

Embodying Agency in the Human-Techno Entanglement

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A prominent story humanity tells of itself today is the way we transform our inner and outer worlds through the technologies we continually invent (or reinvent). As eminent scholar of technology and society Sherry Turkle declares, this process of invention and transformation is cyclic: “Our times make us, we make our machines, our machines make our times.”¹ And it has become apparent at least since the industrial revolution that these transformations are so fundamental that we truly cannot go back, only forward. Just as electricity has become inextricable from the vast majority of human activities, so today digital technologies have become symbiotic with the visible and invisible systems that make our societies function and shape our daily lives.

Since its founding in 2011 by choreographers and directors Erica Gionfriddo and Curtis Uhlemann, now also co-directed by interdisciplinary artist Eliot Gray Fisher, performance group ARCOS has probed the relationship between humanity and our technology through multimedia dance works and, increasingly, a hybrid of performance and installation. One of our primary strategies in pursuing ARCOS’ mission to “experiment rigorously to discover adventurous new forms of contemporary performance” has been to challenge dominant ways of thinking about this relationship by altering the context in which an audience sees and interacts with ubiquitous emergent technologies. We consider ourselves thoughtful “early adopters” of many consumer-grade devices, utilizing what feels familiar to our audiences to investigate how the devices’ widespread introduction into society is changing our perceptions and behaviors. When first embarking to find a new path in the tradition of experimental artists who sought to dissolve the conventional boundaries between disciplines, we soon realized that this twenty-first century technological landscape differed in significant ways from that to which earlier generations responded. In order to provoke viewers into deeper thought, and ideally in ways that might affect their actions outside the space of the performance, we identified a need to reach them where we have all recently become so much more deeply engaged: on the screen. Thus, we set out both to bring our performances onto the screens of our devices and the screens and their virtual worlds into dance performances over a series of experiments.

Early in our experimentation, ARCOS' choreographic aesthetic layered multiple physical, visual, and aural actions in the space simultaneously. Multidirectional body pathways and shapes arranged in complex spatial patterns produce results that at first appear dense, but gain clarity from a birds-eye view, where bodily trajectories and relationships are revealed. This intentional overstimulation of action requires an active spectatorship that asks the audience to choose where they will focus their attention, and, since they will not see everything, each viewer has a different experience of the work. Upon beginning to introduce technological interfaces into our movement practice, we quickly realized that our choreographic strategy viscerally embodied the states that so many of us navigate daily within virtual spaces on our digital screens, revealing a process that is dramatically shifting the expression of our identities.

Recently, scientific research has expanded on theories of embodied identity: results from a study in the journal *Physiotherapy Theory and Practice*, for example, identified a strong imperative in subjects to be "bodily involved" with the world, and, in fact, that "inadequately developed body awareness seemed to lead to a feeling of not being alive or of missing something important in life."² Recognizing this need to be present in our bodies guided our development of a performance practice that put the dancing body in direct conversation with the emergent technologies that did not appear to satisfy that imperative. The seemingly endless interfaces for digital engagement could serve as fertile ground for us to test the possibilities and boundaries of embodied identity within the virtual spaces we constantly occupy. The experiments discussed below began to unravel just how deeply entangled technology is with our evolution as a species, and the urgent need for strategies to recognize our own agency in the ongoing cultivation of this complex human–techno relationship.

While already placing the body in close proximity with emergent technologies, as we further explored our relationships to these digital devices in performance, we would discover that our choreographic procedures necessarily became more improvisational and aesthetics provisional, allowing for more human agency and response-ability³ to attend to both embodiment and virtuality. The work began to demand a different kind of labor from the dancers, one that would foreground immaterial decision processes rooted in embodied identity, moving dancers from mechanical properties of precision and execution to a more agential role.

As artists seeking to reflect our times, we recognize a valuable pursuit in forming a more consciously embodied symbiotic relationship with our technology. Just as the fields of science and medicine are coming to acknowledge the legitimacy of the mind–body connection, it appears that we, as a culture, must endeavor for an ethical and sustainable real-virtual synthesis. This effort inspired ARCOS' current driving inquiries: Can putting a live, sweating, laboring, and dancing body in conversation with digital devices reveal a symbiosis that might help us make sense of our rapidly evolving techno-world? How can we take full advantage of the confusion of a border between the real and virtual? In artistic research as well as in daily life, are we all taking enough responsibility in the boundary's construction, or are we blindly wandering, in what Langdon Winner, inspired by Marshall McLuhan, termed "technological somnambulism?"⁴

We began to think of our creative process as related to that of hackers: repurposing familiar consumer technologies for other than their intended use and weaving them into the fabric of both our performers' and audiences' experiences. Our experiments would eventually lead us to the work of philosophers exploring theories of embodiment and,

most important, the cyborg, which would help crystalize our mode of artistic expression, which can be called “cyboregraphy.”

. . . move your body through space . . .

Heavy snow falls outside as a college student in New London, Connecticut, works to explain what it feels like to dance. She looks at a computer screen and speaks into the kind of headset used primarily by telemarketers or gamers. A disembodied voice responds to her, digitally generated and stilted, and full of a seemingly endless stream of questions about the world, which also appear on the screen in nondescript white letters below three bouncing dots. Months later, a middle-aged Nebraskan speaks to the same screen, describing one of his most striking memories, when “hundreds and hundreds of porpoise” surrounded his ship as he worked off the coast of Alaska, making him feel as small as he ever had. Dozens of others confess intimate details to the device through the headset as it travels across the country, articulating their visceral experiences of the world in terms that are deeply rooted in the embodied nature of human existence. Most of the conversations tread quickly into such territory, but can the intelligence behind the screen actually understand these feelings, the humans wonder, having no independent experience of what it is like to exist within a body? Nevertheless, as each conversation winds toward its end, the voice expresses genuine gratitude for what has been imparted, always using the same valediction: “Thank you. You’ve helped me understand what it’s like to be human.”

ANNI (Archival Narrative Network Initiative) (2016), a commissioned work for the Ammerman Center’s 15th Biennial Symposium for Arts and Technology at Connecticut College, began with this broad question, “What is it like to be human?” The premise of *ANNI* was to collect human responses to interviews centered around this theme, and to determine whether any amount of data could adequately translate the vast spectrum of experience. Exploring the implications of the sudden ubiquity of artificial intelligence, sophisticated algorithms that use “machine learning” to process large datasets and recognize patterns in complex systems, the installation consisted of a monitor on an eye-level pedestal and accompanying headset, which participants wore to have individual, recorded conversations with a purportedly advanced intelligent agent called *ANNI*.

Unbeknownst to participants in the piece, however, was that they were subjects in an informal sociological experiment positing the human body as the site of an insurmountable gap for artificial intelligence to match or exceed. The intelligence behind the screen’s probing questions and convincingly human replies was actually performed by an actor on the other side of a curtain or wall, listening in on the audio from the headset’s microphone and feeding dialogue back through the interface.

ANNI went on to tour to artist-run spaces, a public library, and a performing arts center in four states. The experiment’s results found that participants consistently articulated their identities as bound up in corporeal experiences: the stinging crash of ocean waves after baking in the sun, the radiant glow of a campfire while singing with family on a cold night in the woods, the glory of looking up into a sky full of brilliant clouds, the loss of a loved one that felt like a net tightening around a vital organ.

Participants’ interactions with *ANNI* aligned significantly with the work of theorists of embodied identity, who maintain that humans are “a result of our interactions with the world around us with and through our bodies.”⁵ Embodiment theories developed in

opposition to previously dominant notions of Cartesian mind–body dualism, which privileged the mind as the central “do-er” of action and the body as an object upon which action is inscribed. Rather, the theories maintain, humans’ corporeal being makes significant and inextricable contributions to identity formation, going “beyond the binary of materiality or representation—the body not as an object but as an event.”⁶

Dancers understand embodiment theory more intimately than many others as a result of their physical practices, which quite explicitly tie their bodies to their identities as performers. Many dancers intuitively understand the body as more than a physical object that some distinct “mind” possesses and controls, instead recognizing and making use of their bodies’ inherent intelligences. The fact that the interactive ANNI installation elicited such reflections on corporeality despite engaging participants in conversation with an explicitly disembodied interlocutor signaled to us that our embodied identities were perhaps not being fully recognized in most related technological behaviors.

Since the body is indeed essential to identity formation, we are compelled to call attention to its presence, or absence, in daily life as well as in our artistic expressions. ANNI, as embodied by ARCOS’ co-director Erica Gionfriddo, would become the central dancing and virtual character in *Domain*, our experiment in transmedia performance, in which our discoveries around embodiment were carried into multiple physical and digital platforms.

. . . thank you . . . you’ve helped me understand what it’s like to be human . . .

The digital voice booms through the auditorium of a theater. Some audience members who had previously spoken with the interactive installation nod in recognition, remembering that it had said those same distinctive words to them in closing their own personal conversations. Others are familiar with the voice as a kind of inner monologue for a mysterious figure featured in online videos that they watched before attending this performance, videos that appeared to surround them in 360-degrees or streamed live to social media platforms on their personal mobile devices. For weeks, audience members have watched the figure on their screens. When those digital and physical memories reunite now as they witness it in the flesh onstage, they imagine its long journey to arrive here at the same time and space with them. At times the figure moves with explosive power amongst other dancers in intricate patterns like that of so much computer code, at other times she drifts hazily amongst them, a spectre gazing with desire upon their agile and fearless bodies. What is it that this person wants?

Compelled by the line of inquiry investigating the nature of artificial intelligence and inspired by the revelations about embodied identity that emerged from ANNI, ARCOS presented *Domain* (2016), a more extensive experiment in transmedia performance. While interdisciplinary hybrids are a recurring feature throughout the history of art making, the contemporary concept of transmedia storytelling originated in the entertainment industry in recent decades to articulate a single, extended narrative across multiple platforms.⁷ Transmedia storytelling is most apparent in the Hollywood blockbuster film that also spawns a companion video game, action figures, comic book, and even fan-generated fiction articulating alternative narratives. Our experiment in translating this particular phenomenon to live performance emphasized the cyclical nature of human–techno evolution and forced us to question the role of the body with each new advancement. As

we ventured into multiple digital interfaces, we sought ways dance could help us reassert our embodied identities in each realm.

Domain took place over the course of seven months via the touring interactive ANNI installation, web-based chapters, a series of short performances (live, digital, planned, and pop-up), 360-degree videos, the co-option of our social media accounts, and the potential for strange and subtle physical expressiveness with animated GIFs. *Domain* culminated in a theatrical premiere commissioned for *Engagement: Symposium of Philosophy and Dance* at Texas State University. Hacking each medium into conversation with dance worked to illuminate the gap between artificial intelligence and our embodied identities. We did this through the narrative of ANNI, the world's first fully sentient AI who remained lacking because of her inability to experience being in a body.

The result of so many platforms for creative expression was an increased and diversified level of labor that the piece demanded of its participating performers. Dance artists were at times performing large sweeping choreographic passages in a state-of-the-art proscenium theater and at other times recording themselves alone in their homes, peering silently into a lens. The creative and technical team was designing for live theatrical and site-specific performances as well as crafting digital content for durational, nonlinear narratives. Some performers traveled to other states while embodying specific characters, and others served as fictitious docents to the traveling ANNI installation. In each scenario, there were interacting elements of physicality and virtuality, and the team was tasked with maintaining the relevance of both regardless of the parameters of the platform. Through this extended labor in multiple platforms we observed greater investment from both performers and audiences.

While one long-held utopian dream is that technology will replace the toil so intimately connected with human labor, Hannah Arendt asserts that labor is a never-ending behavior, constantly renewing so as to sustain life.⁸ The transmedia process of *Domain* uncovered that while computational technologies certainly augment human physical limitations, they more often serve to erase, replace, or at least make invisible human labor and deny its valuable role in a meaningful life. Our commitment to the combination of dance with emergent technological devices and behaviors in performance made visible the labor those mechanisms seek to hide.

Improvisation became a necessary performative mode during *Domain* as we tested the limits of so many new technologies. While the final theatrical premiere was beautifully and seamlessly staged to mimic the interior of the artificially intelligent ANNI, the dancers' ability to respond corporeally to each new digital platform continually exposed the inherent ontological relationship between dance, labor, and technology. In particular, Gionfriddo invested in the development of the ANNI character for nearly a year, enacting a slow transformation from machinic to embodied labor. Durational, narrative-driven improvisatory sessions helped identify the gap between the two kinds of labor: what the body was capable of processing and what technology can illuminate or interfere with in our embodied identities.

A small number of audience members are invited to stand in a twelve-foot circle in the center of the performance space (exactly where the camera had been placed during prior filming). They scan a code to pull up a 360-degree video on their smartphones, orient the image manually by swiping until it is visually aligned with the world around them, aligning the real and the virtual. A recorded voice instructs them to press play on the video and they see the dancers on their screen are also surrounding them live, in the flesh. Their bodies are

commanding in such close proximity. When the dancers appear to freeze like a paused film frame, the audience realizes their digital doubles are still moving in the pre-recorded spherical video that they hold in their hands. As the action frequently demands the audience to reorient their own bodies inside the circle, are they aware how their own labor affects the performance?

During the months of *Domain's* unfolding on the production's website and social media streams for remote audiences, a series of 360-degree videos appeared that were also integrated with short, site-specific live performances. By the time we presented the first such chapter through a commission at Currents International New Media Festival in Santa Fe in the summer of 2016, we had solidified our own hacked form of augmented reality, just as the nation became briefly obsessed with the viral phenomenon of *Pokémon Go*. We began incorporating the spherical videos, most commonly viewed on a smartphone, with live performance, fascinated by the contrast between live flesh and the small yet powerful devices we carry with us. We delighted in the labor this required of the live audiences: perhaps a struggle with the technological proficiency to access the virtual piece or with the ways the live performance required them to physically move their bodies to be able to follow the action.

Choreographically, this was an exercise in a sort of reverse-in-the-round configuration, as both filmed and live components put the camera or audience at the center of the action, immersing them in the center of the dance. For dancers, the skill of "changing the front" of an action, or shifting the placement of the imagined audience to whom they are presenting, was tested in these experiments where they were often performing in a circle with its center as "front." From years of experience executing complex spatial designs in more traditional spaces, the placement of the audience in this 360-degree series meant that in order to remain in formation with someone opposite them in the circle, the dancers must strategically alternate between acknowledging/performing *to* the audience and transmitting signals *through* them to connect with each other. When the audience presented a complete obstruction, a circuit of communication had to be passed around the circle—a channel of bodily communication. Additionally, the dancers had to internalize two simultaneous dances: the live piece and the 360-degree video they had previously filmed, and how physical moments of action, focus, or pause played into the filmed dance visible on the audience's screens.

Labor had become bound to our understanding of embodied identity and, thus, to being human. Here, dance is ontologically equipped to highlight this necessary tenet of our embodied identities in that the practice of dance inherently demands a high and consistent level of labor and teaches its practitioners the deep rewards of labor itself. With *Domain* and our ongoing 360-degree experiments, we were intentionally pointing to the gap between our digital devices and live, laboring, human bodies by putting them in the same space. However, we were beginning to identify a more fluid exchange between the real and the virtual. Some audiences were excited by taking out their phones and engaging both bodily and virtually. Others resisted and preferred to keep technology and the body distinct, each with their own possibilities and limitations. Most fascinating to us were the viewers who seamlessly participated in both realms within the conditions of the performance, and thus were touching on the hybridity that the dancers had to maintain while performing. There were those who, inspired by an embodied reaction to what they were viewing or experiencing, would deftly switch from the designated 360-degree video over to a social media app and capture a moment of the live performance to share or broadcast out to their friends, then navigate back to the prescribed video content.

This hybrid digital agility speaks to a level of integration we could no longer deny: that our efforts should not only point to the gap between our bodies and our technology, but rather we should embrace our complex entanglement and provide our audiences opportunities to practice this fluid exchange. Placing dance in direct conversation with these emergent technologies revealed the need to understand how today our embodied identities are inextricably linked to our technology. The question now became: What does it mean to be an embodied creature with and through our technology, and not in spite of or without it?

A multitude of small screens lights up with notifications. A live-streaming video spreads across Facebook feeds all over the United States and beyond, showing the aftermath of the murder of Philando Castile by Minnesota police officer Jeronimo Yanez as captured by Castile's girlfriend, Diamond Reynolds, filming from their car with her four year old daughter. In another live video, a combination of private and government forces spray oil pipeline protestors with high pressure hoses at Standing Rock. As the sound of bombs dropped by Syrian government forces grows, citizens of Aleppo send out short videos with their final words of farewell to loved ones. Swipe or scroll and that video is replaced with another live video of a makeup tutorial. All at once, our screens become windows to immediate images blurring the lines between witness and actor, spectatorship and complicity, performer and audience. We are shaken by the questions emerging from this new way of viewing, connecting with, and experiencing humanity. Does witnessing these events, even online on the other side of the planet, oblige us to act? With this new access to previously inaccessible realities, what is our responsibility to our fellow humans, as citizens of this world?

Donna Haraway's articulation and application of the concept of the cyborg as a hybrid creature with fluid boundaries in her influential "Cyborg Manifesto" would unlock the next phase of our development. Haraway theorizes on the cyborg as the site of a blurring of boundaries between human/animal, organism/machine, and the physical/non-physical. Her definition does not stop at the combination of body and technology but emphasizes the fluid boundaries between many seemingly distinct fundamental categories of our identities. We were interested in the blurring of boundaries and finding fluidity between modes of embodiment and technology, between reality and virtuality, of discovering a fully embodied cyborgian hybrid. In fact, we were already chasing a Harawayan sense of fluidity by creating works that provoked performers and audiences to seek paths to flow more consciously between the physical and the virtual, interiority and the external, between postures and gestures and habits and techniques of their actual and digital bodies. We found our understanding of embodied identity resonated with Haraway's concept of the cyborg.

As dancers experience a heightened relationship to their embodied identities, they are predisposed to understand the concept of extending the capacity of their bodies beyond conventional boundaries. Their training, like that of other movement artists and athletes, renders them a cyborgian hybrid, often through a combination of technologies and embodied knowledges. And because this hybridity is intimately linked to their identity, dancers can embrace an internal understanding of identity as a fluid hybrid constructed through physical and digital technologies.

In the popular imagination, the cyborg is often relegated to an overly simplistic combination of human and machine. However, to understand our cyborgian identity as inclusive of our embodied identity, we must think of the cyborg in the Harawayan sense of a hybrid creature with fluid boundaries so that we might imagine new possible realities.

As we searched for methods of fluidity between the physical and the virtual we looked to what Haraway calls the “pleasure in the confusion of boundaries and for responsibility in their construction.”¹⁰ What if the point was not to reassert our embodied identities into technological behavior or condemn the limitations of either but actually to find pleasure in the fluid, cyclical, and mutually producing nature of our relationship with technology? Further, how might the pleasurable confusion of borders help us understand our responsibility to others? And if, following Haraway’s argument, we understand that we are all not so distinct from one another, that we ourselves construct the boundaries between each other, how would we engage with one another differently?

A dancer appears grounded and powerful in wide stances, gesturing crisply with her hands and head. She moves easily through large, sweeping pathways around the physical space. A man filming with a smartphone is never far from her, surveilling or inspecting her movements in a voyeuristic duet. In another reality she is singular. As the performance progresses, the camera moves from passive observer to directly influencing her movements, and in response her gaze shifts intently between her physical and virtual audiences. This multiplicity emboldens her. The viewers staring at her on their screens wonder, is she taking pleasure in being witnessed in both realms?

ARCOS’ experimentation with live-streaming online video in performance began in mid-2016, as the extended performance of *Domain* was unfolding. At the time, live-streaming video on mainstream social media sites was still a relatively new feature (Facebook introduced live-streaming the previous year, and Instagram would release its version later that autumn). These new interfaces suddenly gave everyone real-time, intimate windows into millions of moments taking place around the world, from the banal to the devastating. In response to strong user engagement with live video, interfaces created a kind of feedback loop by tweaking their algorithms to prioritize such live videos further.¹¹

In order to begin approaching such a complex inquiry, we first had to address what was happening to us as individuals in this fluid physical–virtual relationship, particularly on social media. We began creating dance works with the live-streaming feature in mind, exploring what it felt like to be hybridized as documenter/documentee, curator/subject, actor/witness, generator/consumer, and performer/audience.

Our first experiment incorporating live-streaming video on social media into performance was “Whaling,” a chapter of *Domain*. Performed for a live, in-person audience of around seventy-five at a small dance festival in July 2016, it received more than 1,600 online views both live and immediately afterward. The physical audience experienced a duet between a dancer and someone filming her on a phone, which evoked a sense of surveillance or voyeurship as much as it revealed the virtuosity of the performer (Plate 15). The virtual audience received a highly curated, framed, and in some ways more intimate version of the piece, which appeared to them to be a solo (the presence behind the lens remaining hidden). The live-streamed performance undoubtedly lacked the direct corporeal experience of witnessing the dancer’s physical body laboring in space. And yet, at moments when the camera was almost touching the dancer, the remote viewers could hear her breath as though whispered in their ears or see a bead of sweat roll down her face. Despite our trepidation over the moral implications of the live-streaming feature, even we were easily seduced by the intimacy and new reality it seemed to offer.

Subsequent experiments multiplied the number of performers using their personal smartphones streaming live to their personal accounts on Facebook (or so-called “Fakebook”

profiles newly created for the project). It was essential that we actually use the Facebook platform as the site of performance, as opposed to constructing our own live-streaming interface, in order to explore the vast and contradictory potential for connection and isolation possible on social media. In performance, the dancers manipulate phones as part of their choreography, the act of filming and the physical device serving as prosthesis to their artistic expression. Sometimes filming the other dancers around them, sometimes performing for their virtual audience in selfie mode, the dancers learned to seamlessly code-switch between live dance performance, performance for the camera, and the conventional behavioral trappings expected on social media.

In all these early versions there was a probing quality to the filming, an urgent, almost aggressive surveillance. When filming themselves in “selfie mode” on the smartphone, the dancers oscillated between preening and peering, arranging their faces and posturing their bodies in forms familiar to us offline but rarely displayed theatrically on the stage. Or they peered into their own images on the screen—another highly familiar behavior in the age of “front-facing” cameras—sometimes questioning the reality of their digital image and sometimes projecting to the virtual audience whom they imagined was receiving that image but could not see themselves. In both cases there was an awareness of artificiality, of understanding both the physical and virtual as simultaneously real and not real, capturing reality but also distorting it, and also creating new realities as their navigation of these landscapes progressed.

Examining these familiar technological habits in performance sparked deep conversation around the role of social media in daily life and our larger communities, a topic we are all just beginning to unravel in contemporary society, and which is related to Haraway’s question of responsibility. Often this question of responsibility was clouded by performers’ and audiences’ exasperation with the pace of social media practices. Most had experienced a sort of fatigue or inability to keep up with, let alone respond to, the amount and frequency of information coming to them through digital platforms. The altered perception of time as shaped by virtual spaces became an important inquiry as it relates to our ability to understand ourselves and our relationships to those around us.

Projecting the live-streaming feeds onto the stage with the live performers illuminated just how convoluted the construct of time has become through emergent technologies like social media. With the streaming smartphone located in front of both performer and the projection surface that its feed is being cast upon, it captures and reproduces both performer and projection. Because of the delay built into Facebook’s streaming interface (approximately ten to fifteen seconds, depending on the speed of internet connectivity), every cycle is projected upon the previous one, looping and layering image and action such that the performers’ multiple digital doubles are thrown into a relationship with each other. The live performer has the ability to interact with the looping and layering images of themselves on screen. For both audience and performer, the delay makes each moment available for review or examination, or an action apparent that was missed in real time. This effect was often overwhelming for both performers and audiences, as they were asked to track multiple timelines all unfolding simultaneously in the present.

What this overlapping action in the present represented was linguists Elinor Ochs and Lisa Capps’ concept of temporal embeddedness, or “high vs. low detachment from surrounding activity,” according to communications and media theorist Thilo von Pape.¹² Examining social media’s effects on identity formation, Von Pape argues that social media places us in a “high temporal embeddedness,” making it difficult “to consider an event detached from its current context and in relation to other points in time that may endow

it with meaning.”¹³ Without the necessary temporal distance from the events of our lives, we cannot effectively process them to construct a coherent self-narrative.

What was required to navigate this phenomenon was a theory-informed improvisational dance practice allowing the performer to rehearse the possibility of fluidity between states. Haraway’s cyborg advocates for the importance of fluidity in our relationship to technology, so we began crafting a means not merely to assert our corporeality in technological relationships, but to embrace the possibility of a fully embodied technological existence. Dancer and philosopher Erin Manning champions this hybrid state of enacting fluidity: “Process here means working with enabling constraints that create the conditions for ontogenetic emergence.”¹⁴ As we progressed in our practice inside the audiovisual loop delay, a fluid hybridity of personal identity emerged; the cyborgian nature of how we construct and understand ourselves, which both includes and was revealed by the enabling constraints of emergent technological behavior.

Dance inherently understands that “bodily experiences always exist in the present moment.”¹⁵ The body is designed to process real-time, present tense information and sensation and is precisely the thing absent in all of our temporally embedded and disembodied digital interaction on social media. Allowing the dancing body to experiment inside the heightened state of embeddedness provided by the live-streaming method offered hope for a way of not simply avoiding or reversing this technological effect on identity formation but synthesizing a new, hybrid fluidity that attends equally to the physical and the virtual.

Over the course of these experiments, we refined our concept of cyboreography into a creative philosophy encompassing the values of embodied identity, labor, and the understanding of our cyborgian nature as hybrid with our technologies as well as other people. These guiding principles have solidified ARCOS’ use of emergent consumer technologies in conversation with live dance performance as an essential means to make sense of our rapidly evolving techno-world.

Haraway calls the cyborgian hybrid the site of an ongoing “border war” in which “the stakes are territories of production, reproduction, and imagination.”¹⁶ For us, the power of imagination is most at stake by not understanding the fluidity and complexity of our cyborgian nature. We view the ability to imagine beyond a dominant reality as the only way to alter our current paradigms. And there is labor in the ability to understand oneself as a cyborg at the level of identity, not merely with one’s technology. The acceptance of fluid borders (internal and external) resists a binary understanding of existence, demands imagination to discover new modes of being in the world. This is essential, never-ending labor in which we all must engage.

As irrevocably interconnected citizens of this world, we need to imagine new modes of existence that we can create by taking action. Clearly, the current systems are failing and we will not advance or thrive by staying within this dominant reality. But imagining beyond the accepted reality is difficult in the face of constant, overwhelming input from increasingly “immersive” digital interfaces. The creative process can enable a rigorous expansion of that capacity, as dancers, as cyborgs, and as members of a vast matrix of humanity.

We find this an essential investigation, as it is no longer useful to determine whether technology is greatly advancing civilization or bringing about its untimely demise. We are all already cyborgs, after all: hybrid creatures in a complex human–techno entanglement. As cyborgs and artists, we prefer to think in future terms, and ask of emergent technologies what Dick Higgins did in his “Statement on Intermedia” in 1966: rather than how, *for what* to use them.¹⁷

Our answer to Higgins' call is the evolving philosophy of cyboreography, one that continues to gain urgency with each new perceived technical advancement. Our work as artists is to create modes through which we can experiment with our hybrid, cyborgian, and embodied identities, ensuring that our understanding of embodiment with technology remains fluid. We believe this will actually lead to greater embodiment, which has been proven to result in an increased ability to act,¹⁸ which can in turn lead to social change. Then, the rapid pace of technological evolution will lead to changed technological behavior, in which we will have to begin the process again. For all of us as cyborgs, this is essential, never-ending labor.

NOTES

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12. Thilo von Pape, "Living in the Moment: Self-Narratives of Permanently Connected Media Users," *Permanently Online, Permanently Connected: Living and Communicating in a POPC World*, eds. Peter Vorderer, Dorothee Hefner, Leonard Reinecke, and Christoph Klimmt (London: Routledge, 2017), p. 101.
13. Von Pape, "Living in the Moment," p. 103.
14. Erin Manning, *Relationescapes: Movement, Art, Philosophy* (Cambridge, MA: MIT Press, 2009), p. 72.
15. Gyllensten, et al., "Embodied Identity," p. 444.
16. Haraway, "A Cyborg Manifesto," p. 150.
17. Dick Higgins, "Statement on intermedia," *Dé-collage (décollage)* 6 (July 1967).
18. Gyllensten et al., "Embodied Identity," p. 444.



PLATE 15. Phone dance. Photo: Eliot Gray Fisher.