

Elsewhere Worlds, Poetics and the Science of Human Learning
a reflection in four verses

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I. Otherwise Possibilities

Otherwise possibilities trouble the temporality of modernity and its being harnessed as property. The disruption is such that we can be in spaces dedicated to the cause of the coloniality of being, but nonetheless gather together as an alternative structuring logic. Otherwise, like dreamworlds, feels surreal in its surround, yet is very intensely felt. As otherwise, dreamworlds demonstrate that what we desire, what we want, has already existed; indeed it exists alongside, and as a critique, and against the currents of the epistemologies of settlement, property and racial distinction that marks our moment of and in spacetime. Tarrying and thinking with otherwise possibility allows alternative ideas, alternative structures, and realities imagined to unfold. To unfold like sewn cloth, like sewn sound, like sewn critique.

Ashon Crawley, 2016, *I Dream Feeling*, Otherwise

Ashon Crawley traces the unfolding of sewn cloth to the quilting collectives of Black women in the South, sewn sound to the choir music of the Black Pentecostal tradition. He stresses that the transcendent worlds woven through these practices of survivance and collective nourishment are both surreal and intensely *felt*. Otherwise as idea and experience. Dreams as the felt “amplifications of possibility” (Crawley, 2016).

As an educator and learning scientist who has been working to build and study the felt elsewheres of learning, I find kinship in Crawley’s words. I can sense sewn cloth in a student’s reflection on the experience of receiving feedback on their writing in a summer program that sought to reimagine the university, a space “dedicated to the cause of the coloniality of being” but where we can “nonetheless gather together as an alternative structuring logic.” Assata shared: “[the feedback] was different, and it was coming from a place of care, it allowed me to be more vulnerable, and creative in what I was saying and what I was revealing...I know that I’m loved, and my writing will be loved.”¹ Different from what they didn’t need to say. More vulnerable as a good thing. Otherwise educational

¹ Vossoughi, S., Nzinga, K., Berry, A., Irvine, F., Mayorga, C. & Gashaw, M. (Forthcoming). Writing as a social act: The feedback relation as a context for political and ethical becoming. *Research in the Teaching of English*.

worlds and the creative capacity they can stir felt through the quilt of feedback as deep relation.

I have learned to hear sewn sound in the first moments of a class, an afterschool program, or a conversation with a child. I remember witnessing Tesha Sengupta-Irving begin an undergraduate course I TA'd by writing "I revere the half-baked idea" on the whiteboard, a genius move I have since borrowed in my own teaching. It is a promise that marks the potential of a different collective relationship with knowledge-making, one fulfilled in waves, by the quality of the response when a student offers a first fledgling thought, and then, perhaps, another. From learning "harnessed as property" to learning as the public communion of mind. More vulnerable as a good thing.

On the first day of the Migrant Student Leadership Institute in 2006, a place that opened worlds for me through the design and study of learning as poetic craft, my co-teacher and brother Octavio Estrella introduced the teatro component of the program by asking 100 high-school aged migrant students, "Can teatro humanize the world?" A few students, likely feeling some first-day butterflies, commented that it can. One young man suggested that a work of theatre can "help you see new solutions to a problem." Octavio gently affirmed and translated each of these responses, from English to Spanish or Spanish to English, and then offered:

For us, this is not really a yes or no question. We're interested in finding out: is it possible to change reality, even a little bit?...And by asking that question of ourselves, it's also demanding something of us: our reflection and our imagination.²

A different approach to language. A question that appears to call forth a straight *yes* or *no* transforms—live—into something else, something more open, perplexing, intellectually inviting. I wonder how students experienced this moment. If this question can morph, maybe others can too? If this teacher can edit his own question mid-stream, imbuing it with new meaning, maybe language is used differently here?

Unfolding like sewn sound.

² Vossoughi, S. (2011). On the formation of intellectual kinship: A qualitative case study of literacy, learning and social analysis in a summer migrant education program. Dissertation, *University of California Los Angeles*.

What does “tarrying and thinking with otherwise possibility” mean for the science of human learning? What does the felt experience of such elsewhere educational worlds ask of us as designers, educators, researchers, writers and human beings?



II. I need to make a clearing for science.

I have always tripped on the word. Truth be told it wasn't until I was applying for jobs that my graduate advisor wisely told me to write “as-a-learning-scientist-I-study...” in my cover letter. For a while I felt like I was playing pretend, a wannabe artist in scientists' clothes. Trained as an ethnographer and socio-cultural theorist, I had a healthy skepticism towards the presumed objectivity, predictability and control I associated with Western science, and the ways they routinely flatten the vast dimensionalities of learning and learners into something more neatly measurable. Poems made into bubble tests. I have since found a home in our field, largely through scholars who taught me that the political and ethical concerns drawing me to the study of learning have a place here. Kris Gutiérrez, Carol Lee, Na'ilah Nasir, Beth Warren, Ann Roseberry, Megan Bang and Paula Hooper made the clearing for so many of us. I first learned about Jan Hawkins through Paula, who knew her as a mentor, thinker and educator. I imagine I too have learned from her through our sisterhood. Relational genealogies that “trouble the temporality of modernity” through what Vera John Steiner (1997) calls “distant teachers”³—people who nourished and held the elsewheres long enough to create ripples across generational time.

I want to think with you about what these elsewheres can mean for a science of learning befitting the complexities of social life, the brilliance of children, and the lived imagination of educational freedom dreams. A speculative science that attunes itself to the ripples.

³ John-Steiner, V. (1997). *Notebooks of the mind: Explorations of thinking*. Oxford University Press.

Ray McDermott taught me to wrestle with words, to trace their histories and the meanings they have picked up along the way. If *speculative* were a home, there are some rooms I could live in forever and others I would run from. As a postdoc, I had the opportunity to work and study at the Exploratorium, a participatory museum of science, art and perception originally created by Frank Oppenheimer. Frank and his brother Robert were physicists, both of whom had worked on the Manhattan project. The Exploratorium can be seen as a critical response to the atomic bombing of Hiroshima and Nagasaki in 1945. An educational institution that championed science as deep wonder and creation rather than destruction.



The atom bomb began as speculative science. So too did a place like the Exploratorium. I wonder about how people like Frank saw their role in both, and what these histories teach us about science as inherently political and ethical activity. Frank believed that if people were in the playful practice of inquiring about natural and physical phenomenon, then they would inquire about political phenomenon too. The place often lived up to the potentials of this idea in beautiful ways. It also sometimes failed to inquire into its own political assumptions and practices. For those familiar with the institutional workings of whiteness, this was a disappointment but not a surprise.

Towards the end of my time there, the leadership was working to rebrand as institutions do and unveiled the draft tagline “Changing the way the world learns.” I, and others, felt immediately uncomfortable in that room. Who was the world and who was doing the changing? A mere six words suggested that there is one good way to learn, we have it, and our work is to share it with the world. While a number of people pushed back and the tagline was discarded, I share it here in order to think through broader currents in our field. Aspects of this axiom have sometimes characterized our approach to the design and study of learning with technology—the goodness of our efforts clouding the need to attune to the

undersides of innovation in a world weighted towards extraction. Words like DARPA make the material linkages clear.

I can trace my response to this tagline to my time as a college student in a program called “International Development Studies,” and before that to my family’s political history. IDS, as we came to call it, was an experiment in undergraduate education that offered resources for wrestling with the questions many of us were asking as young adults with roots in the Global South: Why are there rich countries and poor countries? What are sustainable alternatives to racial capitalism? What can we learn from movements for self-determination? Our teachers were critical geographers, historians and political theorists. We studied hard because the ideas were personal. By the time I graduated, the program was in jeopardy, rebranding as “Global Studies.” Core faculty and lecturers were either denied tenure or quietly let go, despite students’ petitions and protests.



As is often the case, the effort to repress a set of questions and ideas taught us that those ideas were powerful, dangerous even. It was a lesson I knew from my father’s history as a leftist and political prisoner in Iran. And it was a lesson we were witnessing at a global scale in the U.S. war on Iraq. This year marks the 20th anniversary of that brutal remaking of others’ lives and political destinies. Soon it will be 70 years since the U.S. and British coup in Iran, one among the many such coups that deposed democratically elected leaders and instituted dictators. My father told us stories of hiding paint in an empty watermelon at the age of 18 to write “Yankee go home” on the walls of Tehran. Time bends and the history of

harm is present, alive in the sanctions the country I live in has placed on the people I call home. The violent enclosures of elsewhere worlds also ripple across generational time.

What was so threatening about what we were learning as undergrads? I can trace a line from IDS and protests against the war in Iraq to our work in the Learning Sciences through the word “development.” A staple of our field’s lexicon, it is a word I love and use frequently, alongside its close cousins: “learning,” “growth,” “thriving.” It represents for me a deeply genetic view of human becoming, a principled stance towards people-in-process that disallows preordained rankings of capability. Yet it is a word I also recognize as heavy with the weight of history and hierarchy. I worry about what happens when we use or teach it as weightless.

IDS was supporting us to ask: On whose terms is development defined? What are the values and lifeways associated with metrics for the development of a people? In whose image and interests are they molded? Whether at the scale of a nation or a child, human development—as construct, policy and everyday activity—has been entangled with the imposed demands of assimilation, marking what Leigh Patel (2020) calls “revocable humanity”⁴ and shaping our theories of learning in consequential though often unexamined ways. The so-called “WEIRD people problem”⁵ of the social and behavioral sciences is not only a question of sampling and representation. It is a more profound moral and scientific question about the construction of the normative human being, the normative and model mind, in the image of a population that has yet to reckon with the development of its own consciousness through centuries of hierarchical categorization. As Megan Bang (2016)⁶ has argued, colonial premises like human exceptionalism, as well as the de-coupling of subject-object relations from subject-subject relations, are embedded in Western thought, and in many of the political theories and theories of learning I consider home. I see the work of grappling with these histories, opening up the contingencies and elsewhere of thought, as imperative to the ongoing theoretical and methodological growth of our field. As Cedric Robinson (1983) argued,⁷ the realization of new theory requires new history.

In this light, the histories and presents of decolonial movements (capital and lower-case m)⁸ can be understood as struggles over the valued terms of living, knowing and growing, efforts

⁴ <https://rethinkingschools.org/articles/the-2020-presidential-election-educators-speak-out/>

⁵ Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and brain sciences*, 33(2-3), 61-83.

⁶ Bang, Megan. (2016) "Towards an ethic of decolonial trans-ontologies in sociocultural theories of learning and development." Esmond, I. & Booker, A. (Eds). *Power and privilege in the learning sciences: Critical and sociocultural theories of learning*: 115-138.

⁷ Robinson, C. J. (1983). *Black Marxism The making of the Black Radical Tradition*. UNC Press.

⁸ See, for example: Ali & Buenavista, 2018; Bang, Curley, Kessel, Marin, Suzukovich III & Strack, 2014;

to practice and sustain ethical relations with one another and with the natural world that require new forms of learning and becoming.



Sometimes we surprise ourselves with answers to questions we are asking in unexpected moments. A few months before quarantine I was talking in my office with a student who asked about the “science” part of the learning sciences. The question came from a place I recognized. I looked outside my window and found a response: If I am a scientist, I suppose I am most like a soil scientist. The phenomenon I study is everywhere. I can walk outside my office, pick it up and hold it in my hand. Mundane and powerfully live-giving. I study the conditions of healthful growth. Sometimes that means I spend time with older trees, no two the same, playing a role in helping others grow, and ask: how did they come to be? Sometimes it means I help create the conditions for learning and then try to notice, with patience and care, how life emerges—unpredictable and non-linear, bending towards the sunlight. In this way I understand myself as a student not just of individual plants but of ecologies, stretched out across time, living and breathing arguments for the possible.

Another kind of sowing.

Cruz, 2011; Esmonde & Booker, 2016; Flores & Rosa, 2015; Marin 2020; Martínez & Mejía, 2020; Mckinney de Royston & Sengupta-Irving, 2019; Nasir, Lee, Pea & Mckinney de Royston, 2020; Nzinga, 2018; Paris & Alim, 2017; Patel, 2016; Philip & Sengupta, 2020; Tejeda, Espinoza & Gutiérrez, 2003; Takeuchi & Aquino Ishihara, 2020; Tintiangco-Cubales & Curammeng, 2018; Tuck & Yang, 2018; Vakil 2018; Warren, Vossoughi, Rosebery, Bang & Taylor, 2020; Zavala 2018.

III. “The Learning Sciences needs the Learning Humanities.” (Manuel Espinoza, lifelong personal communication)

What are we working to grow as a field?

Utopian methodologies⁹ ask us to learn how to see and hear what emerges within the elsewheres of learning, and what they make possible over longer arcs of time. Given the routine enclosure if not outright repression of radical experiments in education, there is a tendency to conceptualize the elsewheres as ephemeral, living in the cracks and crevices, alive but fleeting. There is protection there. Yet ephemerality tells only part of the story, and it may not help us conceptualize what it would look like for these possibility models¹⁰ to shape routine activity within our systems.

In the Tinkering Afterschool Program, a space I had the opportunity to help build and study with Meg Escudé, we found that children engaged in *moves to elsewhere* twice as often as acts of *contestation, refusal and resistance*. They routinely inserted their humor and playfulness, moved outside or reinterpreted the bounds of projects, and advanced new goals and needs within activity. This will come as no surprise to anyone who spends meaningful time with children.

| Category | Acts of Self-Determination (# of instances) |
|--|---|
| | Claiming Ownership (60) “I made”, “This is my...” <i>Situating an idea, practice or object as one’s own. Self-attribution by children.</i> |
| Self-Definition | Moves to Elsewhere: Acts of Claiming, Artistic Expression and/or Reimagining (253) |
| | Inserting Playfulness (56) “Ta-daa!” <i>Infusing an object or activity with fantasy, humor or a child’s aesthetic. (e.g., word play, song, personification, performance).</i> |
| | Pursuing Personal Interests (41) “I want (to)”, “I need” <i>Discovering, expressing and/or advancing new goals and needs within activity.</i> |
| | Going Off-Script (48) “I’m going to do/try this instead” <i>Moving outside the confines of an activity. (e.g., pursuit of a “wacky” idea, acts that might be interpreted as social/intellectual tangents)</i> |
| | Maintaining & Caring for Artifacts Over Time (48) “Can I keep (working on) it?”, “I still have.” <i>Children’s sustained commitment to the development or sustenance of projects and ideas.</i> |
| | Opting out of a Question and/or Prompt (27) “I pass” <i>Instances where children choose not to accept an invitation for participation.</i> |
| | Acts of Contestation: Resistance & Refusal (125) |
| | Refusing Help or Refuting Need for Help (22) “I know (how)”, “I don’t need”, “I’ve got it” <i>Assertions of capability, or wanting to do something on their own. Children rejecting offers of assistance.</i> |
| Corrections or Disagreements in Discourse (15) “I disagree” <i>Expressing counter-perspectives; Children privileging their own thinking over consensus.</i> | |
| Other Forms of Contestation (61) <i>Including but not limited to moving to exclude or restrict the actions of another, questioning, ignoring requests for compliance</i> | |

⁹ Bang & Vossoughi, 2016; Brown & Cole, 2001; Dinerstein, 2014; Engeström, 1991; Espinoza, 2009; Ferholt, 2009; Gutiérrez & Jurow, 2016; Gutiérrez, Jurow & Vakil, 2020; Levitas, 2013; Mirra & Garcia, 2020; Rajala, 2021; Stetsenko, 2020; Yates, 2015; Zavala & Golden, 2016.

¹⁰ Shange, S. (2019). *Progressive dystopia: Abolition, antiblackness, and schooling in San Francisco*. Duke University Press.

Tracing one six-year old's experience in the program across her first year showed us how the forms of assistance Tania received from educators early on (represented in the lighter colors on the left of the table above) became resources for how she helped other children (the moves represented in the darker colors on the right), stepping into the role of a peer facilitator over time.¹²



Looking across three years of Tania's participation in the program we found that the pedagogical practices she grew to enact with younger children as a nine-year old resembled the intentionality and ethics of our most seasoned educators, tender efforts to form a "we" in interaction. Mundane and powerfully life-giving.

In recent work, we have documented how students' experiences with forms of writing instruction and feedback that show deep respect for the grammars of their lives opened up new relationships with parents and siblings. Similarly, many of the educators and students who participated in the Migrant Student Leadership Institute went on to build their own educational programs. Settings that grow from settings. My own relationship with my five-year old daughter is powerfully mediated by the gentle parenting of my late father, a gentleness that traces back to his political history.

What can these ripples teach us about the ways experiences of the possible sow a loving responsibility for ongoing creation?

¹² Vossoughi, S., Jackson, A., Chen, S., Roldan, W., & Escudé, M. (2020). Embodied pathways and ethical trails: Studying learning in and through relational histories. *Journal of the Learning Sciences*, 29(2), 183-223. Photo credit: Walter Kitundu.



The historian Robin Kelley refers to the capacity to see the future in the present, to sense the emergent ripples, as “poetic knowledge.”¹³ Eve Ewing writes that poetry creates a “comfort with paradox and subtlety, with nuance and even the moments of apparent self-contradiction or uncertainty that characterize all human life,”¹⁴ the difference, for her, between knowledge and understanding.

I wonder what it can mean for our science to humble itself to the poetics of learning.

IV. Impossible Projects

My partner, Walter Kitundu, is an artist and educator who works with sound, wood and light to tell stories in collaboration with the natural and social worlds, like an instrument played by the waves of the ocean.

¹³ Kelley, R. D. (2002). *Freedom dreams: The black radical imagination*. Beacon Press.

¹⁴ Ewing, E. L. (2018). The quality of the light: Evidence, truths, and the odd practice of the poet-sociologist. In O. Perlow, D. Wheeler, S. Bethea & B. Scott (Eds.) *Black Women's Liberatory Pedagogies* (pp. 195-209). Palgrave Macmillan, Cham.



The culminating project for a sculpture course he teaches invites students to imagine and propose an impossible project. Fully thought through with budgets and sketches, but materially or socially impossible. Initial attempts often produce ideas that may be difficult, though not impossible. Multiple iterations and rounds of feedback help students stretch and work with the “threshold of possibility.” Walter describes how this practice of stretching opens a capacious space for vision and design that may not otherwise exist. He stresses that the task is not only to work with possible futures, but also with alternate histories: what could have existed, and could still exist. Tertiary artifacts¹⁵ that shift our established sense of the world, strengthening our ability to sense its indeterminacies.

The Covid-19 pandemic has shown us, again, the willingness of our economic, political and educational systems to treat people, lands and waters as disposable. It has shown us, again, the kind of society that results when what it means to care for others, and to engage in knowledge making from that ethic, is not the focus of human learning. In a historical moment that amplifies the deep need for a paradigm shift towards social relations as the means and ends of learning, “learning loss” is poised to steal time from the elsewhere of being and becoming. These unfoldings are sustained through a story of inevitability.

What are our impossible projects?

The layers of history I have shared teach us that they ought to be manifold, grown in and with community visions, arcing towards the poetics of collective becomings.

Need they be impossible?

¹⁵ Wartofsky (1973), in Cole, M. (1998). *Cultural psychology: A once and future discipline*. Harvard University Press.