



# ARCHIVO PAPERS

JOURNAL OF PHOTOGRAPHY AND VISUAL CULTURE

ISSN (Online) 2184-9218

## REWILDING THE DIGITAL ARCHIVE: AN ARTISTIC EXPLORATION OF THE BUG AS A DECOLONIAL AGENT

Martina Denegri

### To cite this article:

Denegri, Martina. "Rewilding the Digital Archive: An Artistic Exploration of the Bug as a Decolonial Agent." *Archivo Papers* 5 (30 June 2025): 197–214. <https://doi.org/10.5281/zenodo.15756679>.

Published online: 30 June 2025.

Link to this article [↗](#)

Submit your article to this journal [↗](#)

© *Archivo Papers* / Archivio Press, 2025



Archivo Papers Journal is licensed under a [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/).

## ARTICLE

# REWILDING THE DIGITAL ARCHIVE

## AN ARTISTIC EXPLORATION OF THE BUG AS A DECOLONIAL AGENT

MARTINA DENEGRİ *University of Groningen, Netherlands*

## INTRODUCTION

In “Moths Dreaming of Electric Waters” (2024) artist duo Fadi Houmani and Ster Borgman reimagined the digital archive as an ecosystem. This interactive virtual environment was presented in the online art exhibition “Search History” hosted by the Groningen-based digital gallery WILLOW Online Art Space. The artwork questions the primacy of humans over nature and technology, and the perceived immateriality of the digital; proposes alternative modes of being and relating in the digital space that escape the logics of data extraction and surveillance; and re-evaluates bodies of knowledge and cultural expression that have been erased by coloniality. Houmani and Borgman put in conversation feminist, queer, and decolonial theories with Indigenous practices and mythologies to weave together a digital space that acts as an archive and its metaphor. In the virtual environment, the user finds herself surrounded by a multitude of bugs moving through a city of crystals, a swamp, and copper wires. I invite the bug as a companion in theorizing a decolonial digital archive.

Digitalization poses old and new challenges to archival practices in the culture sector. Cultural organizations ranging from national museums and libraries, to artist-run and community art spaces have to navigate the intersections of

archives, digitalization and coloniality. I use the concept of “archival encounter” introduced by Daniela Agostinho to denote these entanglements and the ensuing responsibilities for creating, managing and distributing digital spaces to host old and new archival records.<sup>1</sup> The archive remains a contested territory shaping, and shaped by, contingent power dynamics, cultural identities and the conventions of knowledge production. Scholars working at the intersection of archival practices and coloniality seek to uncover this contingency. Lisa Lowe, analyzing UK state archives, exposed the archive as a “technology” of domination: affirming the normative classifications of bodies that supported the colonial project, while forgetting how they had been constructed and at whose expenses.<sup>2</sup> Ann Laura Stoler similarly defined the colonial archive as “supreme technology” of the nineteenth-century imperial state and “prototype” of a postmodern one based on global flow of information.<sup>3</sup> In fact, encounters between the digital and coloniality introduce new forms of control that continue the colonial project of turning living bodies into sites of extraction. Ulises Mejias and Nick Couldry exposed the practices of data colonialism: a mode of domination that harvests, manipulates, and mines life in the form of data. The perceived immateriality of the digital facilitates these processes and invisibilize the exploitation of workers and natural resources.<sup>4</sup> As the archive enters the digital sphere it not only needs to deal with its colonial legacies, but also with new challenges. Gabriella Arrigoni and her colleagues considered the unstable objecthood of digital artefacts posing an existential threat to archives by unsettling the notion of originality.<sup>5</sup> Bernard Serexhe explored the conflicting interests of corporate actors, institutions, and communities, and urged the development of new ways of accessing, sharing and preserving culture.<sup>6</sup>

In this complex web of encounters, building a digital archive becomes an act of worldbuilding. First, it is necessary to restore the links broken by the normative taxonomies of coloniality. Lowe suggested a methodology that unearths “intimacies of four continents”.<sup>7</sup> While this method points towards alternative ways of reading the archive, questions remain on how to *build* one in the digital space. Starting with the question of who should be involved in the making of an archive, Jon Ippolito’s calls for empowering “amateurs”<sup>8</sup>, while Michelle Caswell and Samip Mallick propose collective participation.<sup>9</sup> Yet, how these individuals and communities can participate in the preservation of culture equally and safely remains challenging. I build on the ethic of care of Michelle Caswell and Marika Cifor to imagine radical empathy in the digital space.<sup>10</sup> My companions in this process are Legacy Russel’s “glitch”,<sup>11</sup> and Robin Wall Kimmerer’s “honorable harvest”,<sup>12</sup> which I extend to data harvesting. The focus then shifts on *organizing* the archive. Bruno Latour’ principle of “connectivity” presents an alternative to fixed categorizations, and endows agency to non-humans.<sup>13</sup> Donna Haraway’s “naturecultures” are also key in theorizing the relational ontology of digital cultural artefacts.<sup>14</sup> Finally, the question becomes *what* is included in the archive. Macarena Gomez-Barris invites recovering “submerged perspectives”, ways of knowing that re-evaluates embodiment, spiritual connections with non-humans and the irrational.<sup>15</sup> I explore

how encounters between different ways of knowing can meet on an equal footing and generate new meanings.

In this paper, I propose principles aimed at *rewilding* the digital archive. Building on the notion proposed by Manuela Carneiro da Cunha,<sup>16</sup> rewilding becomes a necessary step towards a decolonial digital archive that disrupts hegemonic systems of control in the digital space; blurs the boundaries between nature, culture and technology; recovers and develops epistemologies that arise from the body, the spiritual, and the irrational. By complementing the engagement with the work and research of Houmani and Borgman with decolonial and feminist epistemologies, I theorize the bug as embodying complementary roles: a transformative agent (a glitch), a composite being existing between the human, the natural, and the technological (hybrid), and a way of sensing the world (perspective). Through “speculative fabulation”,<sup>17</sup> I theorize each of these roles to imagine a decolonial digital archive, as a *technoecosystem* built on the principles of *decentralization, reciprocity, fluidity, and connectivity*. May this digital archive, partly metaphorical and partly enacted in “Moths Dreaming of Electric Waters”, become a model for a decolonial way of relating with nature, technology, and each other.

## ARCHIVAL ENCOUNTERS

Daniela Agostinho introduces the concept of “archival encounter” in her analysis of the digitalization of the colonial archive of the US Virgin Islands to denote the challenges raised by the intersections between the colonial, the archival and the digital.<sup>18</sup> Addressing these encounters has become the responsibility of many cultural organizations, from national museums to small artist-run spaces, busy with digitizing existing collections and archiving “born-digital” artefacts.<sup>19</sup> This means having to (re)define how to organize, contextualize, manage, and disseminate old and new materials, and build new digital infrastructures for these purposes. In line with the “archival turn” in cultural studies, I propose a reading of the archive as both material and metaphorical. I turn to Jacques Derrida’s interpretation of the archive in *Archive Fever*, which builds on the etymology of the term itself, rooted in the Greek word *arkhe*, meaning both “commencement” and “commandment”. The first meaning refers to origins, as originality and authenticity; while the second refers to power, as the *arkheion* was both the residence of the ruler and the place where official documents were preserved.<sup>20</sup> Hence, the control of the archive is linked to the power to determine the conventions deciding which events become history, and which interpretations knowledge. Yet, these conventions are historically contingent and continuously renegotiated. According to Agostinho, the process of digitalizing archives is an opportunity to create new knowledge, but also question what counts as knowledge.<sup>21</sup> I accept this invitation by looking at encounters between archives, coloniality and the digital sphere in the literature before developing principles that can guide the (re)construction of a decolonial digital archive.

## THE ARCHIVE AND COLONIALITY

What the archive forgets becomes a wound enlarging with each generation; what it keeps reproduces the power dynamics and culture of those who control it. Lisa Lowe termed this dialectic the “economy of forgetting and affirmation”.<sup>22</sup> She analyzed the National Archives of the UK to uncover the relationship between the narratives of liberalism and the violence of colonial practices of European powers across Africa, Asia, and the Americas in the late eighteenth and early nineteenth centuries. In her analysis of document production in the Dutch East Indies, Ann Laura Stoler defines the colonial archive as “supreme technology” of the nineteenth-century imperial state and “prototype” of a postmodern one.<sup>23</sup> These analyses show the co-constitutive relationship between archival records, power, knowledge and cultural production. Hence, Lowe suggests unearthing “intimacies of four continents”—interdependencies across time, space, and disciplines to bind together peoples of Indigenous descent, slaves, and colonized workers—as a method to *read* the colonial archive.<sup>24</sup> This method is valuable for uncovering the inherent fragilities of the colonial archive by tracing the genealogy of the “contingent foundations”<sup>25</sup> of the constructs of nature and culture which ordered and othered human and non-human bodies. Yet, this process of *deconstruction* is not the end point but the start of the *reconstruction* of a decolonial archive.

The archive continues to symbolically and materially organize bodies. Hortense Spillers’ distinction between “body” and “flesh” highlights the violence of the archival inscription: dissecting bodies into units of information, or “hieroglyphics of the flesh”, and naturalizing separations rooted on the nature/culture divide.<sup>26</sup> In his analysis of coloniality in Latin America, Aníbal Quijano further expanded on the processes that cast ‘Indigenous’ peoples on the ‘nature side’ of the divide, engendering a devaluation of their personhood, culture, and knowledges. First, the modern idea of progress created a temporal classification that labeled Indigenous populations and cultures as “pre-modern”, and by extension inferior. Second, the Christian values imported by the Western colonizers severed the mind from the body, constructing the latter as an ‘object’ of knowledge, incapable of rationality.<sup>27</sup> Manuela Carneiro da Cunha also criticized the gaze of eighteenth-century Western colonizers and thinkers, who perceived the Amazon rainforest as “terra nullius” and its inhabitants as “wild”, a view rooted in the way liberalism connected the right to property with labor, positing humans as the “ultimate organizing principle.”<sup>28</sup> This led to the erasing of a multiplicity of non-human bodies—insects, animals, and plants—who tended to the land, and the wisdom they carried.

## COLONIALITY AND DIGITALIZATION

As the legacies of the colonial archive live on in the present, they acquire new manifestations in the digital sphere. The perceived immateriality of the digital invisibilizes the exploitation of the human and natural resources it actually requires,

as evidenced by the intensive mining of cobalt in the Democratic Republic of Congo, and lithium in Bolivia, Chile, and Argentina. Ulises Mejias and Nick Couldry point at the global information system where Big Tech corporations occupy the relatively unregulated digital space through monopolistic and unethical practices that invisibilize and exploit workers and ecosystems following the geography of colonialism.<sup>29</sup> This often includes, but is not limited to, violations of privacy and consumer rights, weakening competitions by accruing market power through acquisitions, escaping labour laws by crowdsourcing tasks such as content moderation.

Extraction in the digital age not only continues to exploit the natural world but also feeds on data. Mejias and Couldry unpack “data colonialism”, a form of control that rests on worldviews, violent practices, and strategies akin to those of historical colonialism.<sup>30</sup> Data harvesting, manipulation, and mining turns life into the raw material of extraction. Couldry and Mejias argue that data extraction is inherently violent as it threatens the “integrity of the self.”<sup>31</sup> Everyday tracking reduces bodies into digital flesh: discrete packets of information that can be quantified and sold. As such, data becomes the currency of participation in the digital world. But the processes through which data is gathered, mined, and turned into profit are opaque. Mejias and Couldry use the term “black box of data,”<sup>32</sup> to denote this lack of transparency. Opacity also denies accountability for the “digital violence” that unequally affects individuals based on race, gender, and class through algorithmic decision-making and platform design.<sup>33</sup> Data colonialism also carries a “civilizing mission” that disguises the violence of surveillance and extraction in the form of consent: privacy becomes a matter of accepting or rejecting Internet cookies.<sup>34</sup> Moreover, this civilizing mission presupposes the primacy of a unitary science: technological determinism.<sup>35</sup> Technology becomes the ultimate solution to the social problems of a narrowly defined humanity.

## DIGITALIZATION AND THE ARCHIVE

The fast pace of digitalization raises old and new challenges to archival practices. Historically, the advent of digital technologies unsettles the idea of the archive as “commencement” by disrupting the notion of originality, from Walter Benjamin’s fear of mechanical reproduction to AI’s challenges to authorship. Digital artefacts are complex assemblages with no clearly defined boundaries, multiple variations, often embedded in a web of external dependencies.<sup>36</sup> This complicates what *constitutes* the record to be kept; which version can be considered the *original* and how to maintain its integrity. Chiara Zuanni proposed decoupling the “essence” of a digital artefact from its “materiality”: archival records are “reborn” in the digital archive, their essence periodically translated into new software/hardware combinations to match rapid technological developments. Thus, archival practices move away from storing finite entities, towards a process of transformation.<sup>37</sup> But this approach raises issues of authenticity and relies on high levels of human, infrastructural and financial resources, often leading to prioritising reliance on documentation.

Digitalization also challenges who controls the archive, as new corporate agents and communities claim their space in the digital realm. Bernard Stiegler highlights the role of the “amatorat”—individuals and communities of non-professional archivists, developers, content creators—in producing, distributing and preserving culture.<sup>38</sup> Similarly, Jon Ippolito questions professionalism by learning from (online) communities of amateurs such as the global gaming community; and from Indigenous peoples in the Amazon who rely on oral communication and social relations to preserve culture.<sup>39</sup> Michelle Caswell and Samip Mallick also point at the potential of widespread technologies—the Internet, word-processing software and built-in recording devices—to empower amateurs in archival processes.<sup>40</sup> Yet the digital infrastructures used by the amateurs are hidden behind the walls of the new *arkheion*: privately-owned software, hardware and communication systems protected by paywalls and strict copyrights policies. Hence, Big Tech companies become the new gatekeepers of culture and memory.<sup>41</sup> But these corporations are rarely interested in long-term preservation, aiming instead at continuously developing new technologies following consumerist principles. Thus, the challenge becomes envisioning a dynamic digital archive that welcomes unstable ontologies whilst facing conflicting interests.

### “MOTHS DREAMING OF ELECTRIC WATERS”: A WORLD-BUILDING PROJECT

If the colonial archive constructed—and was itself produced by—a world of domination and normative classifications, a decolonial world needs an archive built through acts of imagination that reconfigure relations between humans, nature and technology. Donna Haraway defines “speculative fabulation” as a “mode of engagement, a theory of history, and a practice of worlding.”<sup>42</sup> This method borrows from feminist and posthuman perspectives its rejection of hierarchies and categorizations. I embrace speculative fabulation to theorize between fact and fiction, between reality and the world of potentialities. José Esteban Muñoz defines potentialities as things that “are present but not actually existing in the present tense.”<sup>43</sup> This is the temporality of my speculations: the “there and then” of a utopia whose seeds are already in the present and can only be experienced through art, the terrain of imagination. Thus, I turn my analysis on “Moths Dreaming of Electric Waters” (2024), a metaphor as well as a material manifestation of a digital archive as ecosystem by artist duo Fadi Houmani and Ster Borgman. The artwork was presented in the virtual exhibition “Search History”, hosted by WILLOW Online Art Space, a Groningen-based organisation, between July and November 2024. The account of “Moths Dreaming of Electric Waters” provided is grounded in conversations with the artists, and my own experience engaging with the written materials they provided, and navigating the 3D online exhibition space.

“Moths Dreaming of Electric Waters” reconfigures relationships between the human, the natural, and the technological. Upon entering the online exhibition space where the work is hosted, the user finds herself on a circular floating platform. A virtual bridge [Figure 1], a glowing swirl of ink, leads to another suspended platform hosting the work of Houmani and Borgman: a dome stands out against the backdrop of a cloudy sky. When crossing the gates of the dome, the first-person point-of-view suddenly shrinks giving the feeling of crawling on the ground. One finds herself moving on the same level as the only other living





**Figure 1.**

Still from virtual entrance, "Moths Dreaming of Electric Waters" (2024) by Fadi Houmani and Ster Borgman. Hosted by WILLOW Online Art Space. Image courtesy of the artists.



**Figure 2.**

Detail still, "Moths Dreaming of Electric Waters" (2024) by Fadi Houmani and Ster Borgman. Hosted by WILLOW Online Art Space. Image courtesy of the artists.

inhabitants of the digital ecosystem: a multitude of bugs. These digital insects bear a resemblance to natural ones, yet their legs and antennas are made of copper [Figure 2]. Inside the dome, shiny crystals rise from the ground constructing a landscape of towers and suspended passageways. Around this construction is a swamp. Braided copper wires spread like roots through the ceiling of the dome, emitting occasional electric shocks. References to language are scattered around the space: shapes reminiscent of hieroglyphs, characters, and drops of spilled ink. Floating sentences and poems trace the genealogy of the bugs. They reference Indigenous myths, engineering jargon, the language of network sciences, and feminist science fiction. The user encounters animal totems that light up as she approaches them, as if awakening them.

The bug is an unpredictable and inconvenient yet necessary companion of technological development. The term "bug" has been in use in hardware engineering jargon since the 1870s to denote technical malfunctions. Thomas Edison contributed to popularizing the term and even recognized the necessity of bugs in propelling innovation.<sup>44</sup> As the first computers appeared in the 1940s, the



term bug started to spread from hardware to software issues. The moth, referenced by Houmani and Borgman, has a particular history in computer programming. In 1947, Harvard University engineers working on the Mark II computer found a moth stuck in one of the components. The insect was taped and labelled in their logbook, contributing to further spreading the use of the term as well as of the expression “to debug”.<sup>45</sup> The idea of debugging poses the bug as a threat to the order of the technological realm, just as insects in the natural world are hunted with pesticides. I propose the idea of *rebugging* or “rewilding” the archive, to engage with bugs as manifestations of the fragilities of the (colonial) archive. Through speculative fabulation, I tell the stories of physical, digital, and metaphorical bugs to imagine the ethics (Bug as a Glitch), ontology (Bug as Hybrid) and epistemology (Bug as Perspective) supporting the building of a decolonial digital archive.

## BUG AS HYBRID

Houmani and Borgman invite a positive reframing of the bug as a transformative agent. This view recalls the Legacy Russell’s definition of “glitch” as an “error, a mistake, a failure to function.”<sup>46</sup> But rather than being negative, this agent harbors the seed of refusal, resistance, and transformation. The bug-glitch introduces friction in the otherwise seamless digital interfaces that mediate interactions with the world. By creating an unpredictable obstacle, the bug acts as a “catalyst” that forces the user to stop and think, explore alternatives, potentially leading to change. Jakko Kempers argues against the “Silicon Valley design philosophy of frictionlessness,” and proposes an aesthetic of imperfection where frictions become fissures through which the user can confront the instabilities of digital technologies.<sup>47</sup> An example of this aesthetic is the intermittent current that passes through the copper wires of “Moths Dreaming of Electric Waters”, revealing the interdependency of the technological on the natural, and the fragility of the latter. Yet the bug aesthetics alone cannot lead to change, and risks being co-opted to serve the agenda of technocapitalism. Thus, it needs to be supported by new ethical principles and material frameworks.

Making space for bugs to emerge is an ethical act. In their formulation of an ethics of feminist care, Michelle Caswell and Marika Cifor advocate for radical empathy in archival practices. Empathy here is based on the notion of hospitality which invites “the other[ed]” into the archive, accepting the unpredictability this might unleash.<sup>48</sup> Caswell and Cifor’s approach is relational: evolving affective responsibilities bind archivists, records, users, and communities in reciprocity. What these responsibilities entail cannot be defined a priori but is dependent on the context of the archive. Taking “Moths Dreaming of Electric Waters” as an example, Houmani and Borgman practiced affective responsibilities towards the bugs, the cultures and knowledges they embody, the communities who rely on them, and the users of the digital space. First, the artists crafted the bodies of the bugs with clay and copper before introducing them in the digital space. They also delved into their

stories and mythologies, such as the Cherokee “Water Beetle Genesis”, the Cochiti myth of the Eleodes beetle, and Navajo Totem Poles. This is not only evident from their research, but also in the totemic elements, temples, and text selection in the artwork. Then, the digital ecosystem allows the users to freely navigate, without imposing a path or hierarchy. Finally, by shrinking the viewpoint [Figure 3], the user is prompted to develop empathy towards her insect companions.

Inviting the bug into the digital archive is also a call for collective participation, decentralization, and deinstitutionalization. Building on the idea of “anti-domestication”, introduced by Carneiro da Cunha, I suggest a digital archive tended by a diversity of “cultivators”.<sup>49</sup> These cultivators do not need to be “professionals” nor have sophisticated technologies at their disposal, rather, they resonate with calls for empowering amateurs by Ippolito, and for collective participation by Caswell and Mallick. But these forms of participation still rely on technological infrastructures owned by states and corporations; while the cultivators of the Amazon rainforest do not stand in proprietary relationship with the land. Similarly, digital archives can move beyond proprietary relationships between corporate agents, memory institutions and archival records. This opens up to “non-custodial” realities,<sup>50</sup> where archived cultural artefacts are not owned nor physically kept by an institution/platform: they remain in the custody of the individual/community to which they relate. Additionally, current copyright (or copyleft) frameworks are scarcely adequate to deal with records without a single identifiable author nor an original. The Traditional Knowledge (TK) licenses and labels developed by Indigenous communities in North America provide an example that does not merely signal legal rights but also has an educational function.<sup>51</sup> Also, these labels have an external use, while they do not involve legal requirements for community members. Thinking-with these models can prompt the imagining of a digital archive where a multiplicity of cultivators can share, edit and remix without legal restrictions but guided by affective responsibilities.



**Figure 3.**

Still from user-bug viewpoint, “Moths Dreaming of Electric Waters” (2024) by Fadi Houmani and Ster Borgman. Hosted by WILLOW Online Art Space. Image courtesy of the artists.

The conditions of visibility, privacy, and access in the digital archive also need to be reconfigured based on an ethics of care and reciprocity, rather than relying on liberal and individualistic notions. The bug-glitch occupies an ambivalent position between hyper- and in-visibility acting as a shield from extraction, surveillance, and their ensuing “digital violence”: it makes bodies “strategically illegible” to the eyes of surveillance, while becoming hypervisible as a malfunction that cannot be ignored.<sup>52</sup> I also propose expanding interdependence, reciprocity, and respect—the principles of Robin Wall Kimmerer’s “honorable harvest”<sup>53</sup>—to the harvesting of data of those accessing and contributing to digital archives. I glimpse the potential for putting this in practice in Couldry and Mejias’ concept of “second-order control,” defined as “the ability to manage to some degree one’s choices about choices.”<sup>54</sup> This empowers digital dwellers to move past accepting/rejecting consent to the rules of digital platforms, towards rewriting those rules. Autonomy, transparency and radical access become the tools to counter corporate control, the opacity of data extraction, and the centralization of power and wealth resulting from them. Together with the moths, I dream about a digital archive where Internet cookies are replaced by gift baskets where users give the information they wish to share; where the backend is not hidden but accessible and modifiable; where users can wear different digital skins to protect their identity.

## BUG AS HYBRID

Houmani and Borgman wondered: “if something is not intentionally designed, does it inherently become natural?” They see the presence of bugs in digital environments as blurring the distinction between human-made and naturally occurring phenomena. The bug finds itself in a state of in-betweenness: leaking through the porous boundaries of artificial/natural, human/nature, and nature/technology. Building on Haraway’s notion of “naturecultures”,<sup>55</sup> I suggest understanding bugs as *naturetechnocultures*: assemblages of relationships that transcend the human, the digital and the natural. The bug emerges from “relationships of significant otherness,” where parts do not add up to a whole nor pre-exist each other, but are determined by an inescapable co-history that bonds their human, feral, leafed, machinic bodies together. The relational ontology of the bug mirrors the constitution of the digital archive built by Houmani and Borgman, which I understand as a *technoecosystem*: a space where meaning emerges from the interactions among non-human entities (i.e., bugs, copper, totems); the knowledges and cultural practices they embody; the stories scattered through the space in gooey ink; and the actions of the users.

In the work of Houmani and Borgman the information that usually travels unnoticed through hidden wires and data centers becomes embodied. Copper wires, bugs, and the murky waters of the swamp transport and constitute information. The artists also engaged with the materiality of technology by crafting the bugs using clay for their bodies and copper—the ultimate mediator of digital communications—for their antennas, wings, and legs [Figure 4]. This not only

makes visible the interdependencies between the natural and technological, but also endows agency to non-human actors. The digital ecosystem is a site shaped by the actions and culture of humans, yet deprived of their presence. Houmani and Borgman invite the user to imagine a digital archive as an ecosystem where the illusion of mankind's control over nature and technology is broken as cyber-bugs and natural processes reclaim their habitat.



**Figure 4.**  
Photos of residency process: crafting  
the bugs. Image courtesy of Fadi  
Houmani and Ster Borgman.

In the electric waters of the swamp imagined by Houmani and Borgman the power structures of the colonial archive implode: normative classifications, linear time, and a eurocentric map are replaced by emerging interconnections among a web of interdependent human and non-human agents. The artists embraced this hydro-feminist metaphor to imagine an archive that rejects binaries, normative classifications, and hierarchies in favour of connections. I turn towards Bruno Latour's "connectivity"<sup>56</sup> to find the organizing principle of the digital archive. Organizing the digital archive as a network also supports the decolonial project of Lowe of unearthing "intimacies of four continents,"<sup>57</sup> and facilitates new unexpected encounters. Space and time become multiple as different narratives follow non-path-dependent trajectories. As new intimacies emerge the archive is also continuously transformed: archiving turns into a *living* process.

## BUG AS PERSPECTIVE

As the ontology of the bug transcends the boundary between the physical and the immaterial, its epistemology challenges the primacy of the mind over the body. In her study of Indigenous practices in the Americas, Gómez-Barris uncovered "submerged perspectives."<sup>58</sup> These Indigenous perspectives—which treasure



embodied experiences, beliefs, and spirituality—not only theorize the equality of all living systems but enact it. Houmani and Borgman bring a submerged practice in the digital archive through the 3D scanned bodies of the bugs, the braids of copper that run through the digital dome, and the texts that accompany the artwork. The braiding of copper, used for the antennae and legs of the bugs, references Kimmerer’s metaphor of “braiding sweetgrass,”<sup>59</sup> an Indigenous ceremonial act to commemorate the harmony between the human and the natural world. Moreover, the movements of the bugs around the digital space mirror their behaviour in the natural world. These ways of capturing gestures are a prototype of an “embodied archive”, echoing the decolonial archival praxis of Tonia Sutherland in her analysis of the Dunham Archives.<sup>60</sup> The act of braiding copper becomes a record of a cultural practice that can be repeated and experienced, communicating through bodily movements; while the text written by the artists elaborates on the meaning of braiding, contributing to the preservation and contextualization of this cultural practice.

The moths of Houmani and Borgman are *dreaming*, introducing the sub-/un-conscious and the irrational in the digital archive. Jakob von Uexküll investigated the animal world to understand how perception of the environment, the “Umwelt”, varies across species. His findings showed that each species perceives their surroundings differently, but also that those surroundings are *subjective*. Von Uexküll also turned his analysis towards the human animal, whose subjectivity, culture, and discipline similarly produce different Umwelten.<sup>61</sup> This understanding does not necessarily lead to a dualism between perception and reality, but rather introduces uncertainty in the establishing of the objective, real, or rational. In “Moths Dreaming of Electric Waters”, Indigenous myths, engineering jargon, the language of network sciences, and eco-/techno-feminist science fiction, meet and merge without hierarchies. Additionally, animal totems embody alternative ways of relating to the natural world in the manner of Navajo Totem Poles as guardian spirits or manifestations of a tribe’s cultural identity [Figure 5]. As different ways of knowing become fluid, tracing the boundaries between them loses relevance: their entanglements are what create meaning.



**Figure 5.**  
Still from animated totem, “Moths  
Dreaming of Electric Waters” (2024) by  
Fadi Houmani and Ster Borgman.  
Hosted by WILLOW Online Art Space.  
Image courtesy of the artists.

## CONCLUDING THOUGHTS

Inviting the bug into the digital archive is a decolonial act. Building on Houmani and Borgman's "Moths Dreaming of Electric Waters", the archive is reimagined as a *technoecosystem*. The artwork occupies the liminal territory between metaphor and material manifestation: the "there and then" is not only dreamed of, but enacted in the "here and now". On the one hand, its diverse entities—bugs, copper wires, totems, the swamp—are used figuratively to refer to ways of being, relating, and knowing. On the other hand, they become archival records of specific species, mythologies, and cultural practices. Through speculative fabulation, I have developed the intuitions of Houmani and Borgman, and welcomed the bug as my companion in "rewilding" the digital archive. Rewilding is about opening up the archive to a diversity of cultivators, formats, artefacts, knowledges and cultural practices, but also to the disruption they can bring to existing structures. Together with the bug and other posthuman, feminist, and decolonial companions, I have explored principles that can bring a decolonial digital archive in the here and now of the archival practices of cultural organizations: *decentralization, reciprocity, fluidity, and connectivity*.

Opening the digital archive to a diversity of cultivators is an ethical act. Exploring the role of the bug as glitch, I propose a relational ethic to reconfigure who has access to the archive and at what cost. First, this is a call for *decentralizing* as "anti-domesticating", intended as the rejection of anthropocentrism and domestication as the extermination of diversity. It implies recognizing the rights, agency, and equality of those human and non-human agents that were cast as flesh, "pre-modern", and inferior by coloniality. An "untamed" digital archive is a shared and collaborative space where the power held by state institutions and tech corporations is redistributed among non-professional users and communities. Second, decentralizing also entails overcoming the notion of ownership as occupation: creating digital spaces where communities retain their agency and (copy)rights without standing in proprietary relations with artefacts or the digital platforms in which they are produced or preserved. This entails exploring non-custodial scenarios as well as licences and labels built on collaboration rather than individualism.

The currency of participation in the digital archive can neither be exploitation nor data. The cultivators of the digital archive should be protected against "digital violence" by employing digital skins (akin to VPNs) that make them visible yet encrypted. The treatment of data of digital cultivators can follow the principles of Kimmerer's "honorable [data] harvest". The digital archive also needs to be a space that recognizes radical access and the autonomy to rewrite the conditions of visibility and privacy. For instance, cultural institutions can involve interested communities in co-creating (privacy) policies. It can also mean creating digital archives that are open source, where users directly influence the backend, avoiding the "black box" effect of the digital. Regardless of the endless potential local manifestations, what unites these ideas is the relating based on ever-evolving affective responsibilities



that bind cultural organizations, records, users, communities, and corporations in *reciprocity*. A decolonial digital archive needs an ethic based on encounters and exchanges between equal agents.

As the normative taxonomies and hierarchies of coloniality start leaking, the digital archive becomes relational: *connectivity* becomes its organizing principle. The digital archive does not pre-exist the relationships forming among records, it *is* those relationships. Meaning emerges from the encounters among archival records; the human and non-human lives, knowledges and cultural practices they embody; and the actions of the users navigating the archive. Archival records are organized by virtue of their (potentially unlimited) connections, rather than fixed (and necessarily limited) categories. As new relationships emerge the archive is continuously transformed, overcoming the static idea of the archive as storing, in favour of *archiving* as a *living* process of transformation. In the archive as ecosystem there is no preferred format, nor language. Hybridity is welcome to accommodate for those digital artefacts that do not fit neatly into any pre-existing category.

Rewilding the archive also entails subverting the conventions that define what constitutes knowledge. Tending to the digital archive implies acts of restoration that re-evaluate the knowledges, practices, and worldviews that have historically been submerged by the complementary forces of colonialism, liberalism, and technological determinism. This does not mean merely filling gaps but acknowledging the contingency of the criteria that define what is remembered. In the digital archive as ecosystem “submerged” perspectives, embodied experiences, sciences, spirituality, and dreams become *fluid*. Learning emerges from the encounters, whether harmonious or conflicting, of heterogeneous knowledge sources. As the colonial archive produced—and was produced by—a world of domination and normative classifications, a decolonial world needs an archive as *technoecosystem*, where new ways of relating with nature, technology, and each other are imagined and enacted. Rewilding the digital archive becomes an act of worldbuilding: of constructing a world worth preserving.

## REFERENCES

- AGOSTINHO, Daniela. ‘Archival Encounters: Rethinking Access and Care in Digital Colonial Archives’. *Archival Science* 19, no. 2 (2019): 141–65. <https://doi.org/10.1007/s10502-019-09312-0>.
- AIKEN, Howard Hathaway. *Log Book with Computer Bug*. 1947. 1994.0191.1. National Museum of American History. [https://americanhistory.si.edu/collections/object/nmah\\_334663](https://americanhistory.si.edu/collections/object/nmah_334663).
- ARRIGONI, Gabriella, Natalie Kane, Stephen McConnachie, and Joel McKim. ‘Preserving and Sharing Born-Digital and Hybrid Objects from and across the National Collection’, Zenodo (2022). <https://doi.org/10.5281/zenodo.7097278>.

- BRÜGGER, Niels. 'Digital Humanities in the 21st Century: Digital Material as a Driving Force'. *Digital Humanities Quarterly* 10, no. 3 (2016). <https://search.proquest.com/docview/2555208623>.
- CARNEIRO DA CUNHA, Manuela. "Antidomestication in the Amazon," *HAU Journal of Ethnographic Theory* 9, no. 1 (2019): 126–36. <https://doi.org/10.1086/703870>.
- CASWELL, Michelle, and Marika Cifor. 'From Human Rights to Feminist Ethics: Radical Empathy in the Archives', *Archivaria*, 81 (2016): 23–43.
- CASWELL, Michelle, and Samip Mallick. 'Collecting the Easily Missed Stories: Digital Participatory Microhistory and the South Asian American Digital Archive'. *Archives and Manuscripts* 42, no. 1 (2014): 73–86. <https://doi.org/10.1080/01576895.2014.880931>.
- CHRISTEN, Kimberly. 'Tribal Archives, Traditional Knowledge, and Local Contexts: Why the "s" Matters', *Journal of Western Archives* 6, no.1, 2020. <https://doi.org/10.26077/78D5-47CF>.
- COULDRY, Nick, and Ulises A Mejias. *The Costs of Connection*. 1st ed. London: Bloomsbury Ltd, 2019. [https://ebookcentral.proquest.com/lib/\[SITE\\_ID\]/detail.action?docID=7130997](https://ebookcentral.proquest.com/lib/[SITE_ID]/detail.action?docID=7130997).
- DERRIDA, Jacques. *Archive Fever: A Freudian Impression*. Translated by Eric Prenowitz. Chicago, London: The University of Chicago Press, 1995.
- GÓMEZ-BARRIS, Macarena. *The Extractive Zone*. 1st ed. *Dissident Acts*. Durham: Duke University Press, 2017. <https://doi.org/10.1515/9780822372561>.
- HARAWAY, Donna. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press, 2016. <https://doi.org/10.1215/9780822373780>.
- . *The Companion Species Manifesto*. Vol. 8. Paradigm 8. Chicago: Prickly Paradigm Press, 2003.
- IPPOLITO, Jon. *Trusting Amateurs with Our Future*. In book: "A Companion to Digital Art", edited by: Christiane Paul, pp. 537-552. Hoboken, NJ: John Wiley & Sons, Inc, 2016. <https://doi.org/10.1002/9781118475249.ch25>.
- JUNCTURE Digital. 'Edison Invents the Technical "Bug"', n.d. Accessed: March 2025. <https://www.juncture-digital.org/edisonpapers/edison-and-the-bug>.
- KEMPER, Jakko. *Frictionlessness: The Silicon Valley Philosophy of Seamless Technology and the Aesthetic Value of Imperfection*. Thinking Media Series. New York: Bloomsbury Academic, 2024.
- KIMMERER, Robin Wall. *Braiding Sweetgrass*. 1st ed. Penguin Ecology. London: Penguin Books, 2020.
- LATOUR, Bruno. *Anti-Zoom*. Edited by Studio Olafur Eliasson. Olafur Eliasson: Contact. Paris: Flammarion, 2014. <http://www.bruno-latour.fr/sites/default/files/P-170-ELIASSON-GBpdf.pdf>.
- LOWE, Lisa. *The Intimacies of Four Continents*. Durham [u.a.]: Duke Univ. Press, 2015. [http://bvbr.bib-bvb.de:8991/F?func=service&doc\\_library=BVB01&local\\_base=BVB01&doc\\_number=028122935&sequence=000002&line\\_number=0001&func\\_code=DB\\_RECORDS&service\\_type=MEDIA](http://bvbr.bib-bvb.de:8991/F?func=service&doc_library=BVB01&local_base=BVB01&doc_number=028122935&sequence=000002&line_number=0001&func_code=DB_RECORDS&service_type=MEDIA).
- MEJIAS, Ulises A, and Nick Couldry. *Data Grab: The New Colonialism of Big Tech and How to Fight Back*. Chicago: University of Chicago Press, 2024.

- MUÑOZ, José E. *Cruising Utopia*. 1st ed. Sexual Cultures. New York: NYU Press, 2009. <https://www.jstor.org/stable/j.ctt9qg4nr>.
- QUIJANO, Aníbal. 'Coloniality of Power and Eurocentrism in Latin America'. *International Sociology* 15, no. 2 (2000): 215–32. <https://doi.org/10.1177/0268580900015002005>.
- RUSSELL, Legacy. *Glitch Feminism*. 1st ed. London ; New York: Verso, 2020.
- SEREXHE, Bernhard. 'On System Change in Cultural Memory and the Conservation of Digital Art'. In *Preservation of Digital Art: Theory and Practice : The Project Digital Art Conservation*, edited by Bernhard Serexhe. Karlsruhe: Walter de Gruyter GmbH, 2013, 75–84. [https://mam201718.files.wordpress.com/2017/11/dac\\_englisch\\_screen.pdf](https://mam201718.files.wordpress.com/2017/11/dac_englisch_screen.pdf).
- SALDAÑA PEREZ, Joel A. 'Archiving Mexican Folklórico Costumes: Applying a Participatory Approach and a Post-Custodial Strategy'. *Archival Science* 22, no. 4 (2022): 465–81. <https://doi.org/10.1007/s10502-021-09385-w>.
- SPILLERS, Hortense J. 'Mama's Baby, Papa's Maybe: An American Grammar Book (1987)'. In *Within the Circle*, edited by Angelyn Mitchell, 454–81. Durham: Duke University Press, 1994. <https://doi.org/10.1215/9780822399889-034>.
- STIEGLER, Bernard. 'The Quarrel of the Amateurs'. Translated by Robert Hughes. *Boundary 2* 44, no. 1 (2017): 35–52. <https://doi.org/10.1215/01903659-3725857>.
- STOLER, Ann Laura. 'Colonial Archives and the Arts of Governance'. *Archival Science* 2, no. 1–2 (2002): 87–109. <https://doi.org/10.1007/BF02435632>.
- SUTHERLAND, Tonia. 'Reading Gesture: Katherine Dunham, the Dunham Technique, and the Vocabulary of Dance as Decolonizing Archival Praxis'. *Archival Science* 19, no. 2 (2019): 167–83. <https://doi.org/10.1007/s10502-019-09308-w>.
- UEXKÜLL, Jakob von. "A Stroll through the Worlds of Animals and Men: A Picture Book of Invisible Worlds," *Semiotica* 89, no. 4 (1992): 319–91. <https://doi.org/10.1515/semi.1992.89.4.319>.
- ZUANNI, Chiara. 'Theorizing Born Digital Objects: Museums and Contemporary Materialities'. *Museum and Society* 19, no. 2 (2021): 184–98. <https://doi.org/10.29311/mas.v19i2.3790>.

---

1 Daniela Agostinho, 'Archival Encounters: Rethinking Access and Care in Digital Colonial Archives', *Archival Science* 19, no. 2 (1 June 2019): 141–65, <https://doi.org/10.1007/s10502-019-09312-0>.

2 Lisa Lowe, *The Intimacies of Four Continents* (Durham: Duke University Press, 2015).

3 Ann Laura Stoler, 'Colonial Archives and the Arts of Governance', *Archival Science* 2, no. 1–2 (March 2002): 87–109, <https://doi.org/10.1007/BF02435632>.

4 Ulises A. Mejias and Nick Couldry, *Data Grab: The New Colonialism of Big Tech and How to Fight Back* (Chicago: The University of Chicago Press, 2024).

5 Gabriella Arrigoni, Natalie Kane, Stephen McConnachie, and Joel McKim, "Preserving and Sharing Born-Digital and Hybrid Objects from and across the National Collection," *Zenodo*, 2022, <https://doi.org/10.5281/zenodo.7097278>.

6 Bernhard Serexhe, "On System Change in Cultural Memory and the Conservation of Digital Art," in *Preservation of Digital Art: Theory and Practice: The Project Digital Art Conservation*, ed. Bernhard Serexhe (Karlsruhe: Walter de Gruyter GmbH, 2013), 75–84, [https://mam201718.files.wordpress.com/2017/11/dac\\_englisch\\_screen.pdf](https://mam201718.files.wordpress.com/2017/11/dac_englisch_screen.pdf).

- 7 Lowe, *The Intimacies of Four Continents*.
- 8 Jon Ippolito, *Trusting Amateurs with Our Future: A Companion to Digital Art* (Hoboken, NJ: John Wiley & Sons, 2016), 537–52, <https://doi.org/10.1002/9781118475249.ch25>.
- 9 Michelle Caswell and Samip Mallick, "Collecting the Easily Missed Stories: Digital Participatory Microhistory and the South Asian American Digital Archive," *Archives and Manuscripts* 42, no. 1 (2014): 73–86, <https://doi.org/10.1080/01576895.2014.880931>.
- 10 Michelle Caswell and Marika Cifor, "From Human Rights to Feminist Ethics: Radical Empathy in the Archives," *Archivaria* 81 (2016): 23–43.
- 11 Legacy Russell, *Glitch Feminism* (London; New York: Verso, 2020).
- 12 Robin Wall Kimmerer, *Braiding Sweetgrass* (London: Penguin Books, 2020).
- 13 Bruno Latour, "Anti-Zoom," in *Olafur Eliasson: Contact*, ed. Studio Olafur Eliasson (Paris: Flammarion, 2014), 121–24, <http://www.bruno-latour.fr/sites/default/files/P-170-ELIASSON-GBpdf.pdf>.
- 14 Donna Haraway, *The Companion Species Manifesto* (Chicago: Prickly Paradigm Press, 2003).
- 15 Macarena Gómez-Barris, *The Extractive Zone* (Durham: Duke University Press, 2017), <https://doi.org/10.1515/9780822372561>.
- 16 Manuela Carneiro da Cunha, "Antidomestication in the Amazon," *HAU: Journal of Ethnographic Theory* 9, no. 1 (2019): 126–36, <https://doi.org/10.1086/703870>.
- 17 Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), <https://doi.org/10.1215/9780822373780>.
- 18 Agostinho, "Archival Encounters," 157.
- 19 Niels Brügger, "Digital Humanities in the 21st Century: Digital Material as a Driving Force," *Digital Humanities Quarterly* 10, no. 3 (2016), <https://search.proquest.com/docview/2555208623>.
- 20 Jacques Derrida, *Archive Fever: A Freudian Impression*, trans. Eric Prenowitz (Chicago: The University of Chicago Press, 1995).
- 21 Agostinho, 'Archival Encounters', 157.
- 22 Lowe, *The Intimacies of Four Continents*, 3.
- 23 Stoler, 'Colonial Archives and the Arts of Governance'.
- 24 Lowe, *The Intimacies of Four Continents*.
- 25 Haraway, *The Companion Species Manifesto*, 17.
- 26 Hortense J. Spillers, "Mama's Baby, Papa's Maybe: An American Grammar Book (1987)," in *Within the Circle*, ed. Angelyn Mitchell (Durham: Duke University Press, 1994), 454–81, <https://doi.org/10.1215/9780822399889-034>.
- 27 Aníbal Quijano, "Coloniality of Power and Eurocentrism in Latin America," *International Sociology* 15, no. 2 (2000): 215–32.
- 28 Carneiro da Cunha, "Antidomestication in the Amazon".
- 29 Mejias and Couldry, *Data Grab*.
- 30 Ibid.
- 31 Nick Couldry and Ulises A Mejias, *The Costs of Connection* (London: Bloomsbury, 2019), 154–55.
- 32 Mejias and Couldry, *Data Grab*, 244.
- 33 Ibid., 42.
- 34 Couldry and Mejias, *The Costs of Connection*.
- 35 Mejias and Couldry, *Data Grab*, 8–9.
- 36 Arrigoni et al., 'Preserving and Sharing Born-Digital and Hybrid Objects from and across the National Collection'.
- 37 Chiara Zuanni, 'Theorizing Born Digital Objects: Museums and Contemporary Materialities', *Museum and Society* 19, no. 2 (2021): 184–98, <https://doi.org/10.29311/mas.v19i2.3790>.
- 38 Bernard Stiegler, "The Quarrel of the Amateurs," *Boundary 2* 44, no. 1 (2017): 35–52, <https://doi.org/10.1215/01903659-3725857>.

- 39 Ippolito, *Trusting Amateurs with Our Future*.
- 40 Caswell and Mallick, "Collecting the Easily Missed Stories".
- 41 Arrigoni et al., "Preserving and Sharing Born-Digital and Hybrid Objects from and across the National Collection".
- 42 Haraway, *Staying with the Trouble*, 213.
- 43 José E. Muñoz, *Cruising Utopia*, (New York: NYU Press, 2009), xi, 9, <https://www.jstor.org/stable/j.ctt9qg4nr>.
- 44 Thomas Edison, quoted in "Edison Invents the Technical "Bug"", *Juncture Digital* (blog), n.d., <https://www.juncture-digital.org/edisonpapers/edison-and-the-bug>.
- 45 Howard Hathaway Aiken, *Log Book with Computer Bug* (1947), object no. 1994.0191.1, National Museum of American History, accessed June 2025, [https://americanhistory.si.edu/collections/object/nmah\\_334663](https://americanhistory.si.edu/collections/object/nmah_334663).
- 46 Russell, *Glitch Feminism*.
- 47 Jakko Kemper, *Frictionlessness: The Silicon Valley Philosophy of Seamless Technology and the Aesthetic Value of Imperfection* (New York: Bloomsbury Academic, 2024).
- 48 Caswell and Cifor, "From Human Rights to Feminist Ethics: Radical Empathy in the Archives."
- 49 Carneiro da Cunha, "Antidomestication in the Amazon."
- 50 Joel A. Saldaña Perez, "Archiving Mexican Folklórico Costumes: Applying a Participatory Approach and a Post-Custodial Strategy," *Archival Science* 22, no. 4 (2022): 465–81, <https://doi.org/10.1007/s10502-021-09385-w>.
- 51 Kimberly Christen, "Tribal Archives, Traditional Knowledge, and Local Contexts: Why the "s" Matters," 2020, <https://doi.org/10.26077/78D5-47CF>.
- 52 Russell, *Glitch Feminism*, 25.
- 53 Kimmerer, *Braiding Sweetgrass*.
- 54 Couldry and Mejias, *The Costs of Connection*, 182.
- 55 Haraway, *The Companion Species Manifesto*.
- 56 Latour, "Anti-Zoom," 124.
- 57 Lowe, *The Intimacies of Four Continents*.
- 58 Gómez-Barris, *The Extractive Zone*, 8.
- 59 Kimmerer, *Braiding Sweetgrass*.
- 60 Tonia Sutherland, "Reading Gesture: Katherine Dunham, the Dunham Technique, and the Vocabulary of Dance as Decolonizing Archival Praxis," *Archival Science* 19, no. 2 (2019): 167–83, <https://doi.org/10.1007/s10502-019-09308-w>.
- 61 Jakob von Uexküll, "A Stroll through the Worlds of Animals and Men: A Picture Book of Invisible Worlds," *Semiotica* 89, no. 4 (1992): 319–91.