adorable. Absolutely adorable. That's what I'd say to my roommate every Friday morning, plopping down at my desk after the twenty-minute walk home from the farm. Friday mornings were the time every week that second grade classes took field trips to the farm. So, yes, it was almost always an adorable time.

I started working at this farm as soon as I started college. I was

given a work study allotment that allowed me to work off campus, and I was incredibly excited to find out that I could work there as an Education Intern. For that first year of college, I didn't yet know what all I wanted to study, but I knew when particular things felt right. Being at the farm felt right.

A lot of things fell under my job description at the farm, which is part of why I loved it. Some days I'd be digging in the dirt, weeding, harvesting, mulching, planting. Some days I'd be drawing plants for coloring pages for local elementary schools. Some days I'd be at those schools, distributing fresh veggies to parents or making snacks with kids. And on Friday mornings, I'd be with a class of second graders, picking raspberries, smelling herbs, and making soup.

On a big scale, those field trips were about showing students how important food can be as a connection to the earth and to each other. On a very small scale, though, those field trips were about the sense of touch. Most second graders, you see, love to touch everything around them, especially when those things are strange-looking vegetables and silky grass and delicious-smelling herbs. Actually, I think this is true for lots of people who aren't in the second grade; it's certainly true for my 21-year-old self. But there was something particular about these kids. They seemed to explore the world by touch *without hesitation*. Most of the time, they didn't (8)

think twice about the possibility of getting stung by a nettle plant or having muddy sleeves for the rest of the day. And whenever they did think about that, they usually ended up choosing to get their hands dirty anyway. They seemed to know that by getting their hands dirty, by reaching out to the world around them, by literally *digging into* unfamiliar places, they could understand a lot.

In the words of Doug Stowe, a woodworker and teacher from a very small town in my home state of Arkansas:

> **"Our hands are essential to learning ... we engage the world and its wonders, sensing and creating primarily through the agency of our hands."**

Stowe writes extensively about learning with our hands in a long-running blog entitled "Wisdom of the Hands."[2] He writes most often about woodworking, his own trade and the subject that he teaches to kids. The "wisdom of the hands," though, shows up in many places. It showed up for me at a farm on Friday mornings several years ago.

In all of Stowe's blog posts that I've read (which only graze the surface of over a decade of writing), he never strays from the belief that
(6) using our hands in learning is truly essential. Our hands, he argues time and again, can teach us things that no amount of sitting down to think can. It is unfortunate, then, that there seems to be sentiment—and even social pressure—that a successful job is one that doesn't require you to get your hands dirty. In Stowe's words:

> "The making of beautiful and useful things, even getting dirty in the process is the soul of the human cultural developmental process. When we leave some members above it all and untouched by the reality of work, they

> are diminished by it. They fail to draw upon the intelligence real work provides. They also fail in their responsibility to grant dignity to those who labor for a living."[3]

Though I don't agree with Stowe's distinction of "the making of things" as "real work" (implying that other forms of work are not real), I am struck by the way he describes the white-collar/blue-collar divide. It's not hard to see in our world today, this socioeconomic division. It's not hard to see in the life of my dad, who graduated from college only to feel guilty for becoming a carpenter instead of something more intellectual. In fact, he left the carpentry trade about ten years later, for an indoor job that keeps his hands clean, and he still talks today about the dramatic shift in his social circle. Instead of spending his days with fellow construction workers— (7)
many of whom never went to college and will never make as much money as those who did—he now spends his days with people who may have never considered taking on a blue-collar job. People with college degrees. People who are trying to keep their hands clean.

What's troubling to my dad—and to me, and to Doug Stowe I think—is that these two groups of people have hardly any overlap. Our society is no stranger to segregation: our neighborhoods and schools remain racially segregated after mandated segregation was nominally outlawed. Intertwined with that racial segregation is economic segregation, a geographic divide based on income and wealth that has only been deepening in recent years[4]. This divide affects our social circles greatly and, as Stowe points out in the above excerpt, lower class workers are often not granted basic dignity by those on the other side of the divide.

I appreciate that Stowe points out that this divide is not one of intellectual winners and manual-laboring losers. He states that people who never engage in the labor of making things "are diminished by it." This type of work gives us a lot. It teaches us a lot.

I can tell from Stowe's blog that he and I live on different sides of another related division: the political divide. The deepening divisions between the left and the right can be seen in our geography and in our social circles—just as with the manual and intellectual work divide. To be perfectly honest, I have had far fewer instances of learning from right-leaning folks than I have from left-leaning folks. I grew up in largely liberal circles. Sure, that was in a very red state and I know plenty of right-leaning family members and classmates. But almost all of my closest friends and teachers place themselves on the left side of the political divide.

Because of this, I read Stowe's blog with some caution. In the post I quoted above, for instance, he posts a link to a Fox News interview of another writer. I watched it with hesitation. I cringed when the interviewee introduced his personal catch phrase: "If we want to make American great again, we have to make work cool again." I got frustrated when the host references manual labor as making someone "a man." But I continued to watch and read Stowe's commentary, and I did actually learn something from it. I learned from an ordinary person who carries expertise from his lived experiences.
(9) Experiences which are quite different from mine.

Doug Stowe's and my experiences do align in one significant way: we have both felt the power of using our hands to understand the world around us. Those second graders at the farm seemed to understand this in their own way, too. This is a pattern, dirty hands, showing up in all of these very different lives. Taking note from the wisdom of the second graders, I think that we (especially we who may position ourselves outside of or above manual work) might not need to think so hard about getting our hands dirty. We'll be able to wash them later. And it will have absolutely been worth it.

infinite solutions (3)

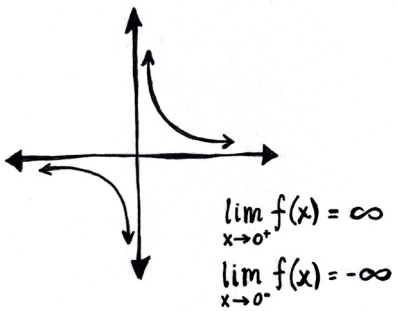
"Following simple rules in one small place, with curiosity, can lead to deep inquiry and connectedness, even beyond where those rules still apply."

-Ardelle Walters[1]

"I'm just not good at it." Those were the words Tynan used over and over again as we worked through the exercises in her math textbook. She said this repeatedly, yet she would usually get the problems within a few minutes of looking at them. I wish I could say that there was no reason for Tynan to think she was bad at math, but I saw the reasons that surrounded her. I saw the standardized test scores that placed her in this remedial math class. I listened while her teacher explained that she needed my tutoring because she "doesn't usually get things the first time around" which, realistic as it may be, didn't exactly instill confidence in her. And I saw her walk into a classroom every day as one of just three girls, where her

voice was often overcrowded, consciously or not, by the room full of boys (a scene which I'm all too familiar with in my own life). So, although I was able to see how completely false it was that Tynan was "just not good" at math, I understand why she believed it. And, though I made effort to tell her otherwise, I knew that I was up against a whole slew of systems telling her that it was true. (5)

What I saw specifically in Tynan was someone who hadn't yet been introduced to types of math (or ways of doing math) that made sense to them. For instance, when we started diving into geometry, she suddenly understood some of the formulas that we'd covered more abstractly in algebra. I was so happy to see this, partially because it disproved Tynan's internalized narrative that she was bad at math, and partially because I related to it myself. Even as someone who has pursued math as far as upper-level classes in college, I often don't fully understand abstract concepts until I can picture them geometrically.



Fortunately, the more math classes I've taken, the more I've been taught that math is not about finding a single correct solution; it's about finding one of many correct solutions. Even for problems that have only one numerical answer, there are usually many ways to arrive at that answer. The purpose, then, of learning different types of math (geometry, algebra, calculus, etc.) is to be able to approach a problem many different ways. For me and Tynan, the geometric approaches often make the most sense. Recognizing that there are many ways to solve one problem is not only a way of validating dif-

ferent ways of thinking—it is actually crucial to the field of mathematics. None of the laws and theorems that we now take for ganted would be known if mathematicians before us hadn't tried something new.

For some reason, math is often seen as an innate gift rather than a way of thinking that can be learned. Along with this, the people who are likely to think that they are inadequate at math is not at all random. Our country has historically excluded people of color and women especially from STEM fields like math, and that exclusion still exists today, though it may be less explicit than it once was. As a cis woman, I can speak to the gendered side of this appearing in my own life.

It wasn't until I was a sophomore in college that I had a math teacher explicitly name the gendered power dynamics in class. I vividly remember our professor pulling aside the four women (out of probably twenty students in the class) before our first collaborative class assignment. She named that it would probably be intimidating to be in a room full of men deliberating on a problem set, and that this might make it harder to have confidence in our own ideas and suggestions. But, she said, even if you don't want to speak up, you can trust your own judgment. Again: there are many ways to solve something. And it is hard to try new solutions if you lack confidence from the start.

This professor's advice meant a great deal to me. She affirmed that a lack of confidence doesn't necessarily stem from a lack of knowledge or ability. And she reminded me that fighting that nervous feeling doesn't necessarily mean confronting the intimidating people in the room. As it turned out, fighting that nervous feeling in this particular class meant finding solidarity with another classmate experiencing the same thing. That semester, I became close friends with one of the other women in the class. We found that we were most comfortable doing math with each other, and we were able to actually get excited about solving the problems in a way that we rarely would

in class.

I carried this experience and advice with me into my class with Tynan, where I quickly recognized a similar dynamic. I tried to be the voice that my professor was to me, validating that feeling of inadequacy but pointing out that it says nothing about your actual capability. But our school systems need more than just individual teachers to provide these affirmations. There are many reasons for including more voices in math and STEM fields. It can foster confidence in those that feel like they are "just not good at" math—especially those whose identities are marginalized in the field. And it will only lead to more knowledge, more ways of looking at problems. For math is about finding infinite solutions within the constraints of a single problem. The more perspectives we have to contribute to that creativity, the better we are for it.

(9)

(4)

many ways to sit (4)

"Chairs are generally not a response to the realities of the body, its natural evolution, or its needs for any extended period. Instead, the industrialized body has devolved its needs and succumbed to chairs."

-Sarah Hendren [1]

Are you sitting right now? Yes, you, reader. Are you sitting right now? At the risk of being presumptuous, I'm going to guess that you are, because most of us sit when we read, right? It would be tiring to stand or move around while we read, and lying down is often not an option.

Galen Cranz, author of the 1998 book *The Chair: Rethinking Culture, Body, and Design*, would disagree about that last part. As a researcher of the horrific impact of modern chairs on our bodies, Cranz often forgoes chairs in her daily life, even if it means lying

down in public places. She recalls one instance:

> "I laid down in a bank and somebody came up and asked me if I was having a heart attack, which was kind of them. You know, I understand. But I said, 'No, I'm fine. I'm just resting because the line is so long.'"[2]

Although many of us [and I intentionally include myself here] don't have the guts that Cranz does to go completely against social etiquette for the sake of long-term health, her actions do point to a feature of arranged space that we might be able to change: the type and variety of seats.

There are so many ways for our bodies to sit, yet most of our public spaces—and most of our learning spaces, notably—are filled with only upright, backed chairs. This is significant. These types of chairs not only take a toll on our physical health, as Cranz's book reveals in great detail; they also send a strong message that every person's body should be able to conform to the shape of this one chair. (8)

But not all bodies are conformant. Sarah Hendren, a designer in the field of disability studies, explores the ways in which the built world disables certain bodies. In her book *What Can a Body Do?*[3] Hendren expands on Cranz's research and reminds us that if we change the way the designed world treats nonconformant bodies—that is, if we design and build a world that works to meet human bodies where they are—we might stop designing chairs that are so damaging to us.

I think it's important to note that many types of bodies are deemed "nonconformant" by the built world, beyond those labeled as disabled. Walk down the aisles of any department store and you can see the ways in which dark skin is nonconformant: clothing, makeup, BandAids all cater to consumers with light skin. Non-male bodies,

too, are often nonconformant in ways that we may not even realize. Caroline Criado Perez authored a book about this phenomenon, entitled *Invisible Women: Data Bias in a World Designed for Men*[5].

In this book, Perez looks at a host of ways in which people with non-male bodies have been completely ignored when it comes to design and data collection. One of the most pervasive examples is the fact that car crash testing dummies are based on a 50th percentile male body. This means that cars are built specifically to protect a male body on impact. A male body which, as Perez points out, has entirely different neck muscles, spinal column, and pelvis from a non-male body. As a result, women are far more likely to be seriously injured or die from a car crash. And, on a less life-threatening level, car seats just don't fit non-male bodies very well; they're prone to be less comfortable.

Which brings us back to chairs. Straight back chairs just don't fit lots of types of bodies very well. Perez offers a solution at the design level: collect sex disaggregated data. Find out what works for bodies that do not fit the niche 50th-percentile-male norm. Galen Cranz
(3) offers a solution at the arrangement level: provide more ways to sit! We know that different bodies have different needs, so why not fill rooms with many different types of seating to accommodate more of those needs?

These solutions are important for all spaces, but they seem especially important when it comes to classrooms. Classrooms, unfortunately, have become a quintessential space filled with only hard, straight back chairs. It's exhausting to be in a space like this for eight hours

a day—especially when you're expected to be focused for that entire stretch of time. I know it exhausted me throughout my schooling.

I've come to realize, over the past few years especially, that the way I'm able to sit in classrooms makes a real difference to my learning experience. In classes where I'm moving around, or sitting on a stool, or even able to sit cross-legged instead of upright, I notice myself being more present and focused. And, because I can only speak (8)
to what it feels like to move through the world in my own body, I am drawn to Cranz's simple suggestion of variety. Offering many ways to sit means offering many ways for different bodies to be present in a learning space. And that, if anything, is a way to making learning come alive.

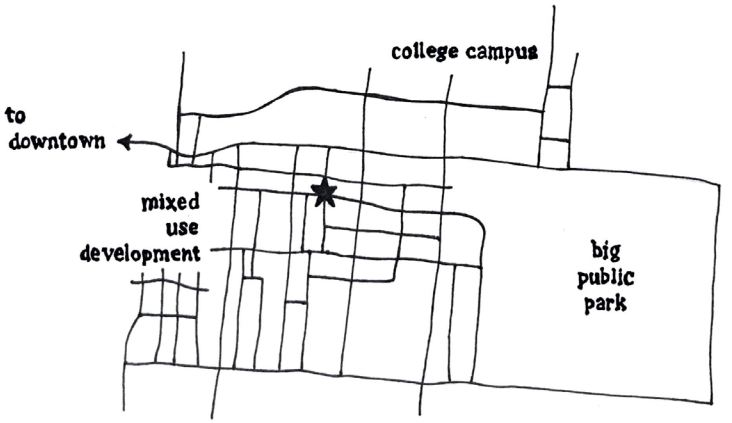
invitations (5)

"Out of bad faith comes a longing for control... bad faith suspects that the gift will not come back, that things won't work out, that there is a scarcity so great in the world that it will devour whatever gifts appear. In bad faith the circle is broken."

-Lewis Hyde[1]

My parents live on the corner of two bustling streets in a historic neighborhood of Memphis. They moved to this city, and to this corner within, after I graduated from high school. The longest stretch of time I've spent there was just last year, in the first five months of the coronavirus pandemic. I was grateful to be there for that long and strange time. Not only because of the comforts of family and an air-conditioned house, but also because of the very specific corner that their house sits on. I spent most of every day that spring and summer on the front porch and came to realize that, because of its

location, this corner sees some of the most frequent foot traffic in all of Memphis.



At any given time of day, there's usually at least one person within eyeshot, biking or walking a dog or dancing down the middle of a street with a boombox. (That last one happens, admittedly, less often than the first two, but more often than you're probably guessing.)

My parents have also planted a butterfly garden on this corner, with herbs and flowers that flow onto the sidewalk in spring and summer. This corner is an exceptionally pleasant place to linger. And, in a time when social life felt especially cut off, I was grateful to see and be a part of the lingering that happened there. Every day I saw dozens, some days probably hundreds, of people: a few of whom I came to know by name, some of whom I came to recognize by their exercise routines, and many of whom I'll probably never know.

It was on this corner, amidst all of these people, that I processed the events of early June. The murders of several Black Americans by the police (though this is tragically not unique to that one month of June). The public outcry. The growing media coverage. The numerous local protests.

And it was on this corner—because of this corner, really, and the way folks seemed to naturally linger there—that I built with my dad a small free library, filled with books written by people of color. This project was fueled by my own realization that many of my neighbors—the educated, progressive ones, even—might never have been introduced to the concept of prison and police abolition, or even systemic racism. The library was my way of responding to my own position as a student of sociology and education, and as an inhabitant of this particular piece of land. In this national outcry, I felt strongly that what I needed to do was turn to the spaces right around me.

I know that this library won't solve systemic racism. I know that it won't solve the racism present in that particular neighborhood in Memphis. But I also know that the impact I'm capable of lies on the small scale of personal relationships and conversations. And that, as is pointed out in *The Timeless Way of Building*, my impact also lies in the spaces I am a part of everyday. This small street corner was one of those spaces. It was a space that I knew intimately and saw as having incredible potential to bring people together in a particular way.

I thought a lot about how to present this free library to the world. How to convey to passersby that this isn't just a random assortment of books, it's been purposefully assembled for learning and conversation. I thought about how to present the library in such a way that White people's first reaction wasn't just *great, I have books to donate* but something more like *what can I learn from this?* I thought about how to talk directly about race without using politically polarizing language, so that my right-wing neighbors would
(9) feel invited to learn from this space. I thought about why I felt so adamantly opposed to this library being put on social media (which had everything to do with the fact that it was born out of a unique physical space, this street corner of spontaneous gathering).

I thought about many, many things. Taking as many of my

thoughts as I could into account, the library ended up looking like this.

The invitation on the door, "let's talk," was accompanied by bookmarks inside the structure with a description of the intention of the space and an invitation for these books to be a spark for conversation between neighbors. Each book inside also had a personal note written by the person who donated it, naming what they like about it and learned from it, or why they were sharing it.

Of course, I wanted this space to remain as intentional as I'd created it to be. And, of course, being a public area, this turned out to be difficult to control. In fact, I came to see that the point was not for me to control it, but to encourage other people (as much as I could) to help care for it as their space, too. This was an open space. That was the beauty of it. And I hoped that people would find the same invitation from this little library that they already seemed to get from the street corner itself.

What became ever clearer over the following weeks and months was that it would be a serious test of patience to keep this library intentional and sustainable. When I left Memphis to attend school in the fall, this test of patience fell more upon my parents. They gave me regular updates about the library, and we grappled with how to let it

(1) be shaped by the strangers who encountered it, while also ensuring that the intention behind its creation was kept.

We ultimately agreed that this place be first and foremost an invitation. That it be a place where, regardless of your prior knowledge, experiences, or political background, you were invited to learn. That it be a place where we stick to the values that inspired the library, but let the books do the speaking.

It still requires a lot of patience to honor this place as an invitation. I've since rewritten the language on the bookmarks and added cards for people to write back and forth about the books that are circulating. We've taken out and re-donated piles of books that were put in the library without recognition of its specific purpose. [Probably the most shocking of these was a book called "How to Be a Fairy Princess," which discouraged girls from wearing rain boots to play in the rain because they are "ugly," and which my mother took out of the library and immediately slammed to the ground, cursing and screaming in frustration. Like I said, it's been a test of patience].

But, as much as the library is still evolving, and as much as we will continue to be frustrated by it, I have witnessed and been a part of some incredible interactions because of it. Like meeting Patti, a neighbor who I'd never known before but ended up trading books with and corresponding with by leaving notes on each other's porches. Or seeing Emlyn, a high schooler, get excited about reading and donating and writing her own blurbs about Maya Angelou and Roxanne Gay books. Or talking to Patricia, who works at an education nonprofit, about our shared interest in the American education system and how it might change for the better. Or hearing about the anonymous neighbor who stopped by to thank my parents, saying that the library had become a habitual destination for him and his daughter.

And so, as time moves on, I am trying to hold two truths at once: (1) that creating a learning space as an open invitation takes consistent

effort and will be full of collisions between people and ideas, and (2) that creating a learning space as an open invitation can create meaningful moments of connection and growth. Both of these things are true. I don't want to just think of the good moments as outweighing the bad or making up for mistakes I've made along the way. I want to see these truths, sitting side by side, and let them remain there.

I include invitations as a pattern, then, not because they are easy to enact but because they seem to be worth the effort. Some of our neighbors' reactions to the library space affirms this. As do my own experiences of feeling invited into learning spaces. I can recall learning spaces, too, where I have felt particularly unwelcome (often because of my gender) and regret how that affected my ability to engage. To be invited into any space always feels good, but it carries extra weight in a learning environment. (3)

In the case of my parents' front yard, maybe that invitation looks something like fresh herbs to be picked or the gift of a book. In some of my classrooms, that invitation has looked like pointing out power dynamics and explicitly inviting those who may feel unwelcome or unwanted *into* the life of the place. In your learning space, an invitation might look entirely different. It may be messy, and there will most likely be some conflict. But you might be surprised by just how far that invitation can reach.

creation [functional] (6)

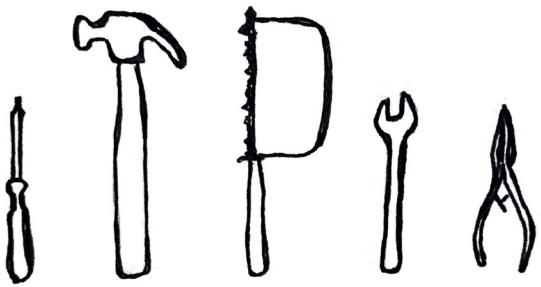
"Getting an adequate grasp on the world,
intellectually, depends on our doing stuff in it."
-Matthew B. Crawford[1]

"Thank you for treating us like the ~~people~~
teenagers we are"
-Victor, 10th grade student

When I turned 14, I got a bed for my birthday...sort of. What I really got was materials and guidance to build my own bed. My family still jokes about giving me a gift that required my own labor, but anyone who knows me knows that it was actually the perfect gift for me. I've loved making things for as long as I can remember, and helping build functional things for our home was a pretty big part of my growing up. As I've mentioned earlier in this book, my dad was a carpenter, so I was often roped into helping with one construction project or another. And I loved it. Still do, when I visit home and get

to help with projects.

I didn't learn much about construction or practical skills at school, so my own backyard became the primary learning space for things of that nature. I learned some things about how the world works from school, but I learned about how the world is *built* at home. And I learned by doing. By building things that my family and I actually used: kitchen cabinets, bathroom sinks, tables, shelves, benches, beds. Understanding how something is made is one thing, but actually making something that you know is going to be used gives a whole new sense of purpose to learning. (2)



In the late 19th century, a theory of education emerged that encouraged woodwork and other handiwork as a means of fostering healthy development in children[2]. Under this system, called Sloyd, children are taught manual skills, not so that they can enter the workforce in a particular trade, but so that they develop the skills that come with this type of work, such as problem solving and fine motor skills. I am intrigued by Sloyd because it transcends the dichotomy of intellectual and physical work that defines our contemporary education system. Sloyd values physical work *as* intellectual work. (2)

Before I'd ever heard of the term Sloyd, I yearned for this type of learning in school, perhaps because I got to experience it at home. I wonder, though, if a classroom would have been the right site for me to dive into this type of learning. Would the simulation aspect of (1)

classroom learning (that is, doing exercises for the sake of exercises rather than doing work with stakes in the real world) really give the same sense of purpose to this type of work? Or, in other words, would I be as interested in building something if it weren't actually going to be used by me or people I know?

I think, for instance, about learning how to wire electrical outlets. I learned how to do this just last year, as my dad and I turned a tool shed into an extra bedroom. Whenever I learned about circuits and batteries in science classes, I was usually bored, wishing I was elsewhere. But when I was given the task of hooking up the outlets that would give me a reading light at night and charge my phone every day, I found it pretty fascinating. The work felt worth something, and it was satisfying to have created something useful.

Though I count my backyard as a learning space in its own right, I am curious about more formal learning spaces that might include the act of creating functional things. Perhaps something like a Sloyd curriculum is a good starting place. But I think that it could be expanded to be even more empowering to students. Students might be even more invested in their learning if they are trusted to create things that will actually be used in the world.

Students are capable of making real contributions to the world around them, beyond just practicing doing so inside a classroom. We often treat childhood and adolescence as a time of practicing for adulthood, especially when it comes to building tangible skills. Of course, this is true to some extent, yet it is unfair to judge youth only by how prepared they are for adulthood. Think about how often we tell youth that they are *going to do* great things instead of telling them that they *are doing* great things. Why do we do this? How can we empower students as they are, as well as encouraging their futures?

One piece of the answer may lie in the simple act of creating useful things.

creation [social] (7)

"Building real connections requires a shared physical environment—a social infrastructure."
-Eric Klinenberg[1]

I recently found myself with the task of writing a script for a video to be shown to a middle school class. The purpose of the video was to introduce a project that I and two friends have been working on for the past six months or so. The three of us are soon going to visit this middle school class to talk about our project, and the teacher requested that we create an introductory video ahead of time.

Our project is a design and construction venture. It began last summer, when the three of us decided on a whim to enter a design contest in a nearby city. The challenge was to design a COVID-safe play structure for the city and, if chosen as a winner, to build and implement the design. In a somewhat surprising turn of events, we

were chosen as a winner, so we spent the fall using power tools in my backyard, figuring out how to actually build these structures that we had dreamed up over the summer. It was an incredible experience, so we didn't stop there. We spent the winter seeking out funding and new partners to work with. And now, as I write this, we are on the verge of spring, working with this middle school class and making plans to extend the project into the summer.

So, back to the video script. We're visiting this class to talk about the design-build process. The students are studying invention and design and are starting small creation projects of their own. The three of us are amateur designers and carpenters, so our project seemed like it might be particularly inspiring to a group of students who are also probably amateurs in the design-build process. (6)

It was a fun challenge, to tell our story in a way that would appeal to a group of middle schoolers. We've written about this project a lot, but largely with a professional audience (grant applications, blurbs for press releases, applications for course credit, etc). We've developed a basic spiel about the project by this point, so we worked to adapt that for this new, younger audience.

When we arrived at the part of our story where we talk about what we've gotten out of this project, we realized that we could talk a bit more honestly about why this project mattered to us. We could admit that the best part of this project was the fact that it made us become better friends with each other. When we were writing grant applications, this detail didn't seem like something that our readers would want to hear about. But here, in this middle school class, was a group of people that might actually care about the social part of this story. Here was a group of people that might understand how important this part of the story really is.

In this part of our story, we were naming something that I've noticed in many learning spaces: that the act of creating things together fosters a special type of social connection.

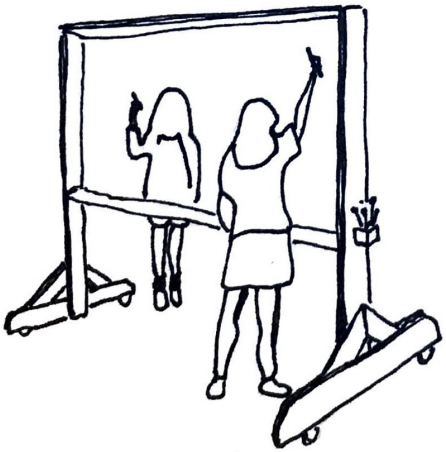
Sometimes, creation takes the form of a collaborative project, like the project I mentioned above. The social dynamics of collaborative creation can be difficult to navigate (especially when you care a lot about the end product you are creating), but collaborative creation can also be incredibly rewarding, as a group learns how to combine
(3) their skills and solve problems and imagine new possibilities together.

Sometimes, creation takes the form of individual projects. When I was in high school, I spent much of my school days in art classrooms. In these learning spaces, each student worked on their own creations, yet everyone often became close over the course of the school year. I saw a few reasons for this. For one, it's often easier to talk to people when your hands are occupied. Our artwork gave us something to focus on, but since the work was in our hands, it created space for our minds to wander into conversation with each other. I also saw that my art teachers interacted with us in a more conversational way than many of my other teachers. They would visit each table over the course of the class period, sitting down for a while to check in as we worked. Art class was a space where everyone could share, give feedback, and support each other's individual creations—and I felt close to my classmates because of this.

Both of these ways of creating point to the same idea:

Creation is not just a functional endeavor; it is a social endeavor.

And remember that design project that began this chapter? Well, our design actually revolves around this very idea of social creation. We call our play structures makerBoards, and they essentially allow people to play games and create things like drawings and music together from opposite sides of a clear plexiglass window.



Our idea for makerBoards stemmed from our loss of ability to create together in the COVID pandemic. Creating together is hard when our lives are physically cut off from each other. If we have the infrastructure to help us, though, it's not impossible. We designed makerBoards to be one small piece of that infrastructure.

It feels significant that the process of bringing this design to life was itself an act of creating together *and* that the things we were building were tools to help other people create together, too. I hope that the people who use makerBoards are finding their own sense of that social connection that we felt in the process of designing and building together. I hope that many learning spaces are finding ways amidst this pandemic to facilitate the act of creating together. And I hope it is a worthwhile endeavor, if only (and maybe especially) for this social aspect.

embodied acts of understanding (8)

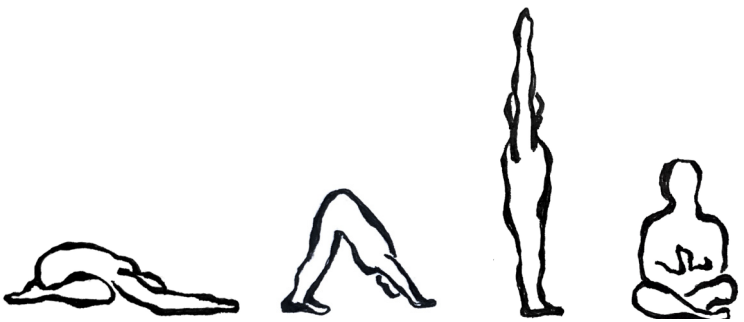
"What is essentially you is your body. In your body you are entirely different from anybody else."

-James Alison

I had a religion professor once tell our class that even if the stories of the Hebrew Bible are not historically accurate or verifiable, that doesn't mean that they aren't true. He explained that to him, the *essence* of the stories is true, and that is all that matters for his own practice of Judaism. I was struck by the idea that feeling the truth of something might be as important as knowing the accuracy of it. The school system of the U.S.—and society at large—puts a lot of emphasis on rationality, logic, and evidence. But this professor reminded me that there is much more to being human than the search for accuracy.

Religious spaces are an interesting type of learning space. Not everyone has had a learning experience in a religious space, but I include religion here because, for many of us, religion and spirituality are essential to understanding our own families, communities, and cultures. In many religions, the element of embodied practice (2) is a key part of learning. This was true of my own upbringing in the Episcopal church—the practice would be incomplete without the actions of sitting, standing, kneeling, walking, lighting candles, singing, ringing bells, washing hands, washing feet...

As I've witnessed in the homes of some of my friends, washing feet holds particular importance as a Muslim ritual. The poet Mohja Kahf writes about one instance of this ritual in her piece *My Grandmother Washes Her Feet in the Sink of the Bathroom at Sears*[3]. This poem beautifully describes a collision of culture and rituals in a Sears bathroom, nodding to the very different understandings of the world that all of the women in one bathroom brought to the space. [I've reprinted this poem in full at the end of this chapter, as I can't recommend it enough.]



In a similar vein as religious spaces, one of the most central learning spaces to my life in recent years has been Yoga studios. Yoga has been heavily appropriated and Westernized for American consumption, so I can only speak to a certain strain of this practice, which I was introduced to about six years ago in my hometown, Little Rock.

In my Junior year of high school, my mom had a series of health

problems that ranged from frightening to identity-shattering. Part of her healing process was recovering from the feeling that her own body was betraying her, and this required quite a pretty significant reframing of the world around her, especially the medical world. What eventually brought her to a place of healing was the habitual practice and study of Yoga, and I got to experience some of this journey alongside her.

The physical poses of Yoga are only a small part of the philosophy, but they are an important one. They allow us to take in ideas and themes from the stories of the Bhagavata through our own living, breathing bodies. As I think back on those late high school years, when my mom and I began to practice Yoga together, I think about how significant the timing was.

We found this way of understanding the world, through these specific stories and physical practices, because of an intense bodily need for my mom. But the timing was also significant for me. As a sixteen-year-old, I was in the thick of adolescence—a phase of life
(4) that is often defined by bodies and what they are supposed to do or look like.

The history of the study of "adolescence" and "puberty" is a troubling one. It involves invasive studies of children's bodies without their permission and the creation of an inaccurate and reductive "puberty scale" on which to judge young bodies as they develop[3]. Though the medical field may have more regulations now, shockingly little has changed in the way we define puberty. Many people (including myself) can recall health classes where students are shown pictures of what their bodies are supposed to look like at different stages of development, not aware that these stages of development stem from unethical and reductive studies.

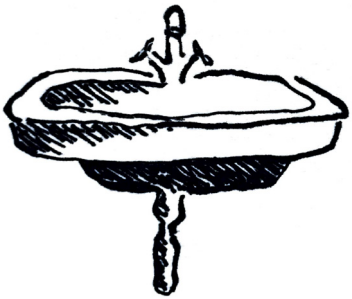
It's no wonder that many of us think of our teenage years as a time when we were particularly self-conscious about our bodies. Or, worse yet, as a time when our bodies were being policed by our own

learning environments, through things like gendered dress codes and rules about when and where we could use the bathroom. [For study of the policing of Black girls' bodies in and out of school, consider reading Monique Morris's *Pushout*[4]. This book was one of the most significant in my college career.]

After learning about the histories of adolescence and puberty, I have become ever more grateful for the practice of Yoga in my own adolescence—a space for learning that treated my body as its own entity. As something that should not be compared to other bodies because it is uniquely mine. From my Yoga teachers I learned that my body is a source of wisdom. It is a complex organism that allows me to do everything I could possibly do in the world. From my Yoga teachers I learned how to learn *through* my own body.

Why are embodied acts of understanding often left out of our formal schooling? Why do many of us have to turn to religious or spiritual or philosophical spaces to learn about the world through our bodies? Can we (and should we) introduce embodied acts of understanding in more learning spaces? How can we treat our own and others' bodies better in all of our learning spaces?

These questions are ones that I didn't know to ask in my own adolescence. I didn't yet have the information that I have now to put them into words. But what I did have was a deep sense that my body was important—and that some spaces treated it as such, but others didn't. I ask these questions now on behalf of my former self, who held an incredible amount of wisdom but hadn't yet learned a language to name it.



My Grandmother Washes Her Feet in the Sink of the Bathroom at Sears

-Mohja Kahf-

My grandmother puts her feet in the sink
of the bathroom at Sears
to wash them in the ritual washing for prayer,
wudu,
because she has to pray in the store or miss
the mandatory prayer time for Muslims
She does it with great poise, balancing
herself with one plump matronly arm
against the automated hot-air hand dryer,
after having removed her support knee-highs
and laid them aside, folded in thirds,
and given me her purse and her packages to hold
so she can accomplish this august ritual
and get back to the ritual of shopping for housewares

Respectable Sears matrons shake their heads and frown
as they notice what my grandmother is doing,
an affront to American porcelain,
a contamination of American Standards
by something foreign and unhygienic
requiring civic action and possible use of disinfectant spray

They fluster about and flutter their hands and I can see
a clash of civilizations brewing in the Sears bathroom

My grandmother, though she speaks no English,
catches their meaning and her look in the mirror says,
I have washed my feet over Iznik tile in Istanbul
with water from the world's ancient irrigation systems
I have washed my feet in the bathhouses of Damascus
over painted bowls imported from China
among the best families of Aleppo
And if you Americans knew anything
about civilization and cleanliness,
you'd make wider washbins, anyway
My grandmother knows one culture—the right one,

as do these matrons of the Middle West. For them,
my grandmother might as well have been squatting
in the mud over a rusty tin in vaguely tropical squalor,
Mexican or Middle Eastern, it doesn't matter which,
when she lifts her well-groomed foot and puts it over the edge.
"You can't do that," one of the women protests,
turning to me, "Tell her she can't do that."
"We wash our feet five times a day,"
my grandmother declares hotly in Arabic.
"My feet are cleaner than their sink.
Worried about their sink, are they? I
should worry about my feet!"
My grandmother nudges me, "Go on, tell them."

Standing between the door and the mirror, I can see
at multiple angles, my grandmother and the other shoppers,
all of them decent and goodhearted women, diligent
in cleanliness, grooming, and decorum
Even now my grandmother, not to be rushed,
is delicately drying her pumps with tissues from her purse
For my grandmother always wears well-turned pumps

that match her purse, I think in case someone
from one of the best families of Aleppo
should run into her—here, in front of the Kenmore display

I smile at the midwestern women
as if my grandmother has just said something lovely about them
and shrug at my grandmother as if they
had just apologized through me
No one is fooled, but I

hold the door open for everyone
and we all emerge on the sales floor
and lose ourselves in the great common ground
of housewares on markdown.

open doors (9)

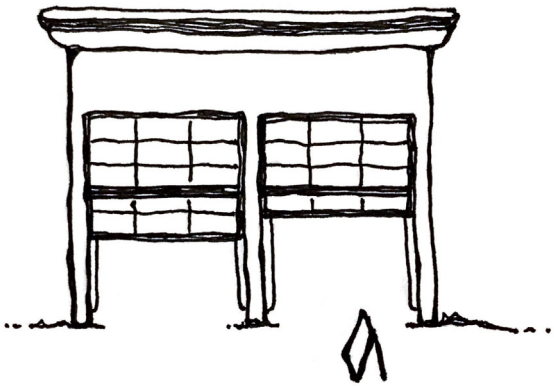
"We come unready. We come alone.
We come together."
—traditional pilgrim's prayer,
Camino de Santiago

Doors. We often think about what's on the other side of them, but rarely do we consider doors in their own right. Doors help us define spaces. Which means that they also help us define *who* belongs in spaces—and when they should be there, and how they get there in the first place. Doors have long been a symbol of status: back doors generally being reserved for people who are disregarded. Literally. You aren't being seen if you enter through the back.

We may not always be able to control the location of our doors, but we do often get to decide how we use them. This matters a great deal. Do we prop them open? Do we keep them locked? When might we prop them open and when might we keep them locked?

In my Sophomore and Junior years of college, I got to work with a local arts organization, based out of a renovated trolley barn. Because this building was originally made to house train cars, the front doors are...well...large enough for trains to fit through.

In my time spent at the trolley barn, these doors had a significant impact on the daily happenings there. As weather permitted, the garage doors stayed wide open, blurring the line between the downtown sidewalk and the gallery & workshop space inside. The staff leaned into this, for part of the mission of the organization was to create an arts space that was inclusive and inviting to the surrounding downtown neighborhood. (5)



These open doors introduced me to so many people, many of whom I never would have spoken to otherwise. These open doors pushed me to invite conversation rather than avoid it. They showed me how a sidewalk could be just as much a site of collaboration as an office building. Dozens of people stopped by each afternoon I spent there, curious about the renovated space and eager to make connections. (1)

Having spent most of my days in schools where there seemed to be an unstated motto of "everyone fend for yourself," I was shocked to see how many people simply walked into this building and offered their help. I almost couldn't comprehend that someone I'd known for

five minutes would be offering to put up flyers for the sewing workshop I was preparing to teach. Encounters like this were actually *frequent* at the trolley barn. And they helped me articulate a reality of my schooling that frustrated me: there always seemed to be a line drawn between my work and someone else's.

Thirteen years of public schooling and the start of a college career had trained me to make sure that my own to-do lists were complete before helping anyone else with theirs. I'd been taught to be weary of other people cheating or taking advantage of my own hard work. To help others, yes, but only after ensuring my own success first.

These pressures, I've come to realize, are very particular to my own identities. I was [and still am] a middle-class White student, sorted into the "gifted" category at a young age. In this society—which functions on a foundation of settler colonialism and White supremacy—my success in school is assumed. There are systems in place to help me attain that success and, in doing so, justify my very privilege. Justify my being set apart as exceptional. It all seems to depend on that: being set apart. Drawing that line between myself and others.

Other: a small word with a tragically large impact. A word that led some of my own ancestors to violently claim land and space and ideas and bodies as their own. A word that speaks to our fear of the unknown and, at its worst, does away with any sense of shared humanity.

And here's the thing: though these pressures stem from a place of privilege, they are not necessarily *good* for me. Not in ways that matter. The pressures of individualism may help me secure my own material success, but they make it difficult for me to recognize the

humanity I share with everyone around me.

This individualistic reality is the one that I knew and carried with me to that trolley barn on Main Street.

Yet in the threshold of those open doors, I got a glimpse of a different reality. One that defined my existence not by its separateness from others, but by its interconnectedness with others. I was pushed (3)
to consider, for one of the first times in my life, the possibility that someone else's work might also be my own. That I too could stumble upon some open doors and walk through them, curious and ready to help. And that when I find myself on the inside of the doors, I can choose to open them.

I can choose to trust.

These open doors were a small way for us to say, "we trust you." And in turn, people seemed to be trusting us too. Or maybe it was the other way around: maybe these people were moving through the world, willing to trust, but waiting for someone to open the doors.

May we all open the doors a little more often. Open the doors and, in doing so, open ourselves to the beautiful variety of gifts that people bring from just beyond the threshold.

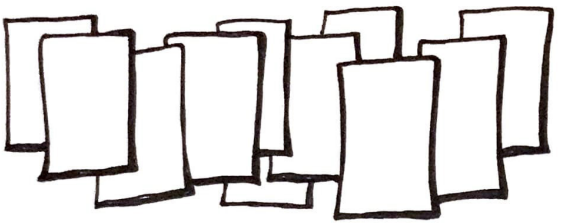
On Process

Over the course of the past year, this project has been shaped into something that I couldn't have quite imagined when I started it. It has become what it is because of my own creative process, which has itself evolved over time. I've never been asked to write something of this length before, so it was a challenge to cultivate a creative process that kept me coming back to the work. At first, I assumed that doing a more imaginative project (not just a traditional "thesis") would be the answer to this challenge, and in a lot of ways, it was. It helped me diversify the work I was doing—like adding the element of drawing, which I'll discuss more below—and it let me follow the project to unexpected places.

But doing a more imaginative project also presented new challenges. At so many points, I wanted nothing more than to have someone else tell me what to do. I was trying to create something wholly original, though. There was no template for me to follow. No one

could tell me whether I was doing the right thing, because I was the only one who could ultimately determine that. At the lowest points, this felt crippling. I questioned whether this project was worthwhile at all, and whether it would be received by others as one big selfish endeavor. I'm still grappling with this, as I'm writing this final chapter now. Fortunately, though, lots of things have kept me coming back to the work. You're reading this now, after all, aren't you?

I am choosing to end this book with some reflections on my process precisely because of the fact that this project is unlike any others. Of course, my ideas didn't come out of nowhere. I was influenced by lots of people and texts and ideas (some of which you may have read about in the introduction). But the book that you're holding now is something that even I didn't expect to turn out quite as it did. And so, I include this chapter for my readers to understand a bit more of how this book became what it is.



Perhaps the most consistent element of my writing practice was my decision to keep a running journal that I wrote in nearly every time I sat down to work. The document is entitled *Running Check-in Log* and it ended up containing 10,344 words—most of which landed on the page in unedited stream of consciousness. Below are some excerpts from that log.

> [October 27th] *... just because pattern languages sparked this project doesn't mean that the project must revolve around that book ...*
>
> [November 3rd] *... the days feel so much*

longer when I've gotten work done before breakfast ...

[November 9th] *... I want more poetry in my life. I think maybe because I want more contemplation in my life that is beautiful rather than overwhelming. I want to meditate on things not because I feel an obligation to fix them but because I want to let wisdom seep into my body. I want to create something beautiful. I guess I want to write poetry ...*

[January 12th] *... it feels a little weird to just be writing stories from my own life ... it's the constant tension of a creative project, I guess. You're simultaneously glad to have autonomy and never sure that you're doing the 'right' thing ...*

[January 13th] *... the autobiographical element of this writing is starting to feel like a more important element ...*

[January 18th] *... I'm thinking now about whether or not tangible change is a necessary part of my thesis. i.e. is my goal really to have people read this and make tangible changes in their learning spaces? ...*

[January 22nd] *... a big idea: maybe this isn't looking how I thought it would because I had a particular (more academic) conception of what a pattern language IS. But THIS is my pattern language. This is the "different direction" that I wanted to take it in ...*

[February 15th] *... AFTERNOON IS JUST NOT MY TIME TO FOCUS (UNLESS I'VE HAD COFFEE AND AM JAZZED)... DON'T FORCE YOURSELF TO THESIS IN A WEIRD SMALL CHUNK IN THE AFTERNOON – IT PROBABLY WON'T WORK VERY WELL AND YOU'LL JUST WANT TO FALL ASLEEP. MAYBE TRY MATH HOMEWORK THEN INSTEAD??? ...*

[February 25th] *... coming back now as I'm wrapping up just to say that that was really fun ... big love to myself for doing this project ...*

[February 28th] *... lol the more I think about it the more I realize I'm kind of writing these like dad writes his sermons. Just a funny thought ...*

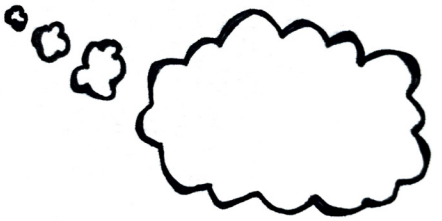
[March 8th] *... I know I'm physically/emotionally tense and a bit distracted, so I'm going to start with something more organizational ... it felt good to have something tangible to do ...*

[March 25th] *... Sheesh. Back after working for a bit, eating breakfast, and getting distracted but meaning to work. I don't know what's up. Maybe it's too much to ask of my body right now to sit in a chair and be upright and type ...*

[April 1st] *... feeling excited to churn out something for Alden [my brother] to read ...*

As you can see here, these check-ins were pretty uncensored. I started this log because I wanted something to get me in the groove of writing before each work session. It served its purpose in doing so, and it also turned out to be a space for me to work through ideas that I'd been thinking about. Clearly, sometimes I just needed to remind myself of things, or pump myself up to work, and this log was a place to do that. But sometimes, I actually arrived at important conclusions by having a conversation with myself on the page.

Having conversations with other people was also an important part of my creative process. Aside from the meetings and deadlines set up by my department advisors, I shared my progress with a few different people along the way. Since my audience for this book is not people within the fields of Education or Urban Studies, some of the most helpful feedback I received was from friends and family members that haven't studied the same things I have. At the beginning of the spring semester, for instance, two friends and I (each studying different things) exchanged our theses-in-progress with each other. It was really useful to hear what points I was able to get across in writing, what was still unclear, and what was coming across that I didn't even intend. My friends gave me a perspective that was outside of my own head (which has been floating all of these ideas around for quite some time now).



These outside perspectives also certainly shaped my voice as I wrote. Throughout the process of figuring out *what* I was writing and *for whom* I was writing and *how* I was going to write, my writing style evolved. As I mentioned briefly in the introduction, part of

this process included a realization that I did not want my primary audience to be the academy. This stems partially from the ideals behind pattern languages, that ordinary people are in fact experts. It also stems, quite honestly, from my own frustration with inaccessible academic texts—especially those that claim to be accessible but still use incomprehensible language. I wanted my senior project to be specifically *not that*. At some points in my writing, I found it surprisingly hard to break from the mold of academic papers. But I kept coming back to this idea, trying to honor it in my project along the way.

Even though it was a conscious goal of mine to write accessibly, I still surprised myself when I started writing stories. I think this had a lot to do with the ever-present pressure to produce rigorous academic work—which is definitely not all bad, despite the negative connotations with the word "pressure." But there is so much rich storytelling that communicates things that more traditional academic texts cannot. On top of comparing my writing to other academic texts, I've also had an insecurity throughout this project that it is too self-centered. Not just in a vague "it's bad to be self-centered" sense, but in a sense that it doesn't actually reach beyond myself enough, and thus is kind of useless to other people.

This insecurity, I think, points to a worthwhile consideration: if I'm going to share this project with the world, it should have some use to people other than myself. But it also points to something that I've grappled with before: my own internalized expectations about how a woman—a White woman, specifically—should act. For as long as I can remember, I've been praised for being quiet. In other words, I've been praised for not bringing too much attention to myself. I like the quiet parts of myself; but I'm very aware of the fact that they are just that. Parts of myself. Being quiet is not my whole being. In fact, in spaces where I feel most comfortable, I am often quite loud.

As I've gotten older, I've noticed more and more that this encour-

agement of being quiet/not attention seeking/submissive is an expectation put on White women throughout a long history of oppression. [I specify White women here because race and gender intersect in significant ways. Though the oppression of women affects all women, racial oppression puts different expectations on women of different races. If you're unfamiliar with Kimberlé Crenshaw's work on intersectionality, I highly recommend reading her essay "Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color"[1].]

As I grappled with my own insecurity about this project being too self-serving, I tried to think through the societal norms that I am always responding to. How does my identity as a White woman contribute to this particular insecurity? How does my identity as a White person contribute to this insecurity? Is it fair, as a White person, to be writing about ideas tied to liberation, but center my own stories? Where is the line between trying not to speak for other people and excluding other voices? How do I balance the reality that this project cannot include everything I want it to and the feeling that it is not complex enough?

Most of these questions don't have answers. Not simple ones, anyway. But I think they're still worth asking. Some of them have made their way into my writing. Most of them remain confusing and unanswered. I ultimately continued writing my patterns as stories because it felt like it was the only way to speak to the ideas that I was writing about. Stories, I think, are perhaps the most essential form of communicating with others, and I couldn't help but think that there was a reason I found myself writing in narrative almost without thinking about it.

I will admit that, in fact, many of my decisions in this project were based off of feeling or intuition. As I discuss in the *embodied acts of understanding* pattern (8), I do not think that this is inferior to—or even separate from—more cognitive, logic-based decision making. Our bodies hold wisdom that our minds might not be able to under-

stand. We learn from our experiences with our whole beings, and this I think informs our own intuition. So, particularly in a project that is all about learning from our visceral experiences, I listened to my intuition quite a lot. One part of this project that I felt a strong inner pull towards was the visual element of it.

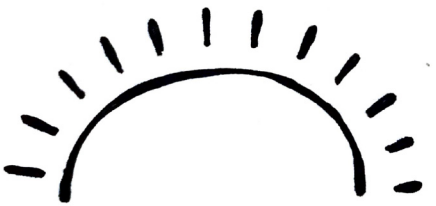
You've probably noticed by now that this book is composed of both text and drawings. I tend to like pieces of writing that include visual components like drawings, photographs, or maps. When they're used well, visuals add another layer of meaning to text; they give readers a new way of taking in the information at hand. Some people, including myself, often rely on visuals to fully grasp an idea. For instance, as I mentioned in *infinite solutions* (3), I am routinely confused by abstract math concepts until I'm able to draw them on a graph. Similarly, when I'm in a new place, I often struggle to orient myself until I know which cardinal direction I'm facing.

So, when I set out to create this book, I knew it would include a visual component of some sort. Drawing and visual art has always been a big part of my life, so I quickly decided that I would incorporate drawings into this project. At first, I was thinking of the drawings in terms of what they do for the reader. I was asking questions like: where might drawings be necessary to convey my ideas? Where might drawings be used to break up text and make it more digestible? Where might drawings help the reader visualize the scenes that I'm writing about?

As I evolved my role as author, however, I began to see the drawings more for what they were doing for me. The act of drawing has become a meaningful part of my process. Drawing is a way for me to

slow down and sit with the ideas that I'm writing about. Time spent drawing is time spent considering the smallest details of something. All of my focus is drawn to those details. In this way, **drawing is a way for me to place myself in the story of my spaces.** As I've taken the time to draw some details of the stories I'm telling in this book, I've felt more connected to the whole project.

At some points in my writing, I've decided to hand draw snippets of text. I am including this in my definition of "drawing" because it carries the same type of meaning. It serves a purpose for the reader (to make certain words stand out on the page or exist as a distinct section) and it serves a purpose for me. It is a way of slowing down and sitting with the words that I've written. As I hand draw a piece of text, I have to consider every word carefully. It's almost like sitting with a *mantra*—a phrase repeated over and over again in meditation. Many of the snippets that I chose to handwrite are phrases that I wanted to meditate on more thoughtfully. Though I spent many more hours at my computer typing than I did with a pen and paper, the acts of drawing were just as important to my process as writing was. You may not have known this as you flipped through the pages of this book, which is precisely why I've written this final chapter.



So. Here we are. At the end of a project which will always be unfinished, because there are always more patterns to be found and named and shaped into stories. Unfinished but not unworthy of sharing with the world.

I will leave you, not with another note about my intentions and hopes for this project but with a note of gratitude. I am deeply grate-

ful for you, reader. Though I may or may not know who you are, I am grateful for you. Actually, I think it is *because* I may or may not know who you are that I am grateful. I am releasing this project, this book, this tangible *thing* into the world without any ability to control how it is received by you. And that, as scary as it may be, makes this project feel like an invitation.

This is my invitation to the world. It will be given meaning by the people who engage with it, and it will evolve outside of me. It has personal meaning, but even this would not quite be the same if it weren't for you, reader. This invitation feels like a small act of trust, an opening of a door.

Thank you for stepping across the threshold.

Notes

Notes

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