

Presence and Physiovalence

Artful Resistance against the Neoliberal Digitization of Our Lives

Ken Ueno



I was invited to participate on a panel for a media arts festival in 2021. Each artist participant was asked to submit a one-minute video to represent their work. It occurred to me that the one-minute limit imposed upon us was indicative of values just beneath the surface of the logistical parameters. The time limit was ostensibly designed to facilitate presentations by a quorum of artists the festival needed to host, but I was frustrated with the imposed impediment to satisfactorily representing my work. The time limit began to feel like a cultural bias.

There are implicit hierarchies that condition those who are fluent in the systems that structure such events to filter out extraneous details. Those extraneous details—the noise—are potential forecasters of social change. As Jacques Attali says, “The noises of a society are in advance of its images and material conflicts. Our music foretells our future. Let us lend it an ear” (1984:11). I often play Rostropovich’s recording of the C minor Bach *Sarabande* for my students to point out his heavy right arm and the incidental *sul ponticello* (an indication to play “on the bridge” of the instrument, resulting in timbral brightness) that results from his heavy Russian bow arm. It’s an extraneous detail, perhaps, but one that keeps me captivated as a Barthesian punctum. Most of my students hardly notice it, their focus wrapped in following the score for the notes. It is social conditioning that filters out the *sul ponticello*; Western music scores traditionally denote rhythm and pitch, but not timbre, with the consequence that pedagogy focuses mostly on only those parameters

that are notated. It's akin to how the people who work at the CVS pharmacy or the local 7-Eleven convenience store don't hear the hum of the large wall of refrigerators that line the back of their workplace. But it IS possible to hear that sul ponticello, that noise. In every performance practice, every system, there is noise that we filter out. When you're fluent in a system, it's natural to take for granted what's filtered out of the system: fluency is driven by efficiency. But being sensitive to sonic artifacts (real and metaphorical) could point to drivers of social change.

It happens sometimes, when I try to use my credit card at some stores in the United States. When I try signing my name in the little screen using a stylus, some machines won't let me do it, because I sign my name right to left, and the coders who designed those machines assumed that everyone signs left to right.

My frustration with the one-minute limit was a similar feeling to my experience of being locked out of the credit card system with its cultural bias that wouldn't let me sign my name. What I offer through my art practice is physical presence as resistance against the digitization of our bodies and lives. What I call physiovalence, the condition that as audiences we vivify and feel empathically—in realtime—what is enacted onstage, is central to my practice. Since physiovalence requires a period of engagement with the audience for the physical state and by extension the mental state of the audience to empathically align with the art work's intent, a minute was not enough to represent my work. My presentation instead served as a critique of the culture of that media arts festival.

The mainstream culture of media art on the other hand is invested in showcasing technological advancements, a context in which a minute is sufficient for the didactic demonstration of new technology.

Neoliberal Normalization

What I have seen as a consumer of culture are signals that valorize innovation, which appear initially to be benign. As a child of the 1980s, the moment of inception in my memory that I associate with the normalization of technology is the piano scene in the movie *Big* (1988). Here, Tom Hanks playfully dances with Robert Loggia to play notes on a large keyboard stretched across a toy store floor (www.youtube.com/watch?v=25CtoSJD9eo).

Who isn't charmed by Tom Hanks in this scene? It's disarming. The scene says to me that technology is fun and benign. But let's remember that the Robert Loggia character is the CEO of a toy company. The latent story is that normalization of technology, as a toy, a commodity, serves sales, serves neoliberalism. The sinister underbelly is that as technology tracks body motion, it is also a species of surveillance technology.

There are similar musical steps at the Boston Museum of Science, which I can't help but associate with the danceable keyboard in *Big*. The stairs, designed to entice children to play, serves to project technology as benign and friendly, even fun (www.youtube.com/watch?v=OCvpregdC0). But, underlying the fun, one wonders what forces decided to place this interactive propaganda machine of neoliberalism here? As in *Big*, beneath the seemingly harmless exterior hides a

Figure 1. (previous page) Jennifer Koh on violin with Lucinda Childs in Robert Wilson's Bach 6 Solo. Chapelle Saint-Louis de la Salpêtrière, Paris, 2021. (Photo by Lucie Jansch; courtesy of the Robert Wilson Archives)

Ken Ueno (University of California, Berkeley) is a composer, vocalist, sound artist, author, and professor. He is known for inventing vocal techniques, composing "person-specific" music, instrumentalizing architecture, and for being an activist in decolonizing classical music. As a vocalist, he has performed his concerto with orchestras across the US and the world. He has published in the Oxford Handbook of Spectral Music (2022), the New York Times (2011), Fractured Scenes: Underground Music-Making in Hong Kong and East Asia (2021), and Blues: Philosophy for Everyone: Thinking Deep About Feeling Low (2011). He holds a PhD from Harvard University and his bio appears in The Grove Dictionary of American Music. kueno@berkeley.edu



Figure 2. Dancing robots in the propagandic projection of technology. “Do You Love Me?” posted by Boston Dynamics, 29 December 2020, www.youtube.com/watch?v=fn3KWM1kuAw. (Screengrab by TDR)

questionable agenda. Interactivity is a veneer of freedom. Engaging in physical play solidifies an ingrained awareness of the harmless aspect of technology within the body. What we learn through our bodies becomes encoded in a space hidden from our thinking brains, as we learn from the somatic abolitionist Resmaa Menakem, sharing space with our embodied prejudices and traumas: “But white-body supremacy doesn’t live in our thinking brains. It lives and breathes in our bodies” (2017:4).

Nowadays, the propagandic projection of technology as benign can also be seen in videos like the 2020 one from Boston Dynamics, in which three robots dance to a familiar popular tune (see www.youtube.com/watch?v=fn3KWM1kuAw).

The anthropomorphic dance moves cast the robots as relatable. The robots themselves are mechanically crude enough on the surface so as not to trigger negative uncanny valley reactions, and the different robots dancing together signals a community. It’s disarming. They like being with others, they need others, they like fun. They are safe.

But what are these robots really designed to do? A 2019 video of the Boston Dynamics robots fighting makes it alarmingly clear (www.youtube.com/watch?v=y3RIHnK0_NE). As Sydney Skybetter says in “What Are the Potential Military Applications of Teaching Robots to Dance?”:

The things that make robot choreographies like *UpTown Spot* interesting as dance videos—specialized, hyper-articulated movement with individuated timing in particular sequence in response to coded and improvised cues—also potentially make robots more lethal in the future. (2020:1)

Neoliberal Disembodiment

Vertical and Horizontal Compression

The normalization of neoliberal technology sets the stage for the digitization of our bodies.

Once on a flight to Portland, Oregon, a few years ago, I sat next to a Nike executive. During the flight, he kept bragging to me how most of Nike’s factories are in the United States. I asked him how many people work in a factory. He said three. Most Nike shoes are made by robots. Thinking back on this flight made me recall what musicologist Marianna Ritcheney said in her critique of neoliberal values: “innovation is valorized as a manifestation of individual creativity and originality, while in practice constant technological innovation keeps the cost of labor low” (2017:4).



Figure 3. What the dancing robots are really for. From “New Robot Makes Soldiers Obsolete (Corridor Digital)” posted by Corridor, 26 October 2019, www.youtube.com/watch?v=y3RIHnK0_NE. (Screengrab by TDR)

During my lifetime, I have navigated through technological changes that transformed how we consume music. First, as a child, I listened to my brother’s LPs. Then, I made mixtapes for friends. Next, I repurchased my whole library of music on CDs. Around 1995, MP3s appeared and normalized lower audio fidelity through compression to facilitate digital transference—memory was expensive in the early days of the home computer and the internet. Earlier, in the ’80s, I remember VHS beating out Betamax, even though the latter was touted to be the superior format. The teleology is not innovation. The story is a timeline of new products, advertised to be innovative, designed to have consumers detach from their attachments to older formats, while leveraging our ongoing affections to music we love into an anxiety to renew, to repurchase, our entire libraries in the new formats. Essentially, it is a circular cycle of addiction to what we already have. The anxiety to continue bathing in soundscapes of the familiar propels us to update our formats.

It’s kind of like watching shampoo commercials. Every season, there is a new pseudo-scientific sales pitch qua innovation used to market our favorite shampoos. “Now with new micro-pearls for extra hydration”; “Smooth intense ultimate straightening shampoo with kera-tourmaline”; “The powerful pro-V formula works all the way to the core.” Through mock innovation, we are conditioned to repurchase in new formats what we already own.

Digitization of Our Bodies

The spectral filtering of audio files when converted into MP3s is a vertical compression of data. What I see on Instagram is a temporal compression. The Kardashian selfie reduces human experience to a synchronic meme. So, the vertical, spectral domain as well as the linear are compressed in our current culture. The next step in the digital etiolation of our bodies after compression is digitization.

A cursory Google search yields several media works that convert the image of dancers’ bodies into data points. A video from 2016 entitled “Realtime Multi-Person 2D Human Pose Estimation using Part Affinity Fields” (www.youtube.com/watch?v=pW6nZZeWIGM) demonstrates how software can track dancers’ movements in real-time by superimposing color-coded dots and lines over a group of dancers’ bodies. Another video from 2009 demonstrates Norah Zuniga Shaw’s platform called Synchronous Objects that automates the datafication of moving bodies in an “Interface Tour” (<https://vimeo.com/519570464>).

I am particularly intrigued by Shaw’s use of the word “didactic” at 1:35 in her voiceover because it describes how this operation feels to me. As stated earlier, my proposition is that the mainstream



Figure 4. Software tracks dancers' movements in real-time by superimposing color-coded dots and lines on their bodies. "Realtime Multi-Person 2D Human Pose Estimation using Part Affinity Fields, CVPR 2017 Oral" posted by Zhe Cao, 6 December 2016, www.youtube.com/watch?v=pW6nZZeWlGM. (Screengrab by TDR)

culture of media art is invested in the demonstration of technological advancements. And Shaw, in her sales pitch, at least offers some transparency.

But What's Lost?

But what is lost through the digitization of dancers' movements into data points, thereby flattening ontologies?

Lucinda Childs walks across the stage of the Chapelle Saint-Louis de la Salpêtrière, in Paris, in Robert Wilson's production of *Bach 6 Solo* (2021). Eighty minutes into the two-hour piece, in the Golden Section when Jennifer Koh performs all six of Bach's solo Sonatas and Partitas for violin, Lucinda Childs makes an appearance at the edge of the stage. She proceeds to slowly process across the hexagonal stage, pulling behind her a heavy hemp rope. As she exits the stage, in her wake the string turns into a trace of light through Wilsonian magic, lingering just long enough to register, like the afterglow of a sunset.

How would this look, converted into data points? What's lost? We would see data points walking across the stage; but in such a world, in that dimension of a flattened ontology, we lose the trace to the specific artist, a singular human being. Our opportunity to recognize the specific person, Lucinda Childs.

To me, it still matters that it *is* Lucinda Childs, a pioneer of postmodern dance, gracefully moving across the stage. When we see one of our heroes perform, do we not attend to that performance as a gestalt experience aggregating all past engagements with our hero? An uncompressed emotional choir of a thousand voices that reaches back in time to multiple past instances, to moments when our hero touched us. Inside each of us is a library of moments engraved into our memory temple. As Lauren Berlant says, being "drawn to return to the scene where the object hovers in its potentialities is the operation of optimism" (2011:24). I agree. We temporize those moments of engagement with our heroes, imagining expansive fireworks over the otherwise empty skies of our existence.

At the time of the performance, Childs was 81. She moved gracefully across that stage. "Moved"—I don't know what other word can suffice—describes a mode of dance where a slow,

seemingly simple, movement redefines the space of what used to be called dance. But not quite dancing. Childs's solo procession is not just walking, either. It is grace. Perhaps a light. An 81-year-old mother Mary, revisiting the planet of her son, carrying an umbilical cord across existence. A dark line, like a rope, behind her, she is pulling the weight of the world. Does it point towards death? Rebirth? Some hybrid creation beyond such terrestrial connotations, perhaps. Then, after a stillness and silence, once Jennifer starts the next movement of the Bach, that line turns into light.

I am still holding my breath.

What does it mean to redact our heroes? If our heroes can be erased, what does it say about OUR humble bodies and lives? What can we hang onto? What evidence, what trace will there be of our having lived? What does it say about our culture, if we are gradually conditioned to be wowed more by what new technologies can do, than what our kindred human beings can do?

At the beginning of his 1993 Super Bowl performance, after a heroic entry, Michael Jackson just stands still onstage—from :34 to 1:47. Then, a head tilt. At 2:04 he grabs his sunglasses as a cue to his band. A full 90 seconds of stillness in front of 98,374 people at the Rose Bowl, and an estimated 90.99 million viewers on television (www.youtube.com/watch?v=EsopN7JKUVs).

This moment works because of Michael Jackson's charisma. The master of dance, he holds us rapt in suspension. All of us collectively hold our breath in anticipation of the potential energy of his dancing that will release us from our heightened awareness of the present tense. If Childs's procession is a dance, then Michael standing still is also a dance. Datafication would teach us nothing about either dance. Childs's procession and Jackson's stillness are virtuosic exercises in presence.

Digitization filters out historical and culture-based contours, the identity of the artist, on which the poetry of art depends. Digitization MP3s our bodies and compresses culture. As we progress deeper into the digital future, what possibility will there be for the sublime?



Figure 5. Lucinda Childs walking, pulling a heavy hemp rope across the stage in Robert Wilson's Bach 6 Solo. Chapelle Saint-Louis de la Salpêtrière, Paris, 2021. (Photo by Lucie Jansch; courtesy of the Robert Wilson Archives)



Figure 6. Ken Ueno in *Kitchen Breath*, 2021. (Screengrab by Ken Ueno)

Physiovalence

Maybe there is something of Michael Jackson's stillness at the Super Bowl that I am after. In my 2021 one-minute video for the media art festival, *Kitchen Breath*, I held my breath for a minute (I set the timer on my iPhone, respecting the durational limit placed on us by the curator). The act of holding my breath is a negative cast of circular breathing, a stillness that is practiced. Like Childs's walking, breath is a relatable act, a contingency that I leverage in broadcasting physiovalence (www.youtube.com/watch?v=-GuJ2OcSoo).

A minute is not quite intense enough, though. So, this short piece is part of an index—it points to other works of mine. For comparison, here's an excerpt from my *Tard* in which I hold my breath in a bowl of water for 2 minutes, as an analog of how I have felt my breath has been suspended since 8 November 2016, as well as how I feel my voice as a person of color has been muted in the US (www.youtube.com/watch?v=_bghPkk1Qek&t=1s). The physical tension and the risk of death are more palpable than in the minute afforded *Kitchen Breath*.

Presence

B.B. King—"Turn It On"

When I was a graduate student in music composition at Harvard, I heard B.B. King present the most amazing lecture in music I ever experienced. What he demonstrated about sounds forced me to confront listening values that my classical training had ingrained in me. King helped me form new listening paradigms.

The highlight of the evening was when B.B. demonstrated how he improvises. First, he had his band vamp on a 12-bar blues (a standard harmonic pattern for the blues). He said, "I can play the right notes" (in Ueno 2012:18). He then proceeded to solo over a 12-bar blues. It sounded good enough, but then he said, "I can play the same notes, but I can 'turn it on,'" and he played some of the most amazing live guitar I ever heard. What was amazing was that we could all feel suddenly a shift in expression. Amazing that during a great performance one can say with confidence that everyone was feeling the same way. B.B.'s shift in expression challenged and contradicted how I was being trained as a classical musician.

Classical musicians often deride the blues for its harmonic simplicity. “There’s only three chords” is a derogatory quip I’ve often heard mouthed by colleagues. Music pedagogy, at least as I know it in the States, teaches us to analyze the materials, the chords, as disembodied, synchronic objects. They have labels, Roman numerals, which stand for their structural function. It goes from there. Numbers and inversions. And counterpoint. A whole system, which is, indeed, useful when we think about Western classical music. But the danger is that since this system is presented to us as the dominant paradigm, we begin to think that this system of analysis applies to all music. What’s more dangerous is that we begin to think that the music that best exemplifies the system, is, universally, the best. Like the workers at CVS and 7-Eleven who can’t hear the hum of the wall of refrigerators, we become comfortable with a system, filtering out what is extraneous to the system, and we don’t hear B.B. King’s body, the tone of his guitar, and the microtonal inflections of his performance. We filter out the body because we are taught to analyze and hear the disembodied music. We no longer hear him “turn it on.” But to others not fluent in Western classical structural hearing, when B.B. King “turns it on,” it is palpable. I was there. And that ineffable, but ultimately human space of “turning it on” is why he is B.B. King, and everyone else just plays guitar. When B.B. King turns it on is when he broadcasts his aura. B.B. King’s “turning it on” advocates for the person-specific and resists the flattening of ontologies. It matters that it is him playing. The Western classical mode of analysis filters out the body.

But why filter out the body?

Nostalgia

I recently learned that the word “nostalgia” was invented by a medical student, Johannes Hofer, in 1688, to describe a condition suffered by Swiss soldiers who were stationed abroad. The symptoms included fainting, hallucinations, and lack of appetite. It was a kind of homesickness. Hofer invented the word by combining two Greek words, *nostos* and *algia* (homecoming and ache), to describe this condition (in Beck 2013; see Anspach 1934). Badia Ahad-Legardy, in her book, *Afro-Nostalgia*, traces the history of what happened when “nostalgia” made its way to America in the 18th century. Slave owners and doctors perpetrated a medical ruse, a diagnosis that enslaved people were incapable of feeling homesick, which facilitated the decoupling of the stories of their individual lives from the material (and commodifiable) fact of their bodies (Ahad-Legardy 2021). This alienation was useful to all who participated in the slave-based economy because the basis of their economies was forcibly displacing enslaved people from their African homes. The reality, however, of course, was that they remembered their homes and longed for their homes and loved ones. In *Sensuous Knowledge*, her masterful takedown of “Europatriarchal knowledge,” Minna Salami recounts, “I had read that enslaved Africans in the US would bury their loved ones facing [...] toward Africa. I took solace in noting that if they cast the dead into the sea behind the cemetery, it pointed homeward” (2020:93). The myth that slaves could not feel nostalgia was another kind of filtering, a flattening of ontologies, weaponized as medical practice. Operating under the pretense of pseudo-scientific medical practice gave it the sheen of objective reality, a scientific truth (like the aforementioned shampoo ads). Viewed historically, the extravagant mental contortions passing for a normal state of nature give further insight into the extent racialized power asymmetries were perpetuated through the dark art of sophistry.

The redaction of B.B. King’s body exemplifies the same system. To support the notion that the number of chords is equivocal to the level of sophistication of a piece of music, the Western paradigm of music theory looks at musical material abstractly, disassociated from the body that performs. Taking the body out of the analysis redacts B.B. King, and discounts the veneration of the blues in favor of a kind of listening that supports the prestige value of Western classical composers, an “unmarked norm,” as Loren Kajikawa says in his article on confronting legacies of whiteness in US schools: “colorblindness does not do away with color, but rather reinforces whiteness as the unmarked norm against which difference is measured” (2019:161).

To what degree are these historical cultural biases, such as the archive of slavery, still lingering drivers of aspects of neoliberalism? Is the datafication of our bodies a continuation of that history?

Shazam Fails and Cultural Biases in Tech

My preferred music to listen to while driving around my hometown of Los Angeles is norteño music on one of the local radio stations. One day, I tried for fun to “Shazam” it. (Shazam is an iPhone app that identifies music by indexing short samples heard through the mic.) Shazam failed. What it said to me is that big tech made the calculus that it was not economically viable to invest in a data set of norteño music because members of the norteño fan base do not tend to own iPhones. The economic decision to redact a musical culture is cultural filtering.

Other examples of racialized biases in recent technology are well-documented, from algorithms that propagate Neo-Nazi propaganda (www.nytimes.com/column/rabbit-hole), to facial recognition software misidentifying Blacks (<https://mitsloan.mit.edu/ideas-made-to-matter/3-ways-to-make-technology-more-equitable>), and color correction in photography applications (www.nytimes.com/2019/04/25/lens/sarah-lewis-racial-bias-photography.html).

The technologies that have been normalized into our daily lives are often a species of surveillance technologies (e.g., the GPS in our smartphones that tracks our movements, the wrist implements that track our heartbeats, even the mouse that we use to scroll our computer screens). In her compelling advancement of surveillance studies, *Dark Matters*, Simone Browne argues that:

Unfinished emancipation suggests that slavery matters and the archive of transatlantic slavery must be engaged if we are to create a surveillance studies that grapples with its constitutive genealogies, where the archive of slavery is taken up in a way that does not replicate the racial schema that spawned it and that it reproduced, but at the same time does not erase its violence. (2015:13)

Impelled by Browne’s argument, I am prompted to consider the datafication of dancers and the decoupling of B.B. King’s body in musical analysis as traces, smoldering embers, at the site of a burned house, evidence of a historical Big Bang that impacts everything in many ways that, on the surface, are invisible. There is a more sinister wizard behind the curtain than neoliberalism. Or, perhaps, the wizard of the archive of slavery and neoliberalism is the same? At least cousins?

Come On, in My Kitchen

Kitchen Breath serves as a critique of the growing trend towards the synchronic presentation of materials privileging techné, wherein technological developments are valorized, decoupled from the body. In the space of neoliberal efficiency, a minute usually suffices as an expositional temporal frame to showcase technological development in media art, compressing our bodies into data points, vertically and linearly.

I acknowledge that there are positive affordances, too; ways in which recent technological developments add value to people’s lives. All technologies are *pharmakons*,¹ after all, both medicine and poison. But in an era in which surveillance increasingly renders us into body-less, history-less data points, I want to resist and reclaim the trace of the author, the performer, the person. I want to trace identities back to their specific bodies, especially because racialized biases in tech-dominated neoliberal spaces are persistently present. At stake are subjugated knowledges and the possibility for the sublime.

In an interview, philosopher Yuk Hui said:

Maybe we should aim for a goal that is the opposite of that of Enlightenment philosophy: to fragment the world according to difference instead of universalizing through a presumed absolute. A new world history has to emerge in the face of the meltdown of modernity. (in Gardels 2020)

1. *Pharmakon* is an ancient Greek word that means both remedy and poison, invoked famously by Socrates in Plato’s “Phaedrus,” when considering the myth of the invention of writing in ancient Egypt.

Dear colleagues, dear media artists, let's resist the false rhetoric of universality and the unquestioning valorization of the development of technology (with contingent erasures of racialized and gendered bodies in the service of historically privileged epistemologies of art and being), and instead advocate for messy fragmentations that respect the ontologies and epistemologies of marginalized communities. Let's value our heroes' presence and movements and not reduce them to data points on screens, their sounds reduced to mere chords represented by Roman numerals (the traditional mode of harmonic analysis in classical music). Let us make a future where we can still be in awe of a specific person. If that trace of the author is etiolated, what hope is there for any of us to leave a trace of having ever lived and tried, too?

References

- Ahad-Legardy, Badia. 2021. *Afro-Nostalgia: Feeling Good in Contemporary Black Culture*. University of Illinois Press.
- Anspach, Carolyn Kiser, trans. 1934. "Medical Dissertation on Nostalgia by Johannes Hofer, 1688." *Bulletin of the Institute of the History of Medicine* 2:376–91.
- Attali, Jacques. 1984. *Noise: The Political Economy of Music*. Trans. Brian Massumi. University of Minnesota Press.
- Beck, Julie. 2013. "When Nostalgia Was a Disease." *The Atlantic*, 14 August. www.theatlantic.com/health/archive/2013/08/when-nostalgia-was-a-disease/278648/
- Berlant, Lauren. 2011. *Cruel Optimism*. Duke University Press.
- Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness*. Duke University Press.
- Gardels, Nathan. 2020. "Singularity vs. Daoist Robots: Is There Another Path than Accelerated Western Modernization?" *Noēma*, 19 June. www.noemamag.com/singularity-vs-daoist-robots/
- Kajikawa, Loren. 2019. "The Possessive Investment in Classical Music: Confronting Legacies of White Supremacy in U.S. Schools and Departments of Music." In *Seeing Race Again: Countering Colorblindness Across the Disciplines*, ed. Kimberlé Williams Crenshaw, Luke Charles Harris, Daniel Martinez HoSang, and George Lipsitz, 155–74. University of California Press. doi.org/10.1525/9780520972148-008
- Menakem, Resmaa. 2017. *My Grandmother's Hands: Racialized Trauma and the Pathway to Mending Our Hearts and Bodies*. Central Recovery Press.
- Ritchey, Marianna. 2017. "'Amazing Together': Mason Bates, Classical Music, and Neoliberal Values." *Music & Politics* 11, 2:4. doi.org/10.3998/mp.9460447.0011.202
- Salami, Minna. 2020. *Sensuous Knowledge: A Black Feminist Approach for Everyone*. HarperCollins Publishers.
- Skybetter, Sydney. 2020. "What Are the Potential Military Applications of Teaching Robots to Dance?" *Dance Magazine*, 16 February. www.dancemagazine.com/dance-robotics/
- Ueno, Ken. 2012. "Reclaiming the Aura: B.B. King in the Age of Mechanical Reproduction." In *Blues: Philosophy for Everyone: Thinking Deep About Feeling Low*, ed. Jesse R. Steinberg and Abrol Fairweather, 16–24. Wiley-Blackwell.

TDRreadings

- Bench, Harmony, and Kate Elswit. 2022. "Visceral Data for Dance Histories: Katherine Dunham's People, Places, and Pieces." *TDR* 66, 1 (T253):37–61. doi.org/10.1017/S1054204321000708
- Kim, Suk-Young. 2020. "Disastrously Creative: K-pop, Virtual Nation, and the Rebirth of Culture Technology." *TDR* 64, 1 (T245):22–35. doi.org/10.1162/dram_a_00894
- Roach, Joseph. 2022. "Presence and the Stuff That Isn't There." *TDR* 66, 4 (T256):73–82. doi.org/10.1017/S1054204322000570