

Primitive way country come look inside

YSOLDE STIENON AND MARINA TSAPLINA

ABSTRACT

A disabled poet with Rett syndrome and a disabled performing artist with type 1 diabetes document their 12-month artistic collaboration to illuminate *ground-time*: the nonverbal, expressive dynamics of embodied communication. Five “communication moments” between the artists (documented in writing, video, and photo) are described. Potentials and limitations of augmentative and alternative communication (AAC) technologies, specifically Tobii Dynavox eye-tracking technology and Communicator 5, are discussed. Additionally, the authors question the clinical diagnostic category of “intellectual disability” on the grounds of disability justice, decolonial science, and philosophy. Communication-assistive technology platform developers are challenged to consider relational embodiment as the foundation of communication in design decisions regarding platform function. Technologies should facilitate improvisation and nonlinear expression—verbal and nonverbal—while maintaining freedom of nondisclosure. The right to opacity in communication is also discussed.

*Speechless, voiceless,
Harsh,
Strong, eerie,
Yes Harsh, strong, eerie,
Warm bright
Speechless, soundless, speechless
Not equal, movements, primitive
Way country come look inside.*

YSOLDE STIENON, “SPEECHLESS,” 2020

THE GROUND BETWEEN US

We do not write this from a place of damage, explanation, argument, or defense. That place seeks to subvert the gaze of suspicion, causing bodyminds to brace themselves against relentless demands for proof, breaking into shards, or climbing into silence, attempting to show something of themselves that will be deemed as worthy, believable, and true. No. We

are writing from relational wholeness, from a place of embrace and trust between us.

By opening our writing in this way, we indicate our awareness that, despite our best efforts, we are up against *something*. Something large, at times seemingly immovable. Something that oppressively squints with suspicion at best and actively harms at worst. We also write against a backdrop of increased incarceration of disabled and mad people [1,2].

For this *something* to fall away requires a foundational shift of perception. From the margins of perception is where the poetic force of art bursts forth. It is there also where some of the best listening and communication between us has arisen. But first, who are we?

Ysolde Stienon is a disabled poet with Rett syndrome. Marina “heron” Tsaplina is a disabled performing artist with type 1 diabetes. We discussed this approach of self-identifying via naming-by-biomedical-diagnosis and had differing views about it. Marina has done much artistic and scholarly work on *unnaming* [3]: releasing the biomedical name and the biologically reductionist world it manifests to let new names, descriptions, and life-worlds arise that more fully describe her disabled embodiment. Alternatively, Ysolde felt it is important to claim the biomedical name of her diagnosis, for her to write and approach our work together from the position that it marks for her.

Our differing relationships toward biomedical naming point to different positions of systemic and cultural access to voice and agency. We are addressing this directly so that we don't create a false impression of a horizontality that erases the unequal markings of power. Ysolde and Marina's relationship takes place within, amidst, and through systems that exert disciplining power on both of us. While ableism and the medical gaze [4] have marked us both in significant ways, medical and state systems mark Ysolde's daily life more acutely. It is for this reason that Ysolde claims the biomedical description of her embodied life. While Marina now refers to her disability as *that-which-is-named [Type-1-diabetes]* [5], Ysolde chooses to speak back from within Rett, to leave new

Ysolde Stienon (artist, disability advocate). Email: ysoldest@gmail.com.

Marina “heron” Tsaplina (artist, scholar). Email: bodypoemspuppetry@gmail.com.
ORCID: 0000-0002-3375-0049.

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imprints and associations with the name, to break its diagnostic borders from within.

Why? At least in part because “non-speakers are being suppressed around the world and deserve to have their words amplified” [6].

**COMMUNICATION MOMENT #1:
THE SPACE BETWEEN PERSON AND TECHNOLOGY**

Ysolde’s access to the world of verbal communication is through Tobii Dynavox eye-gaze technology, which connects to a computer program called Communicator 5 (Fig. 1). Tobii tracks the foveal attention of Ysolde’s gaze through pulsed infrared light (IR), which leads a red cursor on the screen to select different pre-programmed buttons based on her gaze.

Ysolde’s support team edits the buttons in the Communicator 5 on a regular (daily and weekly) basis. Changes (additions, redesigns, etc.) are made in preparation for specific activities, classes, conversations, etc. that Ysolde participates in. Typing sentences letter by letter through one’s eyes is not feasible, so her Communicator is an evolving collection of thematically arranged words. It’s far from a perfect system—imagine using only your eyes to search for needed words within an always-evolving labyrinth of computer pages.

The verbal world that Ysolde has access to thus emerges from what is entered into the communication boards. This makes the Communicator a highly political space. There is also a critical gap between *thought* and *words* for Ysolde. The technology is not a bodymind-reader; Ysolde has to exert energy each time to find the sequences of words that will come close to representing her thoughts.

When Ysolde’s gaze arrives at the button of her choice, the computer voice will (usually) speak the selected words or sentences out loud. Early in our collaboration, Marina asked Ysolde what her relationship is to this computer voice. Below are Marina’s notes from that conversation:

Communication Moment #1—8 October 2022

We started by reading Alice Wong’s essay “I Still Have a Voice” [7]. Alice wrote this after a medical crisis left her without access to vocal expression. Ysolde listened intently and responded particularly strongly to specific sentences in Alice’s essay: “While recovering, communication access is one of my greatest challenges since I can no longer speak. People have talked over me, ignored me, or became impatient as I type my responses. I currently use a text-to-speech app called Proloquo4text. The voice options are robotic, clinical, and white. It mispronounces slang and Chinglish, a mix of Mandarin and English which is part of my culture. It also fails to capture my personality, cadence, and emotions. . . . Right now, can you feel what I am saying? . . . Yet, I can still grin devilishly, roll my eyes sarcastically, and my personal favorite, give the middle finger.”

In response, Ysolde chose: “I like it. I can’t get enough of it. Striking paradox.”

Marina then asked Ysolde a qualitatively binary question: “Do you feel a ‘good’ connection or a ‘bad’ connection to the computer voice?”

Ysolde didn’t respond, so we discussed how disabled and chronically ill people can have many different relationships and emotions associated with the technologies that assist our lives, and that I (Marina) was trying to get a sense of what your (Ysolde’s) relationship is to the Tobii computer voice—do you identify with it? Do you feel like it is your voice? Do you get frustrated/angry at it?

But after this discussion, Marina realized it would be helpful to ask a more neutral and non-leading question: “Ysolde, do you feel ANY connection to the Tobii voice?”

You became very quiet, leaning back into your chair. Your bodymind language became still, composed, and thinking. Some unnumbered amount of time passed with us in a listening silence.

You then startled up, and a series of Tobii eye-gaze choices came forward: “I love to learn new things”; “I want to be an advocate for disability”; “I can use my eyes”; “Because of my seizure medication I can look sleepy, but I am listening to you.”

I said “thank you” for reminding me about the seizure medication and that you were listening. It was helpful to be reminded of this. Then I noticed a button you didn’t choose, but that was on one of the communication boards. The button was programmed to say: “The computer is my voice.” I thought about how the “is” in that sentence collapses the space between technology and person into one, and how that may or may not be true for you. I brought this button to your awareness, and asked you



Fig. 1. This is one example of Ysolde’s Communication Board. It shows a series of computer buttons, each of which can enable more words, phrases, and expressions. The buttons say things like “Word Library,” “The Arts,” “About Me,” “Advocacy,” “Disability” “People Descriptive,” and more.

again: “Do you feel a connection to the voice of the Tobii?” And you chose: “No. No, no.”

And then you burst out laughing. Breaking the previous quieted stillness, your bodymind moved swiftly towards me and you looked directly in my eyes with a laughing smile—there was a big energy release! It felt like a joyful moment of truth. We had arrived at something truthful and foundational.

This was a very clear communication of, “No, I do not feel a connection to the voice of the Tobii.” Then I asked, “Do you like the Tobii? Is it useful?” “Yes,” you chose.

Then Marina wondered where to go next in thinking about how to approach the task of writing and illuminating the fullness of how communication between us happens.

It’s important to note the following about this moment:

Ysolde listened to Marina read the above description of “Communication Moment #1” and confirmed its veracity. This reflective practice is one that we use all the time, to ensure that any descriptions that involve Ysolde have her active input, consent, and agency. For example, the choice of writing “Ysolde chose” was discussed and approved by Ysolde. Marina asks whether her description is aligned with Ysolde’s perception of the moment, or if there is anything Ysolde would change, add, delete, etc. It is a time-consuming, imperfect, and essential process.

At the same time, there is a clear imbalance in this process. Even with Ysolde’s input after the fact, the description of “Communication Moment #1” is written from Marina’s perspective. Marina is in a position of power as questioner, observer, and describer. This led us to wonder how to level the playing field and find/create processes where Marina’s position as describer is removed or minimized.

In regard to speaking fully for oneself, it’s important to emphasize how much of the communication in this conversation happened *outside of the technology* and outside of verbal language. The Tobii eye-gaze and Communicator 5 technolo-

gies (Fig. 2) played an important role at key moments that allowed Ysolde to *describe* and *clarify* her thoughts, but much of the feeling and *communicativity* of the moment occurred rhythmically and energetically, the meaning emerging between us. Our affective, speaking bodyminds [8] were in an intimate communicative dance. Unlike the myth of objective observation [9], which enacts borders instead of relations, the relationship of trust between us is the primary foundation for our communication. Without this, both technology and communication can become forms of ontological assault, a concept discussed in more depth below.

GROUND-TIME

Before writing any further, Marina read aloud this introduction to Ysolde, reading with pause for Ysolde’s vocalizations, shifting energies, and expressions of immediate response as she listened. After finishing, Marina asked: “Ysolde, does this feel respectful of you, of our work together? Does it feel true to our process? Is anything missing from this introduction? What are your thoughts, feelings, impressions?” These questions entered the ground between us as seeds. And as with all seed planting, what comes after is the time of waiting, a time that Ysolde taught Marina—is perpetually teaching her—to trust.

This in-between *ground-time* is foundational to our communication. Ground-time emphasizes the grounded fleshiness of the temporal space, an understanding of time that is embedded into the relation between bodyminds—bodyminds that are made of flesh and dreams, flesh and dreams that are made of earth, memories, histories, sensations. Ground-time is connected to *crip-time* [10]: When time is embodied, there is no abstract, predetermined “right” amount of time for something’s occurrence. The ground-time between us at this moment was perhaps 15 minutes, but that is a very rough guess. Marina would check in every few minutes with Ysolde, who wasn’t yet ready to respond and engage with the Communicator. This was a large volume of content to take in. At some point, to bring the essence of the

writing back to fresh awareness, Marina reread the first and last sentences of the first paragraph of this article aloud: “‘We do not write this from a place of damage, explanation, argument, or defense,’ and ‘We are writing from relational wholeness, from a place of embrace and trust between us.’ Ysolde, what do you think? Does this feel true by you, this approach to the storytelling about our project?”

“Weighty..striking...suggestive. weighty...strong..descriptive.....forceful” (Fig. 3). (The varying periods are a way to point to the rhythm between the words.) Ysolde also opened page after page in her Communicator of poets and poems she studies in her poetry classes: Nikki Finney, Ada Limon, Rita Dove, Tongo Eisen-Martin, Kimiko Huhn, Marie Howe, Dunya Mikhail. While the

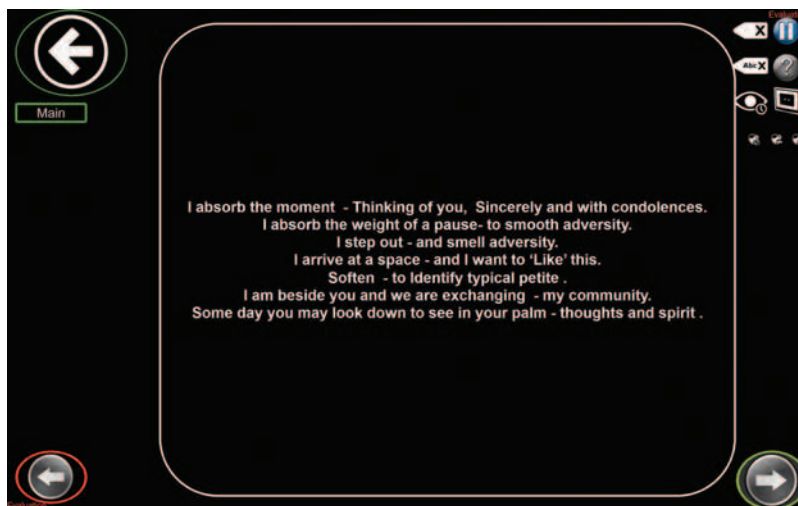


Fig. 2. One of Ysolde’s poems, shown in a Communication Board that Ysolde can voice. There are arrows underneath for advancing forward or backward. (Photo © Ysolde Stienon)

frequency and duplication of these open pages may have been a by-product of the Tobii eye-gaze accidentally catching Ysolde's eyes in a way she didn't intend, Ysolde navigating to the poetry pages of the Communicator was a marker of meaning.

CRIPPING TECHNOLOGY

The Communicator program is based on linear logic. It's like a "box within a box," says Constance, who is a fellow artist and Ysolde's mother. The essence of the system is, "Here is a box—you can put words or images into it. When you open that box, there's another box in there. It is a linear system." Yet thought is not linear; our thinking is not a box within a box. Thought is associative, responsive, embodied and particular to each person and context. So how to create access for Ysolde to verbally express divergent, creative thinking through what is essentially a series of linear boxes?

Crippling technology references how technologies are/can be altered when access and the brilliance of disabled people are centered in their use and design. Below, through the remaining four, intentionally chosen communication moments between Ysolde and Marina, we show how the Communicator boards are designed to provide Ysolde access to nuanced verbal expression, how she improvises with them to express humor and abstract, associative, poetic thought, and how this differs from how the technology is typically used. Our larger task is to attempt to provide a glimpse of the vastness and nuance of embodied communication and to ask what would happen if embodiment were the groundwork from which communication-assistive technology design and discourse emerged.

NO RELATION, NO EMBODIED COMMUNICATION

Our communication moments are embodied. Meaning emerges through rhythmic and energetic undercurrents that frequently precede verbal expression. How you as the reader perceive the word *embodiment* will impact your understanding of how Ysolde and Marina are working. Embodiment is not just a word; in our work, it is how body, mind, earth,



Fig. 3. This is the Communicator page that Ysolde opened to respond to the first part of this article. Notice the marks on the button that says "descriptive": these are the marks of Ysolde's eyes picked up by the Tobii eye-gaze tracker, its pulsed infrared light (IR) glowing as two dotted lines below the screen. The words selected show up at the top, where the cursor is. These are voiced by the computer. (Usually, the selected words need to be manually reset; otherwise the computer can begin a run-on sentence of all previous selections.) (Photo © Marina Tsaplina)

history, politics (racialization, gender roles, etc.), emotion, thought, feeling, sensation, spirit, and dreams—the physical, the structural, and the poetic [11]—come together and split apart. The affect—or "energy"—of a moment emerges from endless configurations of these embodied forces in the relational space between us. This multifaceted way of thinking about energy differs from the medically linear "physical energy" that Ysolde had previously been asked about, pictured in the screenshot shown in Fig. 4.

An early source of inspiration for our work was choreographer Anna Halprin's visualization of the "choreographic score" of her community dance piece *In and On the Mountain*. While it's not clear at what moment(s) in the participatory dance she made this visualization (Pre? Post? During? Throughout?), the drawing shows the movements, shifting energies, and relationships in the choreography. It is a form of notation and script writing (Fig. 5).



Fig. 4. Four cartoon images in a row that represent Ysolde in different energetic states, from fully energetic to depleted/exhausted. The images represent a linear progression of "physical energy." (Photo © Ysolde Stienon)

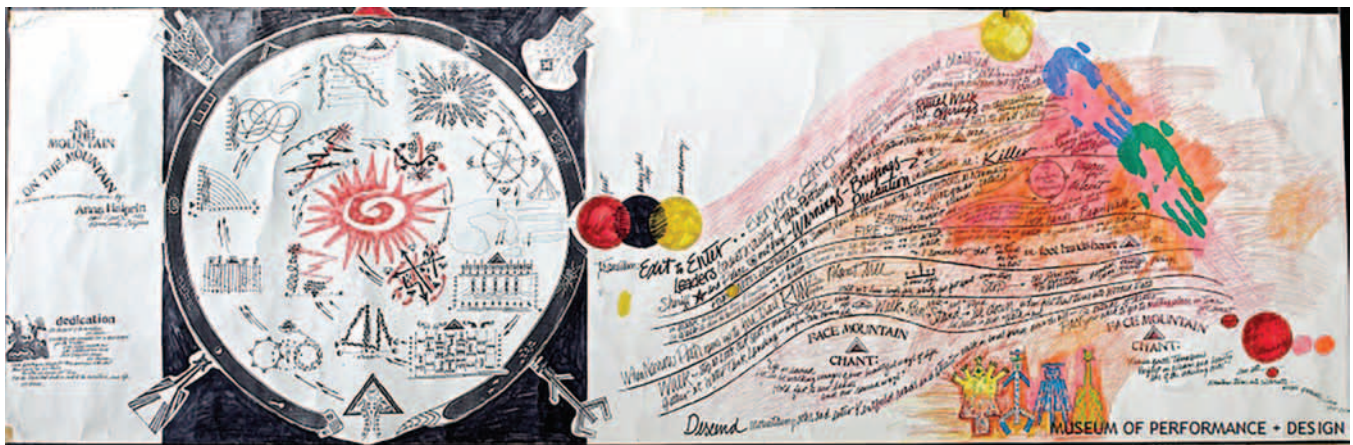


Fig. 5. Anna Halprin’s visualization of the “choreographic score” of her community dance piece *In and On the Mountain*. A sphere with various symbols inside the circle, including a shining spiral in the center, is on the left. It is connected with three small colorful circles to a bursting, energetic painting on the right-hand side with lots of colors, written words, hand imprints, and symbols that together form the shape of a mountain. (© Anna Halprin Estate. Photo © Museum of Performance and Design.)

Early on, Ysolde and Marina established an expansive vocabulary for describing the communicativity of our communication moments in terms of the poetics of embodied energy (Supplement 3). Our communication holds the right to opacity [12]; there is never a forcing or demanding of clarity. This freed us to go wherever the moments took us.

COMMUNICATION MOMENT #2: DEEP WATERS

This moment documents an early turning point in our work. A brief contextualization is needed for its gravity to be legible. At the start of the project (January–February 2023), Marina thought that speaking to several of Ysolde’s long-term hired and family caregivers about how they perceive their communication with Ysolde would be helpful for the project. These conversations, as intended, took place with Ysolde present. On one hand, these were needed conversations: Several caregivers mentioned how this was the first time they had a chance to reflect on their caregiving experiences. Yet what also occurred were conversations *about* Ysolde right in front of her, where Ysolde had minimal ways of intervening into what was shared or not shared about her, including some very personal and sensitive information. She also heard herself being described, oftentimes as if she were not present. To be clear, Ysolde was not passive. She asserted her agency and response at specific moments effectively, powerfully, poignantly. Yet it became very clear that Ysolde’s privacy and integrity had been unintentionally compromised. What follows is documentation of a moment that took place where Ysolde and Marina reflected on this error in the process:

Communication Moment #2—5 March 2023

That moment in between when I asked you about your response to the process of the project so far, and right when you chose “it’s complicated”—the moment in between my question and your response, it felt very powerful. It was deep, quiet, full of emotion. Almost like we fell into a very deep body of water whose surface was still, but within there was a lot of movement. I felt a deep emotional presence from you, between us, and it connected me to my own well of felt experience. A deep sadness overtook me, filling me from within. My eyes became damp. I shared the tear

glistening on my finger with you and said, “I’m so sorry.” I described the rhythm of your thought that I observed as you took in the question about our process: a very deep, quiet fullness. There was pain in your expression, a kind of sadness, but not only that. I described to you the rhythm of your neck and head when you went across multiple communication boards to find and respond, “it’s complicated,” how your decision was already carried by your presence before you chose the button with those words. I said that we all have our own rhythms in our thoughts, bodies, emotions. I’m only describing back to you my perception of you in this moment. Please speak back to this description.

I asked you, “Does describing this moment between us as a deep body of water feel resonant to your experience of it?” And you chose: “yes. yes, yes.”

I said how I have all the power when I ask you questions. You smiled/snorted at that, with a hint of sarcasm.

There were many moments of communication eyes to eyes. You looked directly at me with deep thought, forceful presence, a voice that is registered by hair follicles and spinal muscles, not decibels or eye-gaze sensors. “It’s complicated.”

I then tried to ask us, what colors were the waters of this moment we were in? But we had already emerged, broken through the moment’s surface, and reconnecting back to the waters’ depths felt difficult, perhaps impossible, to do.

“I’m sorry, Ysolde. I led us down a wrong path. Let’s re-orient.”

This brief description, written within an hour of when this “Communication Moment #2” took place, fails to capture the energetic choreography between us. What is absent from those sentences are the rhythms, pauses, movements, spaciousness of the emotion, feeling, and thought—the dynamics that created the intensity and magnitude of embodied communicativity between us within this deep-water ground-time. Honoring that our communication has the right to opacity means not forcing silences, breaths, pauses, or gestural rhythms to resolve into resolute knowability. Instead, they emerge and sculpt the surface of a communication moment into subtle expression, becoming absorbed into

ground-time and re-emerging, in one form or another, as response (which is only sometimes verbal).

This moment, by intent, includes no video recording or photographic documentation. What is and is not made publicly consumable is a very important deliberation at all phases of this project, this writing, and our creative collaboration.

The specific fraught moment that led to this conversation was when a caregiver shared that Ysolde had previously been “overmedicated.” This was shared in the flow of the conversation, without preparation and without Ysolde’s consent. Her family suspected that she was overmedicated; it took several years of advocating to her medical team for a medicine change. It was shared that Ysolde’s communication and expression changed and opened when the medications were changed/decreased. Marina did not know how or if this had been previously discussed with Ysolde. Nor did Marina know how Ysolde would describe her experience of this, what it meant to her, if she was even ready or willing to discuss it. The deep waters of “Communication Moment #2” were us reflecting on this and other difficult dynamics that had emerged during these conversations. Shortly after the events of “Communication Moment #2,” we were invited by disabled performance artist Petra Kupperts to contribute to her Crip/Mad Archive Dances project. In Kupperts’s words, this project “addresses disabled and mad presences in asylum spaces and in dance archives through participatory performances grounded in disability culture” [13].

COMMUNICATION MOMENTS #3 AND #4: CRIP/MAD ARCHIVE

Kupperts’s invitation was to contribute to the Crip/Mad Archive a video of a movement gesture that embodies a disability experience related to medical incarceration. We watched videos contributed by other disabled artists of their experiences interfacing with medical and psychiatric systems. For example, Elisabeth Motley offered a movement gesture of “opening at the wrists and ankles.” She transformed her memory of being tied down by four-point restrictions in a psychiatric institution into a movement where ankles and wrists circle around one another, gradually widening and opening, thereby energetically releasing the lasting imprints of those marks.

Communication Moment #3—8 April 2023

This video [14] is our contribution to the Crip/Mad Archive. It starts with Marina asking Ysolde whether she had known that she had been at some point “overmedicated.” Ysolde answers “yes” several times, then Marina manually resets the communication board so that the technology doesn’t keep repeating Ysolde’s previous responses. We then transition to Ysolde offering a spontaneous gesture of response, contributing to the Crip/Mad Archive a gesture of a feeling of freedom from overmedication. This video is purposefully not edited; the ground-time between us is kept in full.

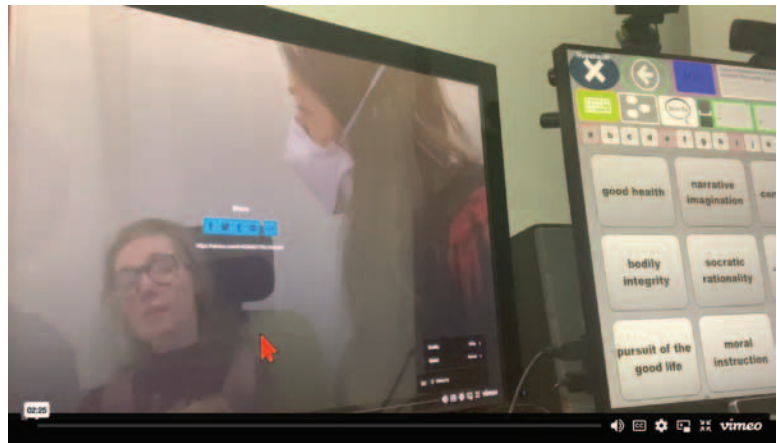


Fig. 6. Ysolde’s meta-DJ response to the authors’ archival video. Two computer monitors are shown next to one another. On the left is a paused video frame with the faces of Ysolde and Marina. On the right is one of Ysolde’s Communication Boards with the buttons “good health,” “narrative imagination,” “bodily integrity,” “socratic rationality,” “pursuit of the good life,” and “moral instruction.” (Photo © Marina Tsaplina)

Communication Moment #4—15 April 2023

The following week, a beautiful moment of crip-magic occurred as we rewatched our Crip/Mad Archive video contribution [15]. Ysolde began responding to it by navigating to a communication board that included the phrases *bodily integrity* and *narrative imagination*. Ysolde’s response became a kind of poetic song cycle, with a circling series of phrases. Marina grabbed her iPad to record this meta-DJ response moment (Fig. 6).

Ysolde and Marina are sitting next to one another, watching a recording of themselves from the week prior. Ysolde is responding in real time to that video as the Communicator voice technology stops and starts the video playback as Marina records, moving the iPad back and forth between the Communicator board, real-life Ysolde and Marina, and the video recording of us on the adjacent computer screen. As Ysolde adds new words to her response, the Communicator starts speaking the phrase from the beginning each time. It becomes a circling poetic phrase that grows a new segment with each of Ysolde’s additions, overlaid over the video playback. This is a vivid example of how Ysolde will break out of the linear logic of the Communicator program and create poignant expressions by finding words that were initially entered for a different purpose (e.g. philosophy class) and weaving them into new forms and descriptions for new situations through improvisational play.

COMMUNICATION MOMENT #5: TO BE WITH WHAT IS—3 MAY 2023

Our next moment took place at the New York Public Library for the Performing Arts for a participatory community workshop of the Crip/Mad Archive Dances. Artists who had contributed to the archive led participants through their gestures, sharing and embodying one another’s movements.

While repeating a choreographic gesture is not accessible to Ysolde, Marina had told Ysolde that she would meet and improvise with her wherever she was at the moment of the performance. Ysolde was quiet and somewhat publicly with-

drawn for most of the day, and Marina did not know what to expect.

The participating artists gathered outside in a circle to set and share our intentions for the evening. We didn't receive this prompt ahead of time (a missed access opportunity for Ysolde), and Ysolde chose to not offer anything during this intention circle from the existing Communicator boards. Marina spoke her intention of releasing the pressure of expectation from Ysolde and herself, to be with Ysolde in the participatory performance with the kind of intimacy and nuance that exists during our one-on-one conversations. For us to be allowed as much ground-time to occur between us and the audience as was needed, for us to be open and ready to receive whatever arises, and not feel rushed or pressured by expectations of response. To be with what is.

At the opening of the workshop, Koppers invited all in attendance to playfully engage with the library's dance archive: We each chose a random book from the stacks, opened to a random page, and chose the first word our eyes saw to accompany us on our workshop journey. Ysolde and I chose a bright red book, and the word-seed that found us was *when*.

When our turn to lead our participatory gesture came (Fig. 7), Ysolde was quiet. She was leaning into a library chair with arms gently crossed. Marina knelt on the floor next to her and echoed her energy and pose. Both of our bodies were parallel to the audience, and the task of releasing the pressure of the expecting eyes settled on our skin. *Release the expectation to prove response, to show thought beyond the thought happening in this moment, to be anything more than we are in this moment.* "Our book word-seed was 'when,'" spoke Marina into the microphone, eyes half-closed. "What would happen if all expectations from that word fell away?"

Everyone in the audience was echoing Ysolde's embodied pose. Marina looked over at Ysolde and saw that though her eyes were facing downwards, they were open, and she was



Fig. 7. A performance moment of Ground-Time shaped by the relational dynamics between Ysolde and Marina. Ysolde is sitting in a library computer chair, and Marina is kneeling on the ground next to her speaking into a microphone. Both are masked; Ysolde is listening with eyes open, and Marina is speaking with eyes closed. Behind them, next to the library information desk, it says "Theatre, Dance, Film." (Photo © Petra Koppers)



Fig. 8. Ysolde and Marina, interwoven with the energies and thoughts of a small group of witnesses, majority fellow Crips, in a loving embrace. Ysolde and Marina's arms are crossed, and their gesture is echoed by all. (Photo © Stephanie Heit)

listening. "Ysolde, would you like to add any verbal response from the Communicator?" Ysolde gave a clear (though perhaps nearly imperceptible to a broader audience) shaking of her head. No. "That was a clear no," Marina spoke into the microphone, responding to the questioning eyes that may or may not have been there.

We could have gone longer, deeper into that moment, continuing to release ourselves from the assumptions, expectations, and distrust that create the pressure of *when*, to let the questioning perceptions—present or remembered—that danced in the air around us to settle, decompose, and become something else. Nonetheless, we achieved an honoring of the truth of that moment's ground-time, an embodied *being-with* in a public setting that we had previously never reached. This ground-time was shaped by the relational dynamics between Ysolde and Marina, interwoven with the energies and thoughts of a small group of witnesses, majority fellow crips, in a loving embrace (Fig. 8).

RELEASING WHEN FROM INLAND RIVER VALLEYS

Releasing ourselves from the expectations of *when* is an act of refusing ontological onslaught, where the technology becomes a tool of interrogation by people who do not trust Ysolde's thoughts. Too often, if she doesn't choose the "right" button, in the "right" amount of time, with the "right" response, her existence as a thinking being is invalidated [16]. Even if the Communicator could be developed to be responsive to the multiple embodied inputs that constitute "communicativity" (breath, pause, rhythm, etc.) while somehow maintaining Ysolde's freedom to choose nondisclosure, to not be tracked—all of these inputs are mere isolated pieces of embodied communication that is first and foremost relational. The technology can never replace the relationship(s) through which the communication is arising.

Ground-time is the space of absorption between cause and effect. Marina's conservatory training in physical theater with master teacher Kari Margolis trained her to think of each action and response during a performance in four phases: cause, absorb, effect, transition (into the next *cause*).

The *absorb* between the *cause* and *effect* is a space of great possibility. It is here that thought, emotional gravity, and the meaning of a moment is revealed. The communicative universes contained within the bodily ground-time of our communication are not registered by the Communicator. There is opacity in these moments, but they are not opaque [17]. Allowing them to unfold, grow, and become what they want to be requires a quieting of expectations of right and wrong, calling for an embodied listening and attunement to the mysteries of how the earth—and all who are connected to the earth—speak. Above all, listening to ground-time requires trusting another's personhood [18]. Releasing *when* is undoing "needing to explain oneself under the threat of exclusion" [19] that disabled people so often face.

Constance, Ysolde's mother and assistive technology provider, was the one who initially radically rethought the design of the Communicator 5 communication boards. Otherwise, Ysolde would only have had access to symbol-based communication. While reviewing the history, philosophical origins, and ideologies behind the development of augmentative and alternative communication (AAC) technologies is beyond the scope of this article, it is important to note that the Picture Exchange Communication System (PECS): Steps for Implementation module by the National Professional Development Center on Autism Spectrum Disorders [20] concludes with the guidance of "applying the picture symbol system to a voice output device if the learner is not showing progress in vocalizations." According to PECS, if a person does not verbally vocalize, they should only have access to symbol/picture-based communication.

In Constance's words, "If I would have left the Communicator design according to how these systems (medical, academic, etc.) evaluate Ysolde, she would never have had access to writing poetry." To this, Ysolde responded "**Comparative anatomy**" and "**inland river valleys**". We were reflecting on Constance's words, and Marina asked Ysolde whether to include them in this article. Think for a moment, dear reader, of how playful, expressive, and multi-layered Ysolde's response is to what Constance is saying, against the force of discrimination and misperceptions she faces. "That is true," Ysolde responded, and smiled. Then, "It doesn't matter." "That's me." The ground-time between Ysolde and Marina in the moments that compose this paragraph [on 21 November 2023] was short, seeds sprouting immediately, the circle of communication between us held by our relationship, the Communicator facilitating Ysolde's verbal thoughts with fluidity.

CLOSING

There are some deep-seated beliefs in the dominant European and North American scientific tradition and its resulting technologies. These guiding beliefs form a philosophical groundwork [21] that is assumed to be factual, including the construction of a hierarchy of intelligence that prioritizes narrowly defined forms of human intelligence as the most

advanced. By contrast, much of the diversity of human intelligences, as well as the intelligences of the more-than-human world (animals, plants, soil, water, molecules, etc.), become demoted—de-authenticated [22] to being less-than, viewed as being, in essence, "intellectually disabled." Based on such a hierarchy, capacity for thought must be proven by a narrow set of terms for a person—human or not—to be permitted entry into the kingdom of conscious intelligence, so as to become someone who holds both the capacity to know, and to be *knowable*.

Informed by disability justice and anti-coloniality [23], our work emerges from a foundationally different groundwork. Namely, that there is no being, no entity in this world, who does not, in one form or another, speak for themselves. From this groundwork, the important question is not whether a particular living being holds intelligence and the capacity for thought, nor where in a supposed hierarchy of intelligence they fit. The question that instead asserts urgency becomes *How* do we listen to perceive the speaking brilliance all around us?

While some are quick to attribute consciousness to artificial intelligence systems, we culturally have yet to acknowledge the diversity of intelligences of the majority of the living world [24]. To do so would require renouncing the myth of the primitive [25].

Marina recalls choreographer Liz Lerman to have stated: "No one understands what the body knows." The expansive way of perceiving embodied communication and ground-time that we have illuminated and described through our collaboration challenges the technological signal-to-noise ratio. With so many facets of potential communicativity, demoting certain inputs to "noise" and not "signal" removes entire universes of potential sources of meaning. It refuses them entrance to absorption into ground-time and for their emergence, in one form or another, as response. Simply because someone does not declare themselves to you does not place them outside the realm of thought. There may be ambiguity, yes, but there's also clear waves of expression. It is never a forcing or demanding of clarity. Illegible does not mean incommunicative. Begin from a place of expansive wholeness (signal), not exclusion (noise). Begin from a place that will allow you to listen to ground-time.

The question for assistive communication technology developers becomes how to design tools that allow maximum flexibility for improvisation, to allow abstract, nuanced, poetic choreographies of expression—verbal and not—to emerge, while critically maintaining the user's freedom to choose nondisclosure, of opting-out. Verbal responses are not the authoritative totality of communication but rather accompaniments to, or at times revelations of, a vastness of communication that no human beings or technologies can ever fully comprehend.

But Ysolde's poem says it best:

primitive way country come look inside.

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YSOLDE STIENON (*she/her*) is a poet, artist, and disability advocate who lives in Brooklyn, NY. She takes college courses at the City University of New York (CUNY), loves to travel, and is working to integrate painting and performance with her poetry.

MARINA "HERON" TSAPLINA (*she+*) is an eco-puppetry performing artist, writer, disability culture activist and scholar based in Lenapehoking (NYC). Her work is dedicated to undoing colonial and ableist logics from how we imagine earth and flesh.