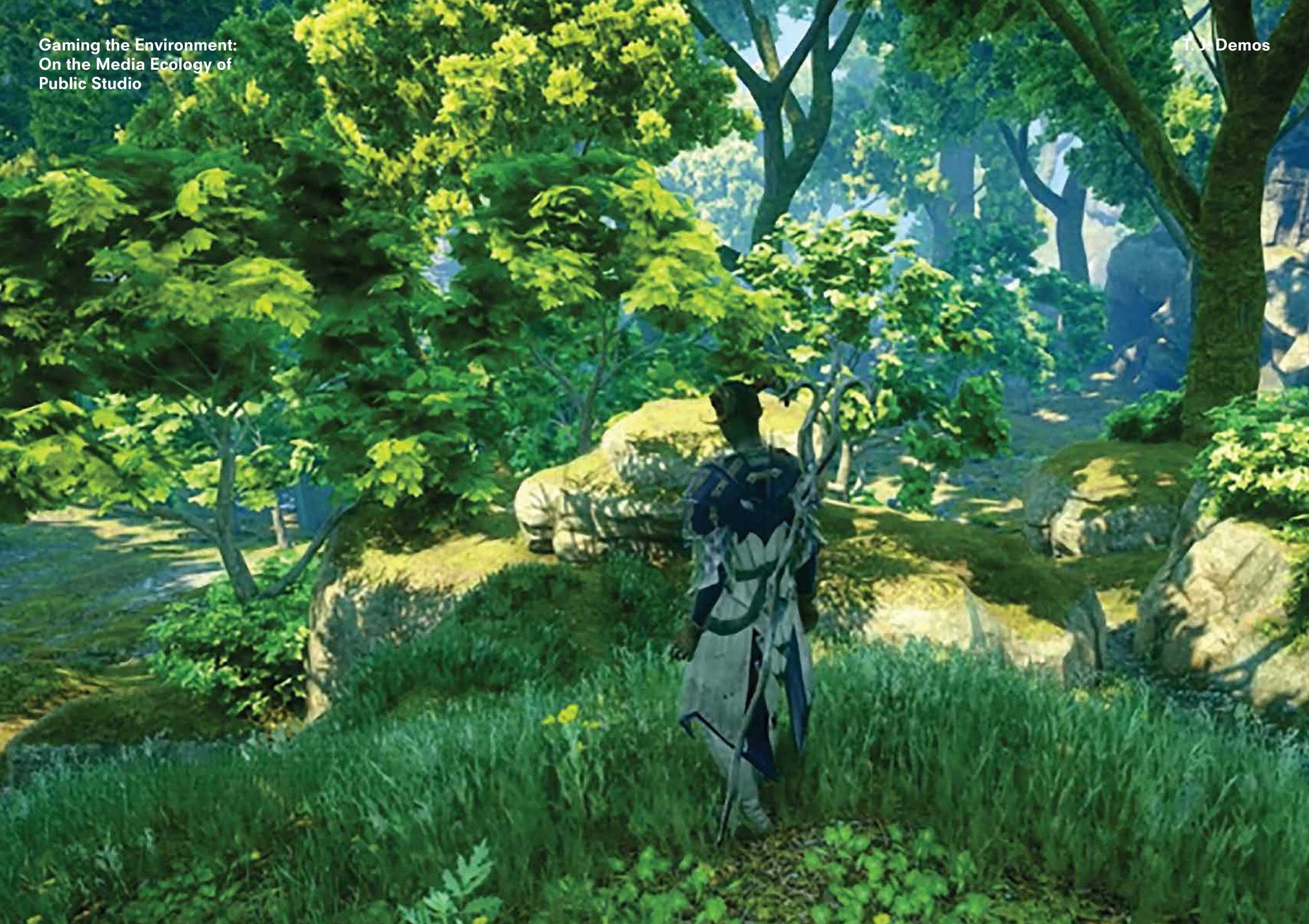
Gaming the Environment: On the Media Ecology of Public Studio

T. J. Demos



One might think that media (consumer-marketed virtual realities presented on computer screens powered by fossil fuel) and ecology (the natural science that explores relations between organisms and natural environments) are diametrically opposed.

But ecomedia is a growing discourse, and understandings of the complex and sometimes contradictory relations between technology and environment, even as regards video games, have reached advanced stages of theoretical depth. One cannot generalize or make facile claims that, for instance, gamers are among the most prone to nature-deficit disorder, or that gaming is simply escapist or exclusively environmentally damaging (from the sourcing of its rare earths to its running on fossil-fuel energy and the destructive disposal of its e-waste). For computer and console games may also advance, as many commentators argue, the positive values of botanical education, non-anthropocentric awareness, nature curiosity, and creative learning, rendering gaming practice multifaceted at the very least.[1] Probing those complexities, the Toronto-based collective Public Studio, comprised of filmmaker Elle Flanders and architect Tamira Sawatzky, has created a range of projects that investigate virtual screen-based environments. These include the exhibition *What We Lose in Metrics* (2016) at the Art Gallery of York University, Toronto, and the installation *Zero Hour* (2015) as part of Nuit Blanche in Toronto. Both engage connections between media and ecology as a way to open a discussion on our precarious environmental situation. As gamers amount to nearly two billion of the world's population, the majority of whom live in urban areas (and those who interact daily with media environments doubtlessly number even more), such an intervention holds significant potential for making environmentalism more accessible and creatively engaging. Seizing that opportunity, Public Studio explores the hidden potentials of gaming and screen-based ecologies to support a broad interlinking of environmental media and political art.

What We Lose in Metrics develops this investigation by collaborating with several players invited to explore a variety of recent commercial video games and consider their respective representations of forests. The carefully choreographed and architecturally designed exhibition—a multimedia environment, including videos and video projections, photography, and a collection of living tree saplings fed by a large text-flashing LED screen transformed into a grow lamp—guides viewers in a predetermined direction, first passing through a long tunnel, spatializing the transition into the virtual realm. One then comes across a wood cabin interior in which *The Darkness between Lives* (2016), a video of appropriated clips from popular films, including *Bambi* (1942), *Apocalypse Now* (1979), *Rambo: First Blood* (1982), and *Avatar* (2009), is displayed. The footage portrays a variety of forest scenes, rendered by Public Studio in silent black and white, supplemented by an electronic soundtrack designed by artist Anna Friz that provokes a sense of ambient disquiet and, at times, dread, lending aural affect appropriate to the ecocide and military violence shown in many of the films. Also included in the video is Akira Kurosawa's 1950 classic *Rashomon*, which is key in its examining of how truth depends on the teller, as four people recount differing versions of the story of a man's murder and the rape of his wife. By extension, considering this presentation of a brief film history, the meaning of forest—whether enchanted place of magical discovery, threatening site of evil, or source of industrial extraction—disconnects from any singular or definitive truth. While its etymology originates in the Latin word *foris*, meaning "outside," once implying the unknown and fearful dark woods, here that zone of alterity is discovered through the video screen.

In films like *Apocalypse Now*, with its Vietnamese tropical jungles (actually shot in the Philippines), or *Rambo*, with its mixed conifer woodlands of the Pacific Northwest, the forest generally figures as subordinated background to human activities, something to be destroyed to make way for military advances or weaponized against adversaries. But with more recent productions like *Avatar*, that anthropocentrism

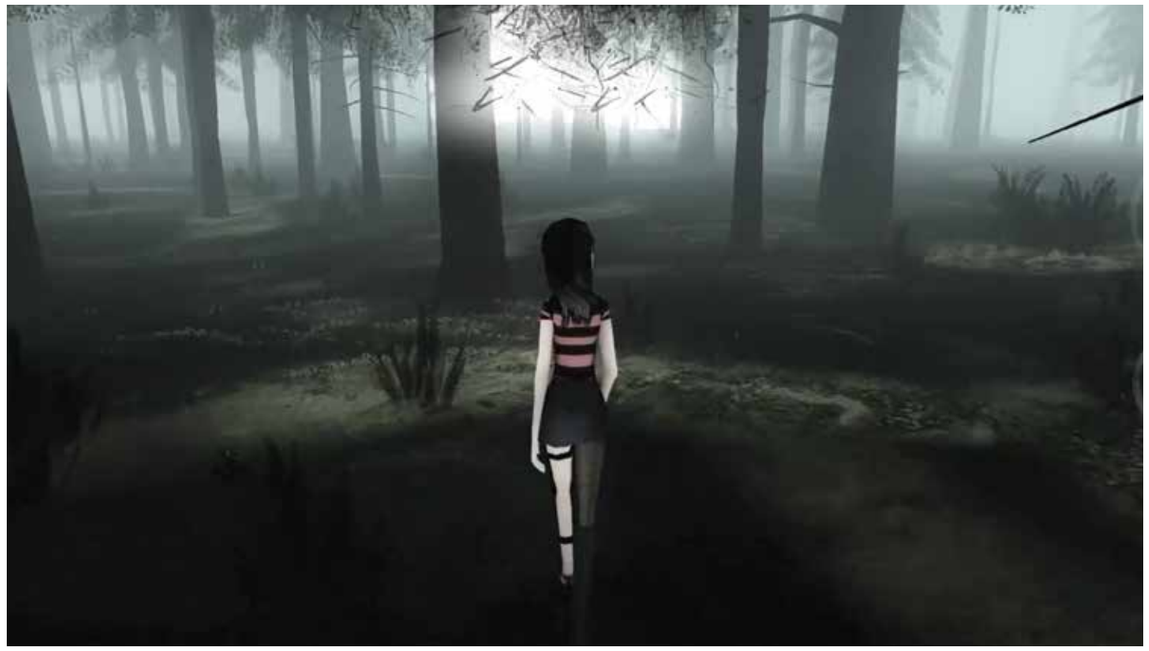
OPENING SPREAD
Public Studio, video still from *The Claw, the Leaf, the Twig,* 2016.

THIS PAGE
Public Studio, video still from *The Darkness between Lives,* 2016.

begins to be questioned: the forest glows in its biodiverse splendor, the spiritual locus of multispecies living for the film's fictional indigenous Na'vi, with whom viewers are invited to identify against the military assaults supporting industrial exploitation by human colonists. The latter film gets at the defining opposition that Public Studio explores in *What We Lose in Metrics*: nature as a site of conflict between competing systems of value. Whether trees are reduced to natural resources, logged for timber, their worth calculated in currency according to financial metrics, on the one hand, or are valued intrinsically for their ecological, cultural, and spiritual values, on the other, is indeed a fundamental question of our time. It's more than biopolitical—the governance of life and lives, according to Foucauldian analyses, which tend to remain in the realm of the human—but rather concerns something that might be called "geontological."[2] With the latter, the very nature of being, as well as the threshold between life and nonlife, is at stake, and specific understandings of which determine potentially radically different forms of economic and political reason. At the recent Standing Rock oil pipeline protests in North Dakota, nothing less was at issue than whether the elements (water, trees, rivers) are fundamentally commodity objects, available for endless human exploitation supporting the capitalist economy, or represent life, are alive, and figure as part of an expanded community of beings that compose our world, make life possible, and demand reverence and care. It's not that we live in multiple cultures sharing the same nature; rather, cultures respond to completely different natures, composing a multinaturalism with antagonisms leading to geontological divisions—and worsening political conflicts.[3]

What We Lose in Metrics probes these divisions and conflicts, initially by inviting experienced female players—a growing demographic of gamers—to interact with the five games presented in the exhibition, and in doing so to consider their virtual environments.[4] Performing "playthroughs" of popular releases—where players test a game's system and simultaneously record their experiences in voice-over commentaries—the women transform the games into open systems of ecological exploration, critical perception, and ethics delinked from the instrumentalized goals, and enjoyment of the rampant sexism and violence, for which the entertainment was originally designed.[5] During their sessions, they also recite verse by women poets, at Public Studio's suggestion, linking the experimental poetics of environment to the game's own specific aesthetic construction. For instance, in the video *Narrowing the Sky* (2016), Karolina Baran plays the action-adventure game *Assassin's Creed III* (2012), set in the 18th century during the US Revolutionary War, and reads occasionally from writer Louise Erdrich's "I Was Sleeping Where the Black Oaks Move" (2003). The verse describes a destructive flood and its effects on local herons and their forest habitat; meanwhile, Baran comments on the game's crisply rendered sylvan landscape of New England, comprising conifers and birch trees, grassy areas and wood pastures.

FACING PAGE
Public Studio, video still from *I Have Been Her Kind,* 2016.



She critically observes how the game's structure forbids players from running from predatory animals like bears or wolves, forcing them instead to kill the beasts or die themselves. Still, and despite this instrumentalized logic, Baran thoughtfully examines the game's presentation of an expansive audiovisual array that provides a virtual experience of sylvan nature—inviting players to listen to the wind and birdsong while exploring wildflowers, trees, and rivers when not solely goal-oriented—an experience otherwise absent for the urban multitudes stuck in concrete environments.[6]

In another video, *I Have Been Her Kind* (2016), Nina Bakan plays *The Path* (2009) and reads "Her Kind" (1960) by Anne Sexton. Nongamers might assume that games offer generic landscapes largely devoted to backdrops for endless acts of virtual violence; recently designed systems are, however, surprisingly attentive to realistic depiction, their portrayals even accurate in their regionally site-specific imaging of forest appearances. While noting such details, Bakan nonetheless laments the unenlightened sexual politics of the game's scenario, which plays on stranger danger in order to allegorize the risks of the avatar's adventuresome adolescent femininity, even while her journey through the forest yields fascinating visual details about the sensuous flora. As in *Narrowing the Sky*, the playthrough produces a critical appraisal of the game's gender politics, counteracted by Sexton's poem, which unlocks female powers of the dispossessed and socially errant, enabling peaceful survival with other species:

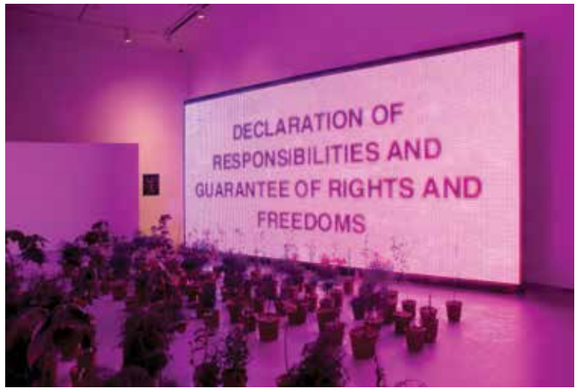
> I have found the warm caves in the woods,
> filled them with skillets, carvings, shelves,
> closets, silks, innumerable goods;
> fixed the suppers for the worms and the elves:
> whining, rearranging the disaligned.
> A woman like that is misunderstood.
> I have been her kind.[7]

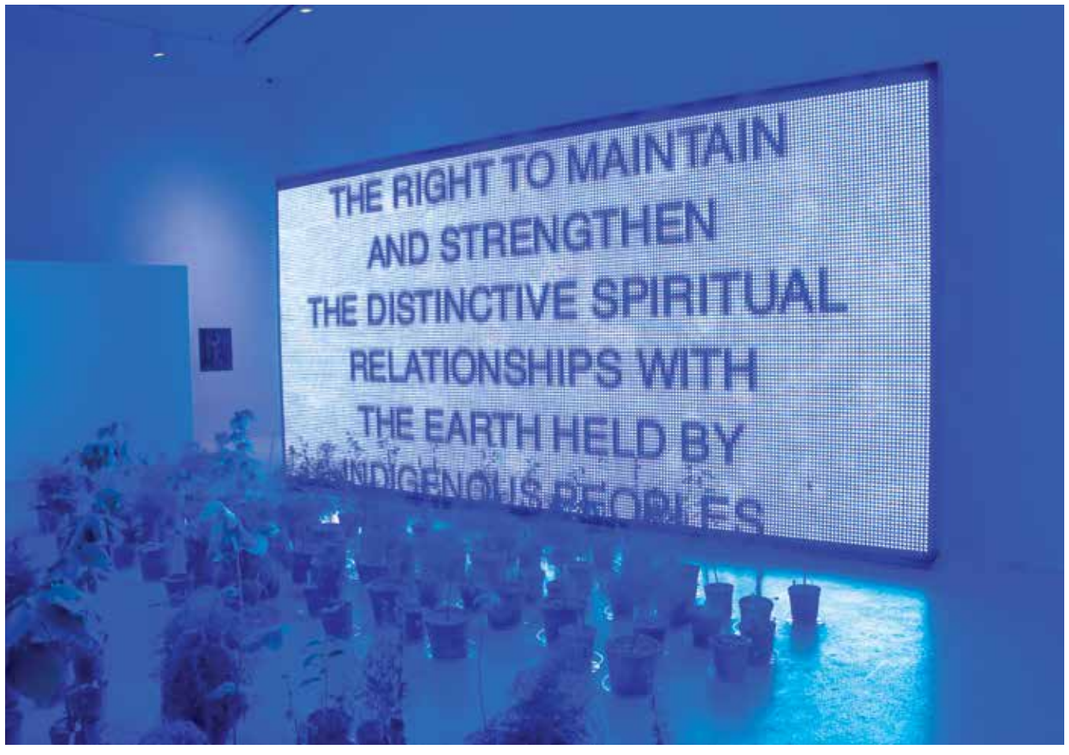
In the poem, identification leads to solidarity in nonconformity, just as Public Studio takes video games that are commonly centered on navigating historical dramas of warfare and intrigue—generally perpetuating anti-environmental and aggressive tendencies—and redirects them toward enhancing critical and ecological sensitivities. In fact, there are a growing number of progressive game designs coming to market these days, ones that offer complex ecologies and promote nonanthropocentric values and creative life-enhancing interdependencies with nature. Still, most gaming environments, according to media theorist Alenda Chang, conventionally divide into the two broad categories: "graphical spectacle" (providing sensuous landscapes as backgrounds to human conquest) and "terrains of resource extraction" (offering trees, mines, islands, and mountains, as the object of competitive exploitation of natural resources).[8]

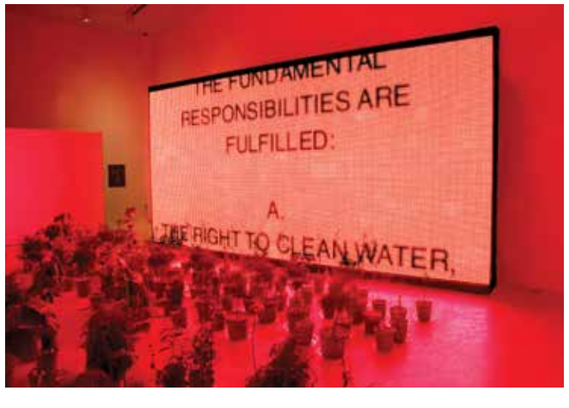
In analyzing the landscapes of animated games, Public Studio advances the work of other critical media analysts, such as the late Harun Farocki. Consider in particular his four-part video installation *Parallel I–IV* (2012–2014), which shows how gaming animation has evolved from two-dimensional schemas to photorealistic imagery, gradually taking over the veristic and objectivist ambitions once provided by photography and film. With reference to popular games such as *Grand Theft Auto* (1997), *Assassin's Creed* (2007), and *Minecraft* (2011), the *Parallel* series examines the shifting renderings of nature, the infrastructure and border zones of game space, and the range of avatar gestures. The work finds that increasingly complex and generative algorithms detach imagery from appearance in forming a historically unprecedented idealist typology of naturalist visuality. With his earlier four-part video installation *Serious Games I–V* (2009–2010), Farocki additionally shows how such gaming animation enters US military applications, both training soldiers in virtual spaces of conflict in advance of real combat—wherein desert landscape designs mimic the environments of Iraq and Afghanistan—and treating them therapeutically in post-traumatic stress disorder simulations once they've returned from battle. In this case, animation is not simply the termination of the image, referencing a preceding reality. It also founds a new visual regime inaugurated by seeing-machines and smart bombs, introducing what Farocki termed an "operational image"—one that intervenes in the world, becomes reality in its own right, and creates new realities, even as it implies processes increasingly invisible to the human eye (whether in military, consumer, political, or social media contexts).[9]

Public Studio's work reveals how conventional video games produce operational images in two further ways: first, they assist subjects in the internalization of dominating, extractive relations to the natural world that is placing life as we know it at risk; and second, they define a modeling of everyday life where militarized violence, existential threat, and power inequality according to sex and gender represent normative conditions. Both bear the potential to influence present and future behaviors. At the same time, Public Studio intervenes in this logic by reprogramming such operational images, transforming the supplemental aesthetic backdrops and instrumentalized sacrifice zones that appear in commercial video games into ecomimetic arenas of philosophical speculation that generate entirely different sensibilities. With the artists' work, viewers are offered socio-affective experiences promoting awareness of ecological functions, possibilities for exploring interrelations between humans and nonhumans, and opportunities for becoming self-aware of one's emotional connections to natural environments. According to their scenarios, virtual forests become more than generic frameworks or supplemental narrative architecture: they contain intrinsic value above and beyond the human dramas set within their midst that are otherwise focused on killing adversaries, racking up points, and advancing levels, as well as reproducing heteronormative subjectivities based on those objectives.[10] Contributing to an ecofeminist critique of dominant games—and in this sense both building on Farocki's analyses and advancing the identity politics-centered game assessments of noted feminist media critics like Anita Sarkeesian—*What We Lose in Metrics* stages a geontological state-shift in an act of environmentalist *détournement* of popular media ecologies.

A further gallery in Public Studio's exhibition offers the culmination of the installation's gradual movement from violent games that instrumentalize forests to biocentric transformation. It presents *Everything Is One* (2016), an installation comprising a range of potted tree saplings chosen in collaboration with the influential botanist Diana Beresford-Kroeger.[11] Her writing in general explores the multivalent meanings of trees, drawing on the ecological, mythical, horticultural, spiritual, and medicinal







FACING PAGE
Public Studio in collaboration with Diana Beresford-Kroeger, installation views of *Everything Is One,* Art Gallery of York University, Toronto, Canada, 2016.

PAGE 100
Terri-Lynn Williams-Davidson, *Cedar Sister,* 2015.

value of forests. She addresses their significance as a global air-filtration system and explains how their decimation leads to the extinction of many species, threatening by extension our own, as forests hold the potential to sequester carbon, mitigating global warming and producing oxygen. Contesting outmoded oppositions between nature and culture, the installation dramatizes how trees and woodlands might not simply be threatened and destroyed by the unsustainable ecology of media,[12] but also nurtured and protected by its gaming ethos. This is literally the case in the installation, as the 10-by-20-inch LED screen turns into a massive grow lamp in the gallery. Here media ecology modestly supports the massive reforestation project called for by Beresford-Kroeger as one way to mitigate the destructiveness of climate change.

On the screen in front of the trees scrolls "The Earth's Covenant," a text proclaiming the rights of nature, presented in attention-grabbing all caps, written for the exhibition by Haida lawyer Terri-Lynn Williams-Davidson. Resonating with recent international calls for a legal paradigm-shift toward a biocentric juridico-political system necessary to rescue ourselves and the Earth's other inhabitants from environmental catastrophe, and situated in the context of First Nations' decolonial claims for autonomy and indigenous rights, the document evinces fundamental ecological principles: "[T]hat we [and nonhuman nature] are all one, that everything depends upon everything else, that we are all interconnected and interdependent and our fates are inextricably interlinked."[13] In positioning this declaration of unified rights and responsibilities before the assembly of trees, the piece stages the pronouncement of a new natural contract between human and nonhuman natures, outlining the necessary geontological legal arrangement to carry us beyond the anthropocentric present.

Public Studio's *Zero Hour* gives further reasons why such rights are crucial at the present moment. Drawing together ecology and environmental poetics, *Zero Hour* offers a digitally rendered video of weather patterns projected onto a translucent dome ceiling. A kind of collectively experienced alternative ecomedia presentation, it's as if the peripheral environment had been isolated from a game, here one of Public Studio's own. Playing over 12 hours in looped succession, the 10-minute video commences with a depiction of a clear, star-filled night sky before transitioning to a gray cloudscape of circulating atmosphere, appearing later as if in a watery reflection, upon which raindrops fall and dark debris floats. Soon, bordering buildings and trees frame a skyward view, the sun blackened as if in full eclipse, as flames erupt, birds fly overhead, and clouds agitate, until a tornado finally arrives and sweeps away the fragmenting, scattering infrastructure. The scenario, created with game-design software, approximates the type of extreme weather event that is becoming disastrously common in the climate-changed Global South, suggesting what it might be like for such a calamity to befall Canada, a leader in fossil-fuel extraction (the work was first shown in Toronto). Meanwhile, a text runs around the base of the visual projection like a ticker that announces natural-disaster statistics and relays, line by line, "Night," a poem by famed Lebanese artist and poet Etel Adnan commissioned specifically for this work.

The poem speaks of a nocturnal world beyond human exceptionalism, which provides a glimpse of one potential future. As Adnan writes: "It's all because life, these days, has started to talk. I have therefore decided to believe that night is a divinity made of all the others, and find in its heart trees whose nature is a new reality." If "Night is the overflow of Being," as the poet intones at one point when her recorded recital of the poem fills the exhibition space, then it is one that exceeds us, represents a world without us. Adnan rejects any religious redemption or metaphysical human specialness that might save us from our displacement from centrality that multispecies social composition brings: "Rivers will run for as long as they have already done; it's wrong to think that we're loved." Considering the poem in relation to the apocalypse schematized in the video projection, the words imply associations with catastrophic climate breakdown that bodes gravely for human civilization, introducing the specter of what multispecies ethnographer Deborah Bird Rose calls "double death."[14] Double death defines a disastrous way of being—whether biological or governmental, agricultural or technological—that facilitates both mortality and

the end of reproducibility. Adnan senses it as well, even as the poem's morbidity, and by extension that of Public Studio's *Zero Hour*, finds itself checked in this last line by the affirmation of life beyond the human: "There's a sweetness in the air that calls for death's coming. I try to deny the latter's presence because the birds, my brothers, have asked me to."

The more-than-human realm is affirmed in the exhibition as a whole, which includes in its final gallery *Cedar Sister*, a 2016 photograph from the Supernatural Beings series by Williams-Davidson, the First Nations lawyer and artist who wrote the rights of nature manifesto discussed earlier. According to Haida culture, the cedar tree is known as "every woman's sister," and is understood as sustaining existence by supporting biodiverse life, extending into and nourishing salmon-filled streams just as it provides valuable medicines that protect humans. Finding solidarity with trees is to "acknowledge the inter-relationship between the forests with the rest of the land and the surrounding marine environment," as Williams-Davidson observes in her explanation of the piece, drawing on ancient wisdom as a valuable inheritance for critical survival in a climate-stressed future. Presented with this image of Williams-Davidson elegantly posed in post-traditional dress, standing amid a grove of cedar tree sisters, we glimpse one possible outcome of multispecies flourishing for the unlimited and ongoing contest of world survival.

This text is a revised version of an earlier essay published in *Public Studio: The Long Now*, ed. Philip Monk (London: Black Dog, 2018).

[1] See Alenda Y. Chang, "Games as Environmental Texts," *Qui Parle* 19, no. 2 (Spring/Summer 2011): 57–84; and Stephen Rust, Salma Monani, and Sean Cubitt, eds., *Ecomedia: Key Issues* (New York: Routledge, 2016).
[2] See Elizabeth Povinelli, *Geontologies: A Requiem to Late Liberalism* (Durham, NC: Duke University Press, 2016).
[3] See Eduardo Viveiros de Castro, "Multinaturalism," in *Cannibal Metaphysics*, ed. and trans. Peter Skafish (Minneapolis, MN: Univocal, 2014), 65–76.
[4] These include *The Path* (2009), *The Elder Scrolls V: Skyrim* (2011), *Assassin's Creed III* (2012), *Dragon Age:Inquisition* (2014), and *The Witcher 3: Wild Hunt* (2015).
[5] The poets include Louise Erdrich, Adrienne Rich, Anne Sexton, Prageeta Sharma, and Ineffable-Hufflepuff.
[6] That said, it would also be productive to invite forest ecologists to explore these games and examine what they reveal about their virtual silvicultures and the accuracy of their computer-generated representations of actual forest environments. That's not to say that games should not be able to also portray fictional and imaginative habitats that make no claim upon ecomimesis as well, which is sometimes what games do best.
[7] Anne Sexton, "Her Kind" (1960), in *The Complete Poems* (Boston: Houghton Mifflin 1981).
[8] Alenda Chang, "The Ecology of Games" (lecture, Art Dean's Lecture Series, University of California, Santa Cruz, Santa Cruz, CA, May 16, 2017).
[9] See Farocki's discussion of *Eye-Machine I–III* (2001–2003), in which he addresses the concept of the "operational image": these images "do not portray a process but are themselves part of a process." Harun Farocki, "Eye / Machine III," artist's website, http://www.harunfarocki.de/installations/2000s/2003/eye-machine-iii.html. See also Trevor Paglen, "Operational Images," *e-flux Journal* 59 (November 2014), http://www.e-flux.com/journal/59/61130/operational-images/.
[10] See Henry Jenkins, "Game Design as Narrative Architecture," in *The Game Design Reader: A Rules of Play Anthology*, eds. Katie Salen and Eric Zimmerman (Cambridge, MA: MIT Press, 2006), 670–89.
[11] Diana Beresford-Kroeger, "Bioplan for Biodiversity," in *The Global Forest: Forty Ways Trees Can Save Us* (New York: Penguin, 2011), 48–51.
[12] See my essay on Pieter Hugo's photography of the informal recycling of e-waste that takes place at Agbogbloshie Market in Accra, Ghana, "A Postcolonial Monstrum: The Photographs of Pieter Hugo," in *Return to the Postcolony: Specters of Colonialism in Contemporary Art* (Berlin: Sternberg Press, 2013) 125–54.
[13] For more discussion of Earth law, or biocentric legality, see my essay "Rights of Nature: The Art and Politics of Earth Jurisprudence," written for the exhibition *Rights of Nature: Art and Ecology of the Americas* (Nottingham Contemporary, January 24–March 15, 2015) and published in 2015 on the website of Nottingham Contemporary, http://nottinghamcontemporary.org/sites/default/files/Rights%20of%20Nature%20The%20Art%20and%20Politics%20of%20Earth%20Jurisprudence.pdf. See also Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights for Natural Objects* (Los Altos, CA: W. Kaufman, 1974).
[14] See Deborah Bird Rose, "Double Death," 2012, http://deborahbirdrose.com/144-2/; and "When All You Love is Being Trashed," September 14, 2013, http://deborahbirdrose.com/2013/09/14/when-all-you-love-is-being-trashed/.

T. J. Demos is professor in the Department of the History of Art and Visual Culture, University of California, Santa Cruz, and founder and director of its Center for Creative Ecologies. He writes widely on the intersection of contemporary art, global politics, and ecology, and is the author of numerous books, including *Return to the Postcolony: Specters of Colonialism in Contemporary Art* (2013), *The Migrant Image: The Art and Politics of Documentary during Global Crisis* (2013), *Decolonizing Nature: Contemporary Art and the Politics of Ecology* (2016), and *Against the Anthropocene: Visual Culture and Environment Today* (2017). Demos organized *Specters: A Ciné-Politics of Haunting* at the Reina Sofia Museum in Madrid in 2014, and cocurated *Rights of Nature: Art and Ecology in the Americas* at Nottingham Contemporary in 2015.