DELINDA COLLIER

MEDIA PRIMITIVISM

TECHNOLOGICAL ART IN AFRICA

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VISUAL ARTS OF AFRICA AND ITS DIASPORAS

A SERIES EDITED BY KELLIE JONES AND STEVEN NELSON

Delinda Collier

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TECHNOLOGICAL ART IN AFRICA

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INTRODUCTION AFRICAN ART HISTORY AND THE MEDIUM CONCEPT

> Speech is not in people's hands. People are in the hands of speech.

Media Primitivism: Technological Art in Africa unravels the medium concept as it has been formed in the crucible of the Atlantic world. Therefore, the term *Africa* does two things in this book that at times will seem contradictory. It indicates a set of cultural practices of mediation that are specific to their place and history on the continent. But it also remains a concept—Africa—that is the antitype of art in art history and media studies: origins, essences, and immediacy. It thus refers to the desire for a common, prephilosophical experience that is frustrated by translation, semantic slippages, and the violence of conquest. Media primitivism is the specific place related to an artwork's *aura*, the historicity and sitedness of technology, and culturally specific conceptualizations of technology and art. Media primitivism is the relationship between geographical distance and acts of distanciation. In this introduction, I return to the origin story of the fetish in order to map out divergent and convergent definitions of *medium* in three fields—African art, art history, and media studies—in order to argue that Afro-Atlantic and Western theories of art and technology formed in mutual contestation and, many times, symmetry. The fetish concept is a locus of overlapping objects and intellectual histories: technology, religion, myth, art history, representation, and iconoclasm. Fetish is to fetishism as race is to racism: a misplaced concreteness attributed to people and their material objects.

Fetishism is allegory, further abstracted to become pseudofact used in theories of art and art history. I return to the accusation of fetishism, because critiques of the term have largely missed the fact that it was a judgment made about art *and* technology. It is therefore key to understanding current debates about mainstream art, media art, tech art, African art, and the art and science nexus.

Following the introduction's reorientation of methodology, *Media Primitivism* closely engages with works of art from around 1940 until the present that activate concepts of mediation (as opposed to static medium) using the oldest kinds of media—water, earth, air, metals, blacksmithing, and so on. They demonstrate a playful and sometimes painfully conflicted engagement with foundations: primitivism as material (matter) and as causation (origins). *Media Primitivism* examines the nearly outdated term *new media*, pointing to what it always ran from but also toward: origins or essences. The concept of medium would be unthinkable without the *iconoclash* of both granular and civilizational contact, conquest, racism, and colonialism. And so in this introduction, I look not only to the African art history that has been defined within and against the historical European avant-garde but also the longer history connected to territorial conquest: connecting long-standing questions of art to the earliest moments of contact and cosmopolitan Africa. The fetish is a singular representation of a metonymy, an impossible proposal, a black box of mediation that results in the fiction of one object of art.

African art's intermediality (especially the blurring of the sonic and visual), entanglements, and esotericism have haunted modernism's search for the singular and increasingly literal object of art. *Media Primitivism* draws connections between audible and visible modes of perception and mediation, charting a general history of technological seeing and hearing that merge by the end of the twentieth century. This "global village," the confluence of mediated sound and vision, is a return in some ways to philosophies and societies that did not neatly distinguish the two. Each chapter of *Media Primitivism* discusses the intellectual history of media in various African art and philosophies and the ways in which they haunt and lurk in the historical record. As the media historian Siegfried Zielinski implores about preserving such diversity, "Media are spaces of action for constructed attempts to connect what is separated. . . . In the longer term, the body of individual anarchaeological studies should form a variantology of the media."[1] If we are indeed to build a variantology of the media, we must quickly dispense of a myth that technology studies has perpetuated: that race and gender are stable, essential categories outside of progressive, changing technology. Categories of race, gender, medium, and technology are

vestiges of Enlightenment thought: all are implicated in the notion that "Enlightenment is an event in the history of mediation."[2]

The artworks that I consider in *Media Primitivism* ground themselves in *natural media* to reorient art to a broader definition of art and technology, to preserve the indeterminism of art, and to resist its reification. The art examined herein reoriented me to longer cycles of time and entangled histories and substances, and it has guided me in my thinking. I arrive in my analysis, at times, at something so primary that it cannot be depicted or analyzed. This some "thing"—also the nonthing, the noncategorical—then, is media primitivism. There are cognates in many languages that I will explain in order to help me approach the art. For instance, Christopher Wise writes of the Mande word *nyama* as "anti- or prelogocentric": "a *psychē* upon which the logos necessarily depends, a *psychē* that is blowing wind before it becomes mind."[3] Such concepts are culturally marked but seek to describe something as yet unmarked and unmediated, insignificant but potent. They reach and gesture, always incomplete. The artworks in this book use *technological* objects to mediate, but they activate atomic and objectless substances (water, light, air waves, electromagnetism, "alchemy") as concepts of technology. For this reason, I avoid the term *new media* in this book, while recognizing that in the broader art world, the label might be used to describe this work. However, in my desire to shift the language that we use to describe art, *Media Primitivism* highlights a pantheon of technology used in the art that substitutes media objects for ancestors.

Each chapter discusses various "new" media that have at some point been contested as art, beginning with film and ending with digital art. Allegory often accompanies shifts in the methods by which people desire and project material and conceptual stability in the face of societal change. The result is an Africa that, as Felwine Sarr writes, is "saturated with meaning."[4] In some of the most dramatic epochs, such as during the slave trade and colonialism, allegory and myth enact gaps in translation and erased histories and also attempt to share symbolism. Ethnography, James Clifford argues, is always allegorical: "These kinds of transcendent meanings are not abstractions or interpretations 'added' to the original 'simple' account. Rather, they are the condition of its meaningfulness."[5] Allegory and "figurism" are accusations associated with fetishism, which is imprecise, confused, and prone to revisionist history. Fetishism is not concrete and tends to give way to automatic or illogical thought. *Media Primitivism* therefore examines appeals to mythical thought via its resuscitation by African artists associated with modernism. To give just a few examples, Halim El-Dabh has relied on myth to give contours

of meaning and narrative to a sound practice that relied on the collision of sound waves and cultures in a studio in Cairo in 1943. His full-scale symphonic compositions are often based on myths from many sources. When he narrated the process of making *Ta'abir Al-Zaar* (1944), he included an apocryphal story of disguising himself in women's clothing to make it into the all-female *zaar* (spirit) ecstatic dancing ceremony, loosely resembling Dionysus in the Bacchae, in order to address his outsiderness to the ceremony. James Webb's *Black Passage* (2012) models itself on the journey of Orpheus (displaced in Africa) descending to the underworld connected to the epic of mining in South Africa. Souleymane Cissé's *Yeelen* (1987) reprises *Sundiata Keita*, an epic from thirteenth-century Mali. In addition to playful nods to European surrealism, these artworks align with allegoricity, the conscious move "from this to that" within mediation. If allegory is related to fetishism in that it is an accusation—that it results in a type of false seeing—then the dispute over the status of certain objects as art can be used to test the provincialism of the term *modernism*. Along the lines of Bruno Latour's "we have never been modern," we (the specific and the collective we) have never been so literal as to be without allegory, and allegory is one method by which supplanted histories have been renegotiated, with all of the risk that entails.

Electricity as the Animating Force of a New Art History

So, while this is another book about modernism in Africa, this modernism is not defined solely by nationalism or anticolonialism but rather the granular detail, work by work, of concepts and substances that make up the concept of technology—and thus the concept's reticence, seeming interiority, and poetics. Repeatedly throughout the book, I refer to electricity and light as emblematic of the complexity and the growth of the various media and their genres.[6] Electricity courses in and out of representation in modernism. Sometimes it is the invisible animating force of mediation, but sometimes it is visible and audible; it is represented. The media theorist Friedrich Kittler wrote that the digitization and fiber-optical transmission of all information means the end of medium specificity.[7] Neither Kittler nor I argue that perceptual specificity has vanished—indeed *Media Primitivism* is poised on the historicity of perception—but rather that transmission and the intermedial/multimedial/immediate aspects of art are more emphasized by artists after its electrification and subsequent digitization. The history of electrification in the colonies makes it more apparent that it is

not neutral or inevitable. To account for its contingency is to account for various methods and experiences of modernity around the world. Electrification was often limited to European enclaves and sites of segregated industrialization on the continent and was racialized along with concepts of technology. Still today on most of the continent, the implementation of electricity is guided by multinational interests and profit-loss calculations more than by ideals of innovation or social improvement. *Media Primitivism* begins with Michael Taussig's good-humored point about technology never having become second nature. He muses, "Try to imagine living in a world whose signs were indeed 'natural.'"[8] Of course, nature and technology were never really separate.

Methodologically, electricity unites some of the concerns of art history, media studies, and African studies. Africanists typically write about the state form, and so in that discipline, electricity (as infrastructure) is a metric of citizenship. Art history has witnessed a multitude of writings about the changes in signification and representation as the world became electrified, but still, electricity is mostly invisible within the discipline. In media studies, electricity (not electronics) is only now becoming significant, despite the field's complete focus on art that uses electricity.[9] It is, in all three disciplines, the foundational material of modernism and a locus of both meaning production and the contestation of the separateness of the realms of art and science. But, if I can put it this way, the hypermediality of electricity-based art is an *African* way of doing art. The electricity that I describe is also energy, or nyama, what it takes to transmit something along or through a medium. Indeed, McNaughton likens nyama to electricity, writing, it "is a little like electricity unconstrained by insulated wires but rather set neatly into a vast matrix of deeply interfaced social and natural laws."[10] Compare this conception of mediation to what Caroline Jones writes about an experiential, "global" art: "Like Nietzschean sparks that fly from the philosopher's anvil, signifying energy can be violent. But the sparks of conflict also cast light. They can be used to forge tools to think with, produce a fulcrum for political commentary, ignite local debates, or construct a more elastic public sphere. In this context, art becomes open to event."[11] Jones figures energy into a larger discussion of "trans," a set of tactics based on the prefix for words like *transnational*, *translational*, *transactional*, and *transcultural*.[12] Using McNaughton's rich description of the concept of nyama, I'd suggest that this attention to that aspect of art as a larger energetic environment is deeply historical and set always against the pre- or ahistorical; that is, it appears to not have origins. This confusion of origins is one reason academic artists and scholars further developed the idea that African art was

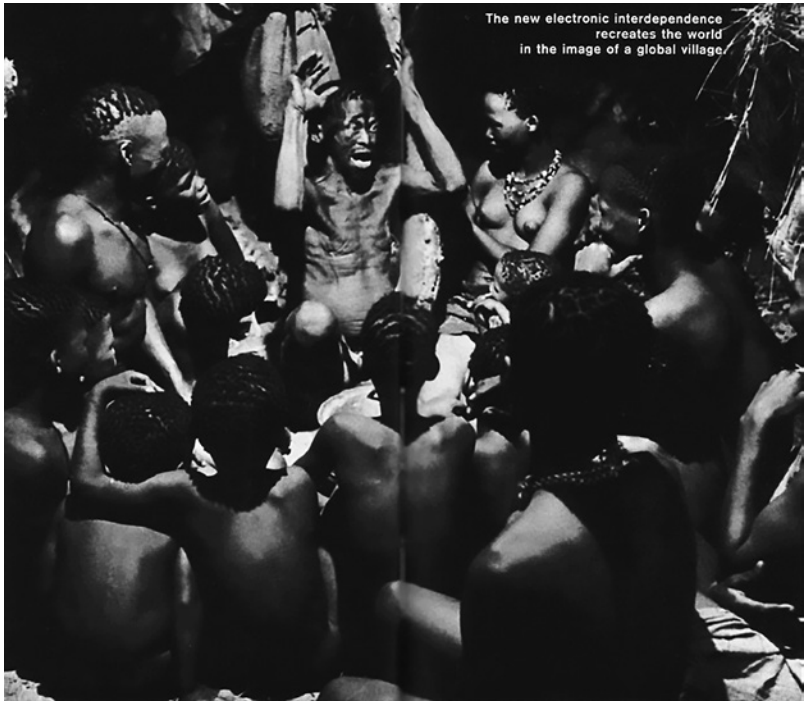
ahistorical, right at the moment that electricity was extracted/abstracted from the environment. Electricity and electronic media grew alongside photography and other new methods of representation, shaping new conceptions of subjectivity and nature, and particularly the concreteness of those terms in the way that they are perceived.[13] Increasingly, cosmopolitan Africa was refigured within tech and art discourses as "nature." Douglas Kahn writes, "These determinations of in-degree and in-kind, and the presence of different classes of energy involved, have influenced what is and what is not 'technology' and, thus, whether technology obstructs access to 'nature.'"[14] In addition to being a medium, electricity is a great way to think of the medium concept, in that it is both a substance and a process, with seemingly inexhaustible relations and attachments. It allows us to think through the problem of causation that lies at the root of the various breakaway fields of art and even that term *art* itself.

On the Field and Its Hidden Assumptions

Because tech art, African art, and art history are so complexly imbricated, the following literature review is unconventional and not comprehensive but rather speaks of objectivity as an unreachable ideal in each of my fields. I am particularly interested in demonstrating how certain texts pose causation as a shifting question, as this is where the question of technology in media studies and art is yet unsettled. Sean Cubitt notes that media studies tends to "privilege a technical-scientific conception of media above a more general, philosophical-aesthetic one," and, conversely, art history is generally ignorant of how many media work physically or mechanistically.[15] *Media Primitivism* is oriented at the borders of technological media history and the broader field of philosophy and aesthetics, because in many ways, African art has functioned as the negative condition of each. Media studies scholars have in recent years attempted to create a field for the work and to examine its shared origins with art history but with mixed results. These disciplinary divides have been institutionalized in nations, conferences, professional organizations, journals, and websites. But as Edward Shanken notes, the exclusion is more due to the inability for art history proper to account for AST (art, science, technology) as it has been written in the last hundred years. He presents the example of Jack Burnham's ostracization in the late 1960s as emblematic of a historical preference in art history for artistic volition as a driver of art production and a general abhorrence of technology.[16]

Returning to the fetish will account for this split in art and tech, via the prevalent understanding that African art was "natural" (base) material, non-technological, and nonphilosophical. A fetish was the fulcrum—a "discrete thing"—of things personal and societal, technological and philosophical.[17] Rather than positing a full faith in technology, or "the manufactured," to the exclusion of critical distance, as Pietz writes, "fetish discourse always posits this double consciousness of absorbed credulity and degraded or distanced incredulity."[18] Pietz cites a fifteenth-century Venetian merchant who claimed that Africans marveled at his navigation equipment, assuming that they were ignorant of the compass and the chart.[19] That is, the fetish accusation was based on an observation about both art and technology. The fetish discourse brings into full view the ambivalence about race and gender in AST and art history generally, its subtle, tricky, and persistent primitivism. Primitivism is obviously found in Hegel's and Marx's theories, but it lurks still nearly unexamined in Marshall McLuhan's infamous declaration that the natives of Ghana had no apparatus through which to understand new media.[20] *Understanding Media* in particular was an apocalyptic book, one that promised mass destruction with each new wave of technological takeover, and Africans were the innocent subjects within his scheme. It is literally illustrated in McLuhan's and Quentin Fiore's graphic book *The Medium Is the Massage*, where a two-page spread of an image of a group of black unclothed people (neither Ghanaian nor urban African) gathers around a storyteller who raises his arms up to emphasize a spoken exclamation. The caption reads: "The new electronic interdependence recreates the world in the image of a global village." The commonplace phrase "global village" that rolls off the tongue of nearly every armchair observer of mass media rehearses the racializing mechanism of media studies. It comes later in the Englishman Brian Eno's glib statement that there's not enough Africa in computers, the seemingly apolitical artist whose album with the American David Byrne *My Life in the Bush of Ghosts* is emblematic of white men musicians freely sampling non-Western music in their championing of electronic sound.[21] Eno's work has eclipsed the other pioneer in electronic music and its relationship to African music, the Camaroonian Francis Bebey. Finally, there is the French new wave filmmaker Jean-Luc Godard, who used Mozambicans as his conceptual tabula rasa for radical televisual communication based on the very idea that the villagers were ignorant about mediation.[22]

J. Lorand Matory locates the assumptions about intention in the fetish accusation: "Contrary to Marx's demeaning metaphor and his assumption that the so-called fetishist is blind to the source of the fetish's value, Afro-Atlantic



I.1 Reproduction of Marshall McLuhan and Quentin Fiore's *The Medium Is the Massage*, captioned: "The new electronic interdependence recreates the world in the image of a global village."

priests typically know that it is people who make gods."[23] Matory asks us to include the conceptual projections of African and Afro-diaspora artists onto so-called fetishes alongside those of later writers like Marx and Freud, writing, "A thing is most likely to be called a fetish when it mediates the relationship between parties with very different or even opposite perspectives on their social relationship, perspectives that are also expressed in opposite perspectives on the thing itself."[24] What made the Europeans different in this exchange is that they would go on to graft their negative experience of difference onto a racial schema within a complex trade relationship that included the fabrication of capital via the body of the slave.[25] The visibility of fetish within our texts, therefore, should have the express purpose of desublimating the vicissitudes of medium and the racializing mechanism of art history. The debate about the risks of using such a fraught and racist concept has been addressed by many,

including Pietz. Rosalind C. Morris notes that fetishism's "history appears in retrospect to be one of relentless vacillation between dominant metaphor and disavowed designator, between valorized and vilified referent."[26] And increasingly, many books published on the fetish lie at the intersection of art, material studies, new media studies, and cultural and black studies; it is a return of the repressed that occurs when disciplines are in crisis. The fetish accusation registers the degrees of anxiety about an object's mystery, its withdrawal from the knowledge of the accuser. It reorients art history to its beginnings as a pidgin language in the theater of conquest and institutionalized with the sublimated racism of abolition. It shifts points of view to regard European art's mystery to African artists, opening the possibility of art history as an unscientific constellation of mediations within this space of contact. I would perhaps leave the term behind and avoid what David Doris calls "the stain of perversity," except that the works of art I am most interested in were forged in similar spaces of contact and have constellating genealogies of art and technology.[27] Indeed, what Doris argues about the terminology "art" versus "power object" can be argued for any artwork, especially those that use the complex apparatuses of contemporary technological art, like computers: "If the real 'power' of an object resides not in finely articulated visible form but in the accumulation of invisible essences and processes, then what is at stake is the very authority of the 'artwork' as the ultimate bearer of meaning and value."[28] When the invisible and processual aspects of certain media art objects are key to their existing both inside and outside of Africa, the pidgin object/concept fetish can help us unfurl multiple aesthetic and political valences in works of art and how those relate to racial declensions. I want to put fetishism in its place, as a historically specific, frail, but habit-forming object- and status-obsessed discourse, the major aspects of which still operate in discussions of global art.

Whither the Fetish?

Most accounts of the fetish begin with its mysterious etymology: it derives from the Portuguese word *feitiço*, which derives from the Latin *facticium*. The repetition of its etymology should clue readers to the concept's logocentrism and its emergence within comparative social sciences that seek hard, "material" evidence to allay the anxiety of unknown origins of objects. After all, the accusation of fetishism is that it covers up its real materiality and knows nothing of its own history. A few authors connect it to Egypt via Phtah in Herodotus

for various reasons, sometimes related to Pliny the Elder's *Natural History* (77–79 C.E.) and the opposition of the term *terrenum*, or that which naturally occurs, with *facticium*. Pliny's delineation between the two occurs within an exhaustive discussion of the things of the earth and of manufacture: he is among the earliest commenters on mining, a recurring theme in *Media Primitivism*. The transactional capacity of African art was first developed in the fetish concept because African art was believed to sustain belief—alchemy, connection to the dead, mediation of the ancestors and other supernatural powers: the fetish was a charm and also a spell. By the seventeenth century, *fetish* had become a shared term, used often in conjunction with more local words for objects and practices. In one example from the mid-seventeenth century, Wilhelm Johann Müller writes, "When the Blacks talk to us Whites, they call their idol-worship '*fetisiken*,'" even though, as he notes, they have their own words for the same objects. He then goes on to note that *fetisiken* is probably a diminutive for the Portuguese "*fetiso*," before concluding without explanation that we will never know with accuracy where the term comes from because of the natives' ignorance: "They themselves do not know how they are led."[29]

Thus Pietz is correct to historicize the fetish as a discourse of contact, an object and concept that only exist in this zone of fluidity between Africans and European explorers and traders. It shaped what we understand as African art, but also as European art. Fetishes were coterminous with early African Islamic art and modern Kongo Christian art, "spaces of correlation."[30] During the Enlightenment period, as discovery turned into conquest, difference was figured as a (Hegelian) choice between art that is fundamentally base and material, knowable, and untranscended and one that is referential of an Idea or Spirit, wielded like a weapon in the messy and protracted struggle for territorial and resource control in Africa.[31] The fetish was—and still is—the focal object of an unrealized secular modernism. Pietz writes that "the fetish could originate only in conjunction with the emergent articulation of the ideology of the commodity form that defined itself within and against the social values and religious ideologies of two radically different types of non-capitalist society."[32] In William Bosman's *A New and Accurate Description of the Coast of Guinea* (1704), he asked an informant in Ouidah to explain how many gods his people worshipped, and Bosman responded,

> The number of their Gods was endless and innumerable: For (said he) any of us being resolved to undertake any thing of importance, we first of all search out a God to prosper our designed Undertaking; and going out of

> doors with this Design, take the first creature that presents itself to our Eyes, whether Dog, Cat, or the most contemptible Animal in the World, for our God; or perhaps instead of that any Inanimate that falls in our way, whether a stone, a piece of Wood, or any thing else of the same Nature.[33]

Bosman, writing around the same time as Lessing's Laocoon essay on artistic media, explains that there is no distinction described between that which has been fashioned by human hand or by the god(s), a sentiment that would be repeated across subsequent explorers' accounts.

The feedback of the fetish concept, that is, was immediate. Latour argues that the fetish story reveals the double bind in Western culture: "Right from the start, the word's etymology refused, like the Blacks, to choose between what is shaped by work and what is artificial; this refusal, this hesitation, induced fascination and brought on spells."[34] He continues, "Yet the misunderstanding persisted, because each side, acting on its own terms, refused to choose,"[35] reminding us that Western culture is founded in many ways on denying mediation while reveling in its mysteries. That is, he argues, "If westerners had really believed they had to choose between construction and reality (if they had been consistently modern), they would never have had religion, art, science, and politics. Mediations are necessary everywhere."[36] Ultimately, Pietz writes, "the fetish must be viewed as proper to no historical field other than that of the history of the word itself."[37] *Fetish* became *fetishism* as a groundless word became institutionalized, reified in the process of creating comparative religion and the fields of sociology, art history, and anthropology. In 1760, Charles de Brosses, a liberal French aristocrat and protoanthropologist, compiled the literature on fetishes and published an analysis in his book *On the Cult of the Fetish Gods*. He penned the neologism *fetishism*, which mapped onto an already-existent racialized mechanism well established by the sixteenth century with the advent of the transatlantic slave trade. De Brosses's book, published at the height of the slave trade, contains passages like, "As a rule, among the most ancient nations of the world, those that were completely brutish and coarse fabricated for themselves these strange terrestrial Divinities through an excess of superstitious stupidity."[38] But it opens by linking the "confused assemblage" of mythology and its ability to grasp at any object with which to associate its concepts.[39]

De Brosses betrays anxiety about men becoming manipulated by tools or machines and can thus be seen in the larger Enlightenment debate about the value of technology. Francis Bacon in his 1620 *New Organon* hailed the advances in empirical study and thought made possible by gunpowder, printing,

and nautical compasses. To him, these three "mechanical things" differentiated the civilized and the barbarous.[40] Just a handful of years earlier, these same mechanical things were written of in terms of their ability to stoke disorder among African nations and catalyze the sale of enslaved persons to the Portuguese.[41] To superimpose the fetish concept onto the medium concept is to highlight the double bind of proximity and distance, attraction and repulsion, a result of the fetish's existence as a product of sacra and territorial and capital conquest. Media studies' ancestor Walter Benjamin was fascinated by the effects of distance and proximity on artworks; he formulated many of his most cherished statements on art and technology after close readings of the art historians, and his mentors, Heinrich Wölfflin, Alois Riegl, and Franz Wickoff. It is not just granular perceptual processes that inform medium theorizing but also the space of (global) conquest and civilizational/racial difference—that is, the spatial metaphors in art history. Finally, there has to be something to conquer, whether a word, a piece of wood or parcel of land, or a body.

The Medium Concept, Institutionalized

Both art history and media studies have characterized African art as absent of mediation (noncritical and nontechnological, respectively). Mediation—at the crux of debates and outright wars over representation, iconoclasm, figuration, and abstraction—relies on the possibility of its own negation. Given this, the Western philosophical history of the term *medium* is famously difficult to write. Western conceptions of medium vary between the imitative and the communicative. The etymology of the word *medium* is usually given as Latin *medias*, or "middle." From Democritus (460–370 B.C.E.), we receive the model of medium as occurring within perception, as objects impress upon our sense organs. The debate persisted with those who took to directly observing natural elements to explain the world. Others like Parmenides (c. 600 B.C.E.) and Empedocles (494–434 B.C.E.) elaborated on various aspects of metaphysics, each arguing the specific character of Nature, human perception, and what lay in between. The English word/concept *medium* in art history can be traced to two key texts: the Aristotelean conception of medium as means of imitation in part 3 of *Poetics* (335 B.C.E.) and Gotthold Ephraim Lessing's *Laocoön: An Essay on the Limits of Painting and Poetry* (1766).[42] Aristotle's interest in medium goes no further than a concern to be specific about the methods through which adequate imitation or mimesis can be achieved. John Guillory

writes that Aristotle "sets the question of medium aside, *where it remained for two millennia*."[43] The rise of communication media in the late nineteenth and early twentieth centuries in Europe occasioned a rereading of the nonobjective aspects of medium. In Walter Benjamin's many essays on medium, he would reconceptualize the "middle" as milieu: the sociohistorical as conditioning the perceptual. Antonio Somaini explains that Benjamin was influenced by the so-called *media diaphana* (air, smoke, vapor, atmosphere, etc.) in the post-Aristotelian tradition. He writes, "The study of 'media' is conceived as the study of the different material and technical articulations of the environment, the *milieu*, the atmosphere, the *Umwelt* in which perception takes place," and this tradition carries forward into media theory today.[44]

The shuttling between medium as middle or field and medium as object or discipline hinges on the distinction one assigns to perception, politics, historical or physical causation, and communication. Guillory argues that the concept of medium as we understand it today was anticipated—even *wanted*—before the nineteenth century and because of technological developments; it became necessary to retool the word *medium*/*media* to theorize communication: "the development of new technical media perplexed thereafter the relation between the traditional arts and media of any kind."[45] Previously, as noted in Greek sources, painting, poetry, music, and so on were not analyzed for their communicational qualities but rather their imitational, a registering of what impressed itself on the sense organs. Guillory explains that the term for *medium* as it was translated from Aristotle's *Poetics* was not an obvious one, with the early translations substituting *medium* or its plural, *media*, for "things." Aristotle enumerates some of these, naming what we understand to be the classical media of painting, drawing, poetry, music, and so on. These definitions of middle or means lay dormant until they had to: that is, until technical media introduced remediation, the transposition of one medium into another. At the turn of the twentieth century when large amounts of African art objects were removed to Europe, medium was being questioned alongside representation.

Such fundamental questions about art and iconoclasm typically occur when societal chaos makes it hard to distinguish art from everyday life. The notion that Lessing argues that a medium is material and distinct was argued alongside the artist's "freedom" from compulsion by religion to make art. His and other Enlightenment arguments for freedom from tyranny for themselves, Matory argues, occur not as an abstract concept but from the direct observation of enslaved Africans, a cognitive dissonance at the heart of Enlightenment theory.[46] Thus, the volitional model of art history embraces the

idea that freedom constitutes art, not material or technique. The autonomy of medium thus takes on a different kind of meaning when read together with the real conditions of a global slave trade that, by the eighteenth century, no European could ignore. Then, the question of ownership and private property is an aspect of the subjectivity being posited by Lessing, that a medium should never represent a different medium, which amounts to "a lifeless reflection of another's genius."[47] Medium corresponds to specific sense organs, depending on the properties of the medium itself, which are static. Lessing rests most of his analysis on the boundaries between painting and poetry, for instance, which correspond to the classical division of time and space in art, one of the most long-standing and unconsciously accepted tenets of art history. Later, via Clement Greenberg, the artwork obtains a status that is particularly charged and powerful, premised on its autonomy in the face of great uncertainty about art and science via the figure of technology, where art is defined primarily through its boundedness and Kantian criticality ("the imitation of imitation as process").[48] It constrains the concept of medium to the very edges, for instance, of the canvas. It is one thing.

African art, then, became the locus of medium questions in the early twentieth century precisely because it challenged the singular, intentional (subjective) work of art and seemed instead to harken back to art in the service of religion: artwork externally compelled and collectively made. African art exceeded, or at least tested, the boundaries of secular modernist disciplines. It was physical proof of a history of slavery and colonial conquest that was variously repressed within the European consciousness. African art was theorized in earnest beginning with the crisis of imitation that photography brought, the challenge to mimesis and to intention—to the very notions of Enlightenment freedom that seemed to be decaying with the advent of world war. The increasing terrible nearness of the Other, civilizational and philosophical, could also be experienced as a pleasure of distanciation hinted at by Guillory, when he writes of media relieving the anxiety of "the dispersion of persons in social space."[49] The difference between distance and distanciation is built in the theorizing of African art as a category, in that it is at once geographical and conceptual and rendered conceivable by object/concepts, that is, the fetish. The mercenary ship, the telegraph, the camera, and the *nkisi* nail figure are all media objects that registered and bridged the distance between Europe and Africa, just as they registered and bridged the difference between subject and object in Western philosophy.[50]

In the Enlightenment project, the Southern Hemisphere was to become the beginnings for Europeans; it was "experimental evidence."[51] Further,

Dipesh Chakrabarty has argued that Enlightenment philosophy, that which gave rise to art history, identified the beginning of human social institutions with nonhistorical or nonpurposive "primitive" humanity.[52] This kept open the possibility of "unintentional actions and their unforeseen consequences," part of the "experimental" aspect of the evidence that was compiled in travel accounts.[53] Rosalind C. Morris and Daniel H. Leonard take this to mean that "if 'savages' indeed participate in the creation of culture, as de Brosses's account of fetishism argues, then natural history introduces a historical horizon characterized by radical otherness: we no longer see our own image reflected back in the mirror of history."[54] The question of the unity of the species was therefore countered by the desire for that which withholds itself and remains Other.

While colonial governments used media objects to conquer Africa, black metropolitan artists were using those same media in search of a viable alternative to what they considered an ethically fraught European society. Unlike their maritime ancestors, the early European avant-garde artists' fetishizing of African art was culturally relativist, and the crisis of art, society, and communication was something to be entered fully. In James Clifford's classic text on surrealist art of the 1920s and 1930s—an art obsessed with the vicissitudes of medium—art and ethnography were coterminous: "To see culture and its norms—beauty, truth, reality—as artificial arrangements, subject to detached analysis and comparison with other possible dispositions, is crucial to the analytical attitude."[55] This research the Europeans did, in many cases, with African artists in their midst, asking similar questions. How this analytical attitude would be organized in relation to African art became, by the mid-twentieth century, a renewed question for scholars, curators, and artists from Africa and Europe. It persisted throughout the twentieth century, as technologies of both representation and war rose up to produce two assemblages that shifted the meaning of technology and nature entirely: the atomic bomb and the computer.

In response to these, and in the wake of McLuhan's field-defining work of the 1960s, systems and cybernetics thinking penetrated the art world with two exhibitions in its center, New York, in 1970: *Information* (Museum of Modern Art) and *Software: Information Technology; Its New Meaning for Art* (Jewish Museum). Both exhibitions embraced various trends in thinking, such as ecology, environmentalism, systems (broadly construed), and an expansive understanding of medium and art. This moment of theorization is foundational for current media studies, as it maps out when tech art breaks off from mainstream art history and criticism, the latter subsuming in many ways the former with the introduction of *Artforum* and *October* and a renewed philosophy of art.

David Carrier writes that Jack Burnham, the curator of *Software*, "championed the wrong new art," articulating an implicit suspicion of tech art in the circles that would come to dominate the discourse of art history in the West, particularly by writers affiliated with the journal *October*.[56] To state a possibly obvious point, the mainstream art world after the "radical" 1960s was as uninterested in African art as it was in tech art.[57] That is, it simply was not registered because, along with its supposed anachronism, it was assumed to be uncritical and naïve, like the fetish accusation. Typical is a statement that William Rubin made in his catalog essay for the contested exhibition *"Primitivism" in 20th Century Art*, where he writes about the "generally low quality of most tribal art" and then goes on to muse about the lack of a critical tradition in "pre-literate" societies, even dismissing Yoruba aesthetic discourse.[58]

Evidence and Context in Institutional African Art History

The fetish was not just defined by its objectness—its misplaced concreteness—but also contained the entire distinction between that which is made and that which is natural: intention and arbitrarity as a metric of critical reason. None of the labels was neutral but rather often became a question of truth or lie, between who could be trusted and who could not; the made is trickery. It also meant that the fetish was untranslatable to the accuser because it was, essentially, irrational and thus had no comparison in the world of objects of the rational viewer. To resist the impulse to name a trickster, anthropology developed a model where African art should have to testify and be transparent as social scientific evidence. Thus art rests embedded in anthropology's radical contextualism, tied to the people (not person) who produce it. Edouard Glissant narrates the model's assumptions about people: "In order to understand and thus accept you, I have to measure your solidity with the ideal scale providing me with grounds to make comparisons and, perhaps, judgments. I have to reduce."[59] African art would become visible even if the Europeans had to force it to be "evidence" of superstition and reduced logic. It could not simply remain untranslatable or withdrawn or too complex to signify—especially as it demonstrated the existence of a cosmopolitan, interconnected Africa. There is no easy compromise between art's esotericism or poetics and the evidentiary requirement, for they both rely on there being a limit to translation.

The full history of African art history is beyond my scope here, but I want to remark on a few key issues, specifically the formal versus the evidence-

based writing about African art, a devil's choice between the singular art object and a *field*. At the turn of the twentieth century, the question of arbitrary form was variously proposed in debates about world art history. The literature divided between ethnography (i.e., Marcel Griaule and Franz Oldebrechts) and formalism (i.e., Carl Einstein and Vladimir Markov). After the end of World War II, the split mapped roughly onto the Iron Curtain, with Markov's literature mainly finding a Soviet audience and some influence in the journal *Présence Africaine* with Einstein. Scholars in the United States forged a third way, a combination of ethnography and art historical iconography that attempted to distance itself from European colonialism. Kate Cowcher explains that the relatively late adoption of models of African art that accommodated, let alone advocated, African self-rule was due to the political ambivalence of scholars in the United States and Europe.[60] A type of competition between the Soviet Union and the United States for prominence in Africa was the impetus for funding large-scale research of African art, and African scholars' attempts to host scholars from both sides of the Iron Curtain came from a stated desire to create a global but African-directed scholarship of African art.[61] At the same time as these attempts for African control over the discourse of African art were being made, "Africanist" art historians in the United States built the literature on extensive contextualization. The problem of establishing a context to determine meaning became the main force of African art history, whose scholars argued for the importance of African art to general discourses of art history. Erwin Panofsky, recognizable to generalist art historians, was widely used by U.S.-based art historians of African art, as he provided a method to study stylistic elements of the work of art in conjunction with some adjustments made to context to account for ethnographic difference. Context was built through an ever-important field research. By establishing a "correct" meaning of African art—the original context of its use and production or its relationship to local cosmologies and politics—scholarship could repair the iconoclastic and destructive tendencies in Western interpretations of African art; art could be stabilized within a social analysis.[62]

Henry John Drewal wrote in support of contextualization, saying that the "history of the discipline" and its "development during the age of imperialism meant that objects were often torn from their cultural contexts."[63] But as scholars have recently begun to note, the buildup of resources for research occurred within the funding structure during the Cold War, facilitated by institutions like the Ford Foundation, Carnegie, the State Department, and others.[64] And though, for some, reconstituting context was an ethical duty,

African studies in the United States was receiving extensive funding from the State Department to support fieldwork. The problem that context fixes, according to Drewal, is formalism: "objects in isolation."[65] One overriding concern scholars had, then, was exactly the racism of the fetish concept and the extent that its conceptual misreading was due to an inordinate focus on the object, disarticulated from a stable field or environment. The model relied on a dichotomy between field and object that some scholars implicitly critiqued when they acknowledged "the social lives of things," or how objects move from place to place.[66] Fieldwork attempts to describe a complete ecology and is based on a figure/ground relationship that was beginning to crumble as contemporary African art history included more than just colonial-era collections and historical African art in Europe and America.

At the close of the Cold War and during a time of renewed thinking about global art history (as supplanting world art history), Whitney Davis opined that the reliance on context and Panofskian methods meant the field of African art history was "in deep, perhaps fatal, conceptual trouble."[67] He wrote, "The 'contextualism' of the essays, then, is paradoxically constituted as an attempt to fill in or paper over the hole in the center of the project—a metaphysics of meaning that is systematically voiding the history of representation."[68] In Robert Soppelsa's text on Panofsky, for instance, he writes that an analogous practice to Panofsky's examination of literary references in Western art would be things like "oral traditions, literature, archaeology, ethnography, and ethnohistory."[69] The logocentrism of Western art, itself famously hard to obviate, is stretched thin to encompass other evidentiary materials from Africa, its sameness simultaneously negated by the "ethno-" prefix. In attempting to right the wrongs of earlier imperialist art history—world art history—Davis argues the scholars commit another logical error, where, once again, the group and the artwork must remain stable entities within an "expression theory of art."[70]

Formalism

In U.S. African art history, formalism became shorthand for what was opposite to context and "thick description," an inappropriate commitment to the thing itself, isolated and autonomous. But in the 1960s, some scholars in the Eastern Bloc revived Vladimir Markov's writings in the Soviet Union as a way to combat the "bourgeois ethnography" of the West.[71] Markov rejected the notion that African art was externally compelled, and his conviction that

it was made by artists comported with African political autonomy. Indeed, Zoe Strother suggests that Markov's close-up photos of African art, many of them head shots, evoke a sense of the subjectivity of the maker.[72] Indeed, the collapsing of the subjectivity of the maker with the sculptural qualities of the (especially figurative) African art objects would formulate the terms of representation generally. That is, a photography that evoked the real presence of the objects, described in textural detail with an emphasis on their boundaries and contours within space, would shift in later decades to photography as the primary vehicle for political subjectivity and visibility.[73]

In many ways, then, the fruitful time before African independence movements in the late 1950s and early 1960s was fully institutionalized by the Cold War and the professionalization of overseas research. The visible political academic research of *Présence Africaine*, its purposeful revisionist historiography in the service of black emancipation, was contained to the few years between its founding in 1947 and 1958. It was a time when the question of origins was debated in the academy, particularly around the work of Cheikh Anta Diop. Diop's scholarly work set out to prove that black Africans were derived from Egypt, laying claim to its celebrated past and working against its appropriation by imperialist academics. Egypt gave African art a longer and more developed genealogy. The persistent question throughout the key years of the journal was how to historicize African art. Jacques Howlett, the philosopher and cultural advisor to *Présence Africaine* beside Alioune Diop, insisted that Picasso's now infamous statement—"Negro Art? I've never heard of it"—was a negation of the theory that African art was a recognizable precursor to European art. Howlett goes on to argue for an otherness of African art once again based on its functionality, that "[African objects'] deep meaning was not disinterestedness but practice, they were in all rigor neither simple things nor aesthetic creations, but pragmata, tools."[74] Only three years earlier, however, *Présence Africaine* had published an article by the dealer and cubist scholar Daniel-Henry Kahnweiler that stated Picasso's and Matisse's interest in African objects was aesthetic; they understood it as art.[75] But unlike a tool, Kahnweiler argues, instead African art was the ultimate art that made a "plastic reality," that is, an illusion made real in space.[76] In both accounts, the object is central; in both accounts, the question is its purposiveness and disarticulation from a field and its status as a medium that shifted its position according to the time and place of its regarding.

This again raises the question of a radical contextualism that renders a foreign object so entirely culturally specific that it cannot be appropriated or translated. Such a thing would exist almost as an abstract proposition itself,

which is partly what we should consider Carl Einstein's famous book *Negerplastik* (Black sculpture) (1915). Sebastian Zeidler writes about Einstein's employment of the fetish to describe the "nonessential" in *Negerplastik*.[77] His embrace of "that culture's irretrievability" struck the possibility of it acting as an ancestor of European art. Einstein's *Negerplastik* was the most radical of the arguments about the relationship between African art and the question of representation. He argued that African art confounded its viewers because it did not address them in a straightforward, mimetic mode; it lay outside of the history of mimesis. Certainly criticisms had been made about the appropriation of African art for the purposes of prefiguring what was to come in European art. A major aspect of Charles de Brosses's term *fetishism* is the appeal for concrete evidence in studying fetishes, along with a growing outcry among Enlightenment scholars against so-called figurists, both Neoplatonic and Christian: figurism, the notion that African art prefigured (or prophesied for some) European.[78] Einstein goes further. Zeidler writes that it "was an attempt not to reify African sculpture as a set of new objects that would enrich the modern Western world picture, but rather an attempt to think it capable of shattering that picture, by confronting a subject who expects an experience of sculpture to be a realization of the possible with an object whose formal structure ought instead be described as an actualization of the virtual."[79] Zeidler argues that Einstein was obsessed with undermining the integrity of the "unified whole" of Western art, and particularly the deployment of words to understand African art. Rather, African art was the epitome, formal and philosophical, of art being unassimilable. No wonder, then, the photographs of African objects do not have captions. Zeidler brings up a key point in the placement of African art in Einstein's work and the beginning of the twentieth century generally: "Like *African Sculpture* [Einstein's earlier book], *Negro Sculpture* cannot stand as an accurate historical account of African art. But, thanks to its art-critical share, it can stand as something like the obverse: as a book that, by taking the art deeply seriously as visual fact rather than distancing it as historical or ethnographic document, allowed it a powerful comeback against contemporary models of Western sculpture."[80] Hovering between accuracy as an art historical (and ethical) value and pure fantasy or hallucination, African art embodied a pure Other that was, at once, recognizably art and outside of the Western tradition. Zeidler again: "It is not just that we don't know what 'fetish' means, Einstein is saying: we don't even know that we don't know what it means."[81] What I argue via the fetish is similar, that the source or meaning of a work of art congeals only as a compensatory gesture for the risk of its not meaning anything to "us." As with *Negerplastik*, there

is a certain perversity and impossibility in decrying logocentrism in a book, but collectively, African art has, since the early twentieth century, distressed standard methods of translating nonverbal objects into meaning that can be properly analyzed according to either science or philosophy.

That is, even the avant-garde rejection of the Enlightenment institutions of academic art and art history had a limited ability to interrupt the automatism of the racialized mechanism, let alone its cultural universe, of its methods. Strother contends that Carl Einstein departed from already-established facts about African art in order to fantasize a condition of total detachment and unbridled creativity. Einstein was, as she notes, particularly taken by transformation in masquerade practice, something not again proposed about masquerade until the 1970s (which corresponds to amulets and *minkisi*, which were included in art museums in the 1960s).[82] Indeed, these periodic flights of fancy wherein Africa is an allegory of ecstasy are attempts to suspend accepted propositions of historical or physical causality. It is a projection on Einstein's part of what he wanted from art generally, mediated through the fantasy figure of the African artist. Strother writes of Einstein's choices, which seem to be formal but can be politically construed: "Einstein never once uses the term fetish. However, make no mistake: the work that collapses signifier and signified, the thing that is mistaken for the god, is none other than 'fetish.'"[83] She argues that Einstein could not have been ignorant about the function of African art, as by the 1870s there were long and developed debates about the function of African art in religious practice, with anthropologists like E. B. Tylor openly correcting himself and other popular depictions of Africans worshipping "things."[84] Rather, she suggests, the collapsing of all signification was a desire he projected onto this external object along with vacating its place as the historical antecedent for European art. It was a bold negation of the philosophical bases of Western art but one that relied on a willful ignorance of a long history of African cosmopolitanism. However, perhaps Einstein, like the Afro-Atlantic priests throughout history about whom Matory writes, knew he was making a god out of African art, a genre without an origin or a history.[85]

Zeidler remarks further, "What we have here is a transformation of autobiography into art-historical fact. The ontological position formerly held by Einstein's authorial persona is shifted to the African artist."[86] He goes on to note that for Einstein, African art was the ultimate existence of nonessence in art: "it means nothing"; it does not symbolize. As his ultimate goal was to render his own writing "meaningless," Zeidler explains that his texts have held an ambiguous place in the history of the academic discipline.[87] Though

as fraught as Einstein's text was, his desire for nonorigins was the recognition that Western art history can never account for African art but must mediate it with fetish objects. In fact, it would have an audience in early twentieth-century scholarship by black diasporic writers like Aimé Césaire, Léopold Sédar Senghor, and Alain Locke, all of whom argue that Einstein was the first European to take African art seriously.

Milieu and Perception

Einstein's book was part of an avant-garde use of African art as a counternarrative to ocularcentric Western art. It was one way to cope with the difficult task of attending thoroughly to trance, magic, and myth as obscured causality: a perceptual and conceptual apparatus that is unavailable because of the distance of time, space, and language. *Negerplastik*, on the one hand, put African art under the reign of Western ocularcentrism but simultaneously suggested it could not be had visually. The proliferation of photographs of African art during the first decades of the twentieth century registered levels of access to African art objects and held the viewer in suspension between belief and disbelief of the work of art—they staged the concept of mediation that variously exposes and conceals the object of African art. They can be seen as an attempt to control the terms of mediation and to highlight the "trick" of African art by fixing its perceptual milieu, leaving aside Africa. Some have noted the importance of lighting African objects in the process of their photography, adding a different dimension to the argument that electrification shifted perceptual conditions.[88] Walter Benjamin's many definitions of medium included the space of perception, the ontological act of naming, the world of color, and a diaphanous halo. It is this last definition of medium that would later become his famous and oft-misunderstood "aura" in his 1935 essay "Work of Art in the Age of Its Mechanical Reproducibility." As Antonio Somaini explains, Benjamin's interest was in conditions of perception, "the atmosphere that surrounds the material world of the nineteenth century as it is represented through photography and that conditions the possibility of the modern spectator to have access to it."[89]

Strother argues that *Negerplastik* relies as much on photography as it does on any new way of understanding African art; she cites André Malreaux's statement that photography "intellectualized" art, that "the creation of a homogeneous archive of images, skillfully sequenced for purposes of comparison and contrast, constituted the founding act of African art history."[90] In-

deed, as Malreaux would remark in his famous *Museum without Walls*, "For the last hundred years (if we except the activities of the specialists) art history has been the history of that which can be photographed."[91] But I want to suggest that African art's visibility in this early avant-garde moment of its photography was at best reluctantly intellectualized, because photographers also consistently suggested in their work that the visual apparatus was not enough to understand African art and especially not its history, if it was even allowed that it had one. African art appeared but would remain strange both because of the way(s) that it was practiced on the continent and the subsequent framing of that difference in Western art history. African art became emblematic of what was available and restricted to visual perception, suggesting a host of other sensations that were missing—things that couldn't be touched, smelled, or felt—thereby reinforcing the notion that Africa was out of reach. This way of framing African art was (and still is) common in media studies, which often drew uncritically from colonial-era writings. Many of these studies had the goal of proving the inaccessibility of Western mediation to Africans.[92] Like the fetish as it became fetishism, the registering of difference in the field of perception was extrapolated to describe civilizational epochs, where one Ghanaian man's response, a sanitary inspector from Accra, is a synecdoche for the African perceptual apparatus. In turn, Africa is emblematic of the global village, a technophobic version of the myth of eternal return.

Because a reconstruction of the mimetic faculty of a place, time, or people is impossible, according to Taussig the only hope is to mimic the condition of magic itself; the scholar wants her or his representation of art to become so concrete that it retains the power of the original. Taussig takes this desire to implore the scholar to think of writing as "the capacity of the imagination to be lifted through representational media, such as marks on a page, into other worlds."[93] But Kofi Agawu writes that building up context can never restore the condition of its historical or cultural perception, as it relies on a falsification of the aesthetic moment. He would rather focus on Europeans' accounts of hearing the "harsh disagreeable sounds" of African music.[94] He argues that aesthetic judgment made them more visible as interpreters and the sited specificity of the aesthetic moment:

> When in later periods of "proper" ethnomusicological discourse such descriptive language and its attendant ideology are excised, we enter also a period in which, perhaps only coincidentally, writers are less confident about what their ears tell them. With this new, mediated response, this

> elevation of symbolic above semiotic order, comes a substitution of a false piety for an authentic, personal engagement with the phenomenologist's Sachen selbst. The fate of African music reception is not helped by such piety.[95]

Then, Agawu introduces the possibility that Nigerians themselves might also find the music discordant and vile. This surface/depth conflict in interpretation leads me to the fundamental problem for medium and mediation: the myth of the stability—the neutrality—of contextualization. The outsider scholar, in assuming a native possesses more or better information about the work, also assumes that the experience or information is different than what has been culled from her or his own attention; this is what Agawu calls "ethnotheory."[96] That is, Agawu helps us to parse the data of an artwork from the practices and moments of its perception. It might not be enough to approach the work of art more closely, since there is no promise that accuracy and proximity will undo the condition of mediation, which is estrangement.

Rowland Abiodun's *Yoruba Art and Language: Seeking the African in African Art*, stresses the role of language (specifically the Yoruba concept *oríkì*) in writing about Yoruba art from a Yoruba perspective.[97] In his criticism of scholars who, according to him, do not account for Yoruba linguistics in their analysis of (usually precolonial) Yoruba art, he notes, as Agawu does, the conceptual baggage of European languages. Oríkì is extended into a verbal/visual nexus that allows for Abiodun to introduce other concepts that aid in interpretation. That is, the interpretive act is one of finding the most proximal to the origination of the object and thus the most "accurate." Proximal terminology assumes a fidelity to the aspect of the medium of African art that is its milieu—essentially its specific context—but these descriptions are often described in North Atlantic literature as "ethno-theories" of Yoruba or other located aesthetics. Abiodun writes that oríkì are a verb more than a noun; they energize and summon to action; and "quite often, they are mnemonic devices, transformer-carriers intended to facilitate free communication between this world and the otherworld."[98] Oríkì could indicate the difference between African art that we look at versus African art we look through or see with. Such an argument is found, but not completely developed, in Moyo Okediji's compelling theory of triangulation, which is meant to preserve the *in-betweenness* of art. Okediji suggests that the concepts found in Yoruba aesthetic theory are fit to interpret not only African art but all of art.[99] He maintains art's alterity.

Nsemi Isaki describes *nkisi* as "the name of the thing we use to help a man when he is sick and from which we obtain health; the name refers to the leaves and medicines combined together."[100] That is, the designation *nkisi* is in its combinatorial potency (metaphoric and metonymic), not in its particular form. Because of this functionality and interiority—their modes of addressing incredibly complex systems like the slave trade—they were among the last African objects to be considered art, because they always stood as the negative definition of art. The legacy of the fetish concept can be most easily recognized in art and technology that has been black boxed, such as computer art, internet art, and much of what has been called new media art. It, like African art from the time of de Brosses's texts, is thought to contain mysteries and demonic charge.[101] If the nkisi or the *mandinga* bag are emblematic fetishes, it is because the objects they assembled inside of themselves were metonymic, what made it most efficacious in the "makers' search for safety and protection in a violent world."[102] The logic of mixing contents that appear to be banal but are referential and indexical, what was in structural anthropology referred to as sympathetic and contagious magic, and the larger implications of the fetish as an in-between of art and technology emerge. It becomes an object whose concreteness is in direct contradiction of the multitudes it contains. On this principle of mixtures and their multitudes in technology, Latour writes, "Consider how many black boxes are in [your] room. Open the black boxes; examine the assemblies inside. Each of the parts inside the black box is a black box full of parts. If any part were to break, how many humans would immediately materialize around each? . . . The depth of our ignorance about techniques is unfathomable."[103] The things we live with, the things called technology or art, are assemblages of things but also of the presence and absence of people. In computers, the relationship between source code and action is occluded—it is, in fact, the ultimate belief in the magic of media objects that recalls the esoteric practices of religious art. The set of functions that could be understood epistemologically as an object—that is, a static epistemological unit versus the more fluid operations of medium—is what Wendy Hui Kyong Chun calls "sourcery," or the fetishizing of source code as the executor of a program.

This conflation of instruction and command with its product is likewise linked to software's gendered, military history, as Chun argues: "In the military, there is supposed [to] be no difference between a command given and a command completed, especially to a 'girl.' The implication here is: execution does

not matter—as in conceptual art, execution is a perfunctory affair; what really matters is the source."[104] Chun reasons that the relationship between source code and its ability to execute is made clear only after the fact of its execution. That is, execution is not guaranteed. "What is surprising is the fact that software is code, that code is—has been made to be—executable, and that this executability makes code not law, but rather every lawyer's dream of what law should be, automatically enabling and disabling certain actions and functioning at the level of everyday practice."[105] Chun argues that the vicissitudes of execution should be the very question of medium. Assigning a causation within the event of mediation is itself a power move that realigns social attachments. This debate over the fetish is about a power dynamic, a "transfer of efficacy," that corresponds to a mystification of freedom.[106] Chun, like Pietz, presses us into thinking about the source code fetish as likewise a "logical mistake of hypostasis" or Whitehead's "fallacy of misplaced concreteness" of the order that has been ascribed to African art objects and their worship. Accounting for the black box of technology and art, its existence as a multiplicity, risks unresolved intention and causation. In Wyatt MacGaffey's response to William Pietz's series of articles on the fetish, he writes, "The underlying principle that makes it possible for such objects [like nkisi figures] to seem meaningful is not mistaken causality but, once again, that of metynomy."[107] They were remarkable because they were known to represent and do many things at once. That is, there was no choice between the mimetic act and what it represented but rather a knowledge that any "thing" was also already a concept that was transitive, able to slide into or interact with something else.

Mining and Metallurgy as Figures for a Slower History

The regime of mining, with its logic of transforming or substituting objects and extracting energy, was generated as a naturalized racializing and gendering mechanism, an example of mediation writ large. Mining, it is worth remembering, is an activity as old as human civilization and was historically related to both painting (representation) and making tools (technology). Mining began in southern Africa at the Ngwenya mine in Swaziland, which has been a site of extraction for about 40,000 years. Industrial mining was increasingly made into a fetish object by creating an interior to the earth: inside are operations and assemblages that are hidden and causally obscure. Mining has formed a global division of labor and "may in no sense be differentiated

from the question of what is technical."[108] The world was divided into zones of materiality that corresponded to raw materials and finished products—to produce, in this sense, would also mean to bring up from below the surface and into form. I consistently return in this book to mining as emblematic of the "trans-" aspect of mediation: transmutation, transformation, transfer, and even transubstantiation. It is nearly impossible to write about modernity in sub-Saharan Africa and not address extraction. Industrial mining shifted the view of Africa as a mysterious and dark continent to one full of mineral wealth: potential energy and luxury. The legends built up around mining feats (one historian even describes a "metallurgical nationalism") are indicative of the mythical landscape new media occupies.[109] Therefore, classic anthropological writing on African art has equipped us to examine the myths and protocols of modernity. Eugenia Herbert's *Red Gold of Africa* (1984) pursues two lines of reasoning common in discussions of African technology: "objective" scientific descriptions and local mythologies of technology. As Herbert writes, "The smith functions as a priest, artist, shaman, magician, initiator precisely because his work demands not merely manual skills but the esoteric knowledge to manipulate the dangerous forces at play in the extraction of ores and in their transformation into finished objects."[110]

The study of artists and blacksmiths, their work with elements and because of that their cultural valence, is emphasized in the history of African art history because it has served as the most complete unification of technological histories and their philosophies. It brought esoteric knowledge to bear on the process of determining meaning. Patrick R. McNaughton, in *The Mande Blacksmiths: Knowledge, Power, and Art in West Africa* (1988), writes that *nyamakala*, specialized professionals, "own the rights to arcane spiritual and technological practices and are therefore able to offer special services to the rest of society."[111] And though I do not reflect on their work overtly in this book, Deleuze and Guattari's figure of the metallurgist, then, reverberates throughout this book, drawing as they do on case studies and the deep history of technology. Similarly, with the filmmaker, "light itself may well be eternal, and its handling historical, but we should not seek radical change where there is none."[112] In an attempt to archaicize the figure of the filmmaker and, in my case, the new media artist, the metallurgist deals with material that is constantly in flux, whose form constantly varies and shifts between state actors and nomads whose existence undermines the state. Using such broad strokes, the near defunct term *new media* can be restated: a medium is new when its origins and genealogy are in question and when its technology is not invisible.

As I wrote *Media Primitivism*, I found myself skirting a line I wanted to erase, between radical specificity that preserves the alterity of works of art, the cultures and singular minds that make it, and a growing urgency for species-inclusive history that erases difference in the present. Indeed, my desire for cosmopolitanism has historical roots.[113] In many ways, what I describe here is influenced by mid-twentieth-century thinkers like George Kubler or Gregory Bateson, who attempted to archaize technology and art by a descriptive reaching for the interpenetrating lines of thought and action with nature. Much of the humanities recently has come together around concerns about environmental and social disaster, discussing our responsibilities as both scholars and users of media, characterized by Jussi Parikka's argument that "nature affords and bears the weight of media culture, from metals and minerals to its waste load."[114] Paradoxically, this concern for the deep time of the media is also a form of presentism that I navigate in the last chapter of *Media Primitivism*. But primitivism was always a form of presentism.

Thus, obsolescent technology is another way to think about primitivism, in that objects are always already part of a deep time and prefigure their own death—their constant boundedness to the earth. In stating that obsolescent technology is a stand-in for ancestors, I ask us to consider anew the personification of objects that Western philosophy sublimated. To orient away from the "new," I mean to examine the avant-garde as a fossil, much like what T. J. Clark writes in his elegy for modernism.[115] Only here, I insist that we include the particular terror that the figure of technology has brought, the historical and current reality of human replacement and large-scale demise of diversity. And so I conclude this introduction with the enormously complex term in the title of the book, *technology*, as I wish the *technological* to become again a philosophical question in the artworks assembled here. I like to return, from time to time, to Heidegger's "Question concerning Technology," because, in its bold refusal to instrumentalize either the term or any object(s) to which it might refer, it also demonstrates a philosophy built on a racializing mechanism. "It is as revealing, and not as manufacturing, that the *technē* is a bringing forth."[116] What could be more about origins, about archaic truth, than the act of revealing and becoming, instead of a means/ends description of tech? Heidegger's belief in the purist aspect of origins able to be revealed as a technological process underpinned his ideological failings. In several passages of his works we now know of, Heidegger makes the same accusation of a misuse of technology against Jews (as a whole) that de Brosses makes against Africans (as a whole) in his coining of the term *fetishism*.[117] Both scholars create unarticulated

masses of people out of their particular fear of the massive assemblage of technology, that is, the metonymy of technology, which particular combination is its unquestionable—mysterious—political valence.

Surely, electricity-based mediation has reached the point where the human no longer is the primary audience for or even author of images, something highlighted in recent writing and artwork by Trevor Paglen.[118] But this kind of otherness of technology has long been the fear of humans and their objects, which is partly why the fascination with African art has reached a point of describing its otherness or sameness in various configurations. Laura U. Marks writes of the kind of self-replicating and groundless systems that characterize Islamic art and design, which is the same as electrified art.[119] There are parallels to be found among that which has been simply called "indigenous" design. But Christopher Wise notes that few writers are willing to see the implications of their research on nyama—and I would extend that to other "indigenous" art—to the level that abandons the analytical mode, where philosophy is heresy: "The paradoxical belief in the Father as intangible yet 'truly existing essence'—which then is represented by a filial copy in the unreal world of the senses—signifies a break from a far more ancient thinking of the world that flourished in Egypt and elsewhere, a theology of the word as groundless ground or *mise en abîme*."[120] If we understand *fetish* to be a pidgin term born of encounter and negotiation, we have a place to start: the alterity of art, the assemblage of art—not as an ends, evidence, or fact but as a dream of a mise en abîme of connection, address, encounter, substitution, and withdrawal. This media primitivism, then, is a paradoxical attention to the substrata, ground, and basic substances and concepts of mediation, while insisting that none can hold its ground.

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ONE FILM AS LIGHT, FILM AS INDIGENOUS

Souleymane Cissé's *Finye* (Wind) (1982) opens as an homage to Aeolian, or natural, sound; the soundtrack of wind precedes the first image of the film. Wind is layered with other sounds throughout the opening sequence—first the otherworldly whistle of an early modular synthesizer, then recorded and reverberated Malian instruments. These three sounds are paired on screen with images of the natural media of water and light. The screen then displays Bambara (Mali) pictograms, and each sign has a sonic signature—all still underpinned by the sound of wind. The wind in *Finye*, like the light and fire in Cissé's later film *Yeelen* (Light) (1987), is *elemental*, as an element is irreducible, necessary, and rudimentary. It gestures toward a substance of film, a precondition of sound and image. And by preceding his film with the natural media of wind, light, and water, Cissé's film decenters the anthropocentric model of film and art. It seeks to place both into the perspective of the entirety of mediation: that which we look at or hear and that which we see or hear through. Specifically, the light and wind in these films once again stages the philosophical problem of light and air as either media themselves or as conditioning perception, something akin to the *media diaphana* in post-Aristotelean logic and nyama in West African thought. The question is proposed by the invisible causality of the sound event. Cissé's treatment of film undermines the notion that it is somehow unnaturally situated in Africa; it opens to technological indeterminism. The result: film is indigenous to Africa.

I begin this book with Cissé's now-classic African film, *Yeelen*, because in the nonspace of media, film occupies perhaps the most ambivalent place;

Yeelen, as one more type of and place for film, adds to the capacity or the program of the medium and carefully negotiates the uncontrollable, inhuman parts of film, as well as its essence, light. *Yeelen* is in part an allegory of African film and its plight, but also all of film. If one of the problems in calling cinema a medium is its complexity in both production and consumption, *Yeelen*'s gesture of return is more than just a commentary on Malian or African culture or politics. It is about determining what film does, what it is. The ontology of film is only one of the philosophical positions that have been debated since film's inception, and one that in part relies on finding its irreducible element. Cissé is not being romantic or reductionist, but rather he takes on the issue of the elemental, philosophical aspects of film and, using metaphor, aligns them to the archaic sociological content of film. Instead of a philosophy that begins with the problems of contemporary Africa, as has been common, the film is set in historical Africa using historical African philosophy.[1] Its meta-analysis is built into *Yeelen* via structural metaphors that are, as it turns out, the essence of film as a whole.

I also begin with *Yeelen* because it refers to a line of thought about West Africa that is best described as Afrocentric and thus introduces us to the problems of creating a genealogy of African art, especially that which is technologically modernist. Afrocentric philosophy found home in the journal *Présence Africaine*, which was inaugurated in 1947 by the Senegalese scholar Alioune Diop. *Yeelen* is spoken in Bambara and Fula, which indicates not just a dedication to indigeneity in filmic language but a diversity in African language: like *Présence Africaine*, it resists linguistic nationalism and reactionary politics. But overall, as V. Y. Mudimbe notes, the problem of doing any kind of philosophical or, by comparison, film philosophical work in Africa always entails confronting the *ethno-* prefix, whether it be ethnophilosophical or ethnoideological.[2] The nexus of questions that comes from studying *Yeelen*, then, is precisely whether a philosophy is at work in the film or whether it might be better to think of the film as a hermeneutic. Indeed, light is the origin of film: it cannot be depicted in film but only suggested by its impediments and implements (dust, fire, refracting glass).

Yeelen is a methodical, slow-paced film with sumptuous cinematography and spare sound. It is set in thirteenth-century Mali, around the time of the Mali Empire, and loosely based on the *Sundiata Keita* epic. It narrates the story of a young, spiritually gifted man named Niananankoro and his corrupt father, Soma, as they attempt to find one another and settle Soma's claim that Niananankoro has misused his Komo ritual powers—the Komo being a centuries-old association of blacksmith/sorcerers, one of the central Mande social institutions in West

1.1 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Nianankoro faces off with Soma, just before the two Korè wings light up and destroy both protagonists and the landscape around them.

Africa. Nianankoro travels from village to village—spanning Bambara, Fulani, and Dogon country—overcoming challenges and tests of his honor; the story thus overlays film narrative onto Nianankoro's ritual progression. Throughout the film, the various types of nyamakala, or practitioners who wield nyama, are featured in their ritual setting. They include griots, blacksmiths, hunters, and praise singers. As a whole, they act as a righteous witness to the drama that unfolds. Early on, the film reveals that Soma is full of unfounded hatred for his son and is abusing his power over the elements and his servants to find him. The film culminates in the face-off of father and son and their ritual implements—the wing of Korè and pylon (*kolonkanni*)—both of which activate spells, instructions, and enhanced intuition according to Komo lore and practice. A disembodied voice of the Korè condemns Soma for his unrighteous use of power, and the two objects light up in a flash resembling lightning that eliminates Nianankoro and Soma and reshapes the entire landscape. Cissé depicts this apocalyptic moment with a slow fade into a pure white screen that lasts for five seconds and is accompanied by a synthesized high-pitched whistle. A slow fade back in reveals a completely altered landscape. In those five seconds, all contour of representation is whitened out of the image, and viewers sit between the light of the projector and the screen. The concluding scene takes place five years later, when Nianankoro's wife gives their son the wing of Korè and cloak of his father and the young child marches off, as it were, into the future.

1.2 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Closing shot of the film, with Nianankoro's son marching into the figure with the Korè wing.

This orientation to the future, and the possibility that a child can correct the corrupting influence of power, is part of *Yeelen*'s futurism. Cissé engaged with a radical and revolutionary tradition of filmmaking. *Yeelen*'s filmic lineage can be traced to early anticolonial films made by Africans and Soviet-style political films that he learned at the Soviet Gerasimov Institute of Cinematography (VGIK). His elaboration on power as political and technological via the iconic Komo blacksmith clan indigenizes technology in Africa. It indigenizes politics in Africa, by suggesting through this particular story that griots and blacksmiths are not archaic historical fixtures without intention but rather have been instrumental within a long and volatile history of revolutions in West Africa. Griots were the figures who could either sustain the legitimacy of dynasties or undermine them. One can think of the postcolonial citation of the griot by Manthia Diawara and others as a type of remediation; it serves as the legitimizing media ancestor, as much as any particular content of the work.

Throughout, the Bambara concept of nyama ("power" or "means") operates under the surface as a descriptor of elemental mediation. By invoking (but not naming) nyama as the correlative or perhaps even descriptor of film, *Yeelen* rejects the notion that revolutionary film needed to be realized in a dialectical play of fixed signs, an analytical endeavor. Letting it remain as an instance of mediation within the tradition of nyama is revolutionary. Anyway, the methods by which scholars have attempted to write about nyama match

closely with the politics of doing so, exemplified by Cheikh Anta Diop, the Senegalese historian famous for reclassifying language types in Africa and arguing for the relationship of ancient Egypt to premodern African cultures. While Diop's methods and conclusions were controversial, his goal and that of his students and colleagues was to excise a place for a philosophy wholly outside of the West. In fact, this philosophy, if taken to its logical completion, would be a nonphilosophy, which Christopher Wise describes as "a theology of the word as groundless ground or *mise en abîme*."[3] Thus the pressing of "source" material to its (logical) end is one of the gestures of *Yeelen*, if incomplete. What would it mean, in other words, to eliminate Western ideas of reflection and representation? Wise writes, "I do not refer to a logocentric concept of *nyama*, but a psyche upon which the logos necessarily depends, a psyche that is blowing wind before it becomes mind. There can be no question of any new master term to anchor African cultural criticism. Instead, *nyama* must be construed as a word that may be replaced by any number of substitutions."[4] This substitution of words and objects has been historically central to the debates about Westerncentricity and Afrocentricity, a tactical level of cultural specificity.

Film as Indigenous

The literature on film in Africa has long been centered on the question of its indigeneity. On the one hand, this is a matter of the practicalities of doing film on the continent, as there have been few Africa-based directors, producers, postproduction facilities and labs, and funders. Secondarily, the cultural applicability of film on the continent has taken shape as a "roots discourse" of film.[5] In the 1980s, it became commonplace to compare indigenous oral culture in the form of the griot and film—that is, narrative film. This reliance on orality as the sole indigenizing factor of narrative cinema and literature is discussed in an article by P. Julie Papaioannou, where she writes that "film criticism that has extensively relied on the significance and function of oral traditions and verbal arts in African film-making has recycled the discourse of orality as the means to tame film form and to vindicate the claim of essentialist originality, of a certain 'Africanness' of African cinema."[6] While Papaioannou demonstrates the similarities between the function of the griot in filmic discourse and African literary criticism, the media theorist Walter Ong writes about orality and "electronic processing" in his book *Orality and Literacy*. Arguing that literacy is a break from orality, Ong writes that radio, telephones, and television are a "second orality."[7]

The theory that film could more easily adapt to an African perceptual apparatus was championed by the media theorist Marshall McLuhan, who, in the 1960s, interpreted research that he had compiled by Ong and other mostly Canadian media scholars. In his major work *The Gutenberg Galaxy* (1962), where he coins the term "the global village," McLuhan cites John Wilson's 1961 study called "Film Illiteracy in Africa." Wilson and McLuhan after him both conclude that Africans as a whole do not have the perceptual apparatus to look at pictures, and they therefore take in films differently than Europeans.[8] McLuhan's argument was also that Africans do not passively watch anything, but since they are more attuned to acoustic and nontechnical images, they are "naturally" more interactive in their watching. A similar sentiment, minus the point about Africans' interactivity, was repeated as late as 1986 by the South African director Rudi Meyer. He repeated a myth about African perception rife in colonial settings, stating, "If you show a guy going into the house, you have to show him coming out as well. If you cut from the house to a car on the highway, your audience won't know what the hell's going on."[9] This story was also found in McLuhan's citation of John Wilson's study, which stated that "if you were telling a story about two men to an African audience and one had finished his business and he went off the edge of the screen, the audience wanted to know what had happened to him."[10] What most of these studies have in common is the situation: white observers watching black Africans in a situation of considerable power imbalance. The suggestion is not only that African audiences are not able to cognize film because they understand it as "animated pictures" but also that the narrative devices are totally different in conventional film versus African oral literature. The theory is self-replicating. Indeed, even in the landscape of McLuhan's ground-up rethinking of media, he fails to see the racialized nature of the (mis)translation that gives rise to the theory of Africans' experience of electronic media.

When Cissé returned to Mali from his training in the Soviet Union, he directed his work against this predominant view not only among colonial apologists but also the film industry generally. Starting with *Finye* but developed more in *Yeelen*, Cissé engages with West African medieval knowledge as it relates to the medium of film. Both films are spoken in Bambara, the majority but unofficial language of Mali. Both begin by displaying Komo ritual ideograms to introduce the concept of the film. *Yeelen*—unlike *Finye*, which is set in contemporary times—is a historical fiction; it loosely follows the *Sundiata Keita*. But more than just a roots discourse that characterizes much of postindependence African film, *Yeelen* engages in a media primitivism: the

1.3 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Close-up shot of the refractive crystal on the Korè wing. This addition to the Korè wing was made by Cissé for the purposes of the film.

1.4 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Close-up shot of the refractive crystal on the pylon.

1.5 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Opening sequence of sentence in Bambara pictograms and script: "Heat makes fire and the two worlds (earth and sky) exist through light." This shot shows the ideogram *tâ*, which means "fire."

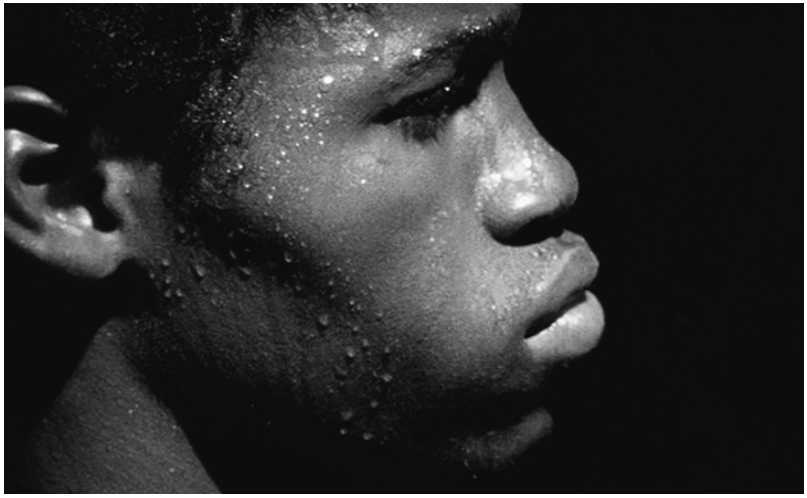
identification of the basic substances and processes common to all media and synonymous with "nature"—particularly the volatile substances that instantiate sense perception (like light). *Yeelen* begins as an associative chain of representations of light and its power objects: sun, fire, goat, the wing of Korè, and a refractive crystal—an object developed for the study and control of light.

Yeelen enacts a conceptual link between film and nyama, or energy, power, flux, potency, life spirit, means, and so on. Thus the five-second sequence of brightness that eliminates the main characters could be read as an apocalyptic release of nyama—of the magnitude of a lightning strike. Including a variety of optical objects in its visual inventory, *Yeelen* signals its engagement with the two aspects of visual medium: that which we look through and that which we look at. Some of the interpretive stakes of *Yeelen* can be found in its opening, where we see the sentence (broken up over three shots) in Bambara pictograms and script with French subtitles: "Heat / makes fire / and the two worlds (earth and sky) exist through light." The ideogram named *tâ*, which is subtitled as "makes fire" in the phrase "Heat makes fire," is in *Les fondements de la société d'initiation du komo* the sign of purification. Cissé and Dieterlen write that fire is "seen in the initial lightning before the formation of water in primordial space."[11] The ambivalence of this statement regards the causality of light: light is born of the dialectic of earth and sky, or the earth and sky *only*

exist because of light. It might be recognized as a classical problem of visual perception. That is, light, or "brightness" (its quality), gives rise to the dialectic of earth and sky. On the one hand, this is the way that Walter Benjamin understood the air or light around a work—its atmosphere—to constitute its milieu, which he extended to the social in addition to the aesthetic. On the other, it considers the technical use of light in all stages of the cinematic endeavor, including the film apparatus and the basic function of film language. *Yeelen* suggests a way of understanding that this film, if not others, aligns with the logic of the Komo: light, earth, and sky exist in a mutually reinforcing association, the drama of which we only see unfold in glimpses, like the flickering light of a fire—or, most dramatically and rarely, lightning.

Realist African Film

Yeelen was Cissé's eleventh film. It was his fourth full-length film to be set in Mali and to use the Bambara language. The first in Bambara was *Den Muso* (The girl) (1975), which tells the story of a mute girl who is raped. The second, *Baara* (Labor) (1978), tells the story of a factory manager who has an ethical awakening when observing the mistreatment of his workers. The third, *Finye* (1982), is about student uprisings against a corrupt military government. *Finye* and *Yeelen* are his only films that open with Komo ideograms. *Yeelen*, which was filmed from 1984 to 1986 and released in 1987, was Cissé's departure from social-realist film and the pioneering work of Ousmane Sembène, Djibril Diop Mambéty, Sara Maldoror, and others. Like Sembène and Maldoror, Cissé was among a large number of African students educated at the VGIK, which taught him the history and the practice of revolutionary and avant-garde filmmaking. Speaking of the years he spent there in the late 1960s, Cissé stated that what he saw in Soviet films and what he experienced in Mali just after independence were similar, noting the energy of filmmakers for a social, if not socialist, realism that directed attention to the worker and those exploited by Western capitalism and colonialism.[12] His instructor at the VGIK was Marlen Khutsiev, whose work was, as Josephine Woll writes, an "overlap of documentary and lyric so often found in Soviet films of the 1960s."[13] He was also influenced by Italian neorealism in this same regard. But as with other African filmmakers at the Gerasimov Institute, Cissé found what he learned at the VGIK somewhat lacked what was needed to address the situation of postindependence Africa. Most filmmakers and artists agree about their



1.6 Film still, *Baara* (Labor), directed by Souleymane Cissé (1978). Opening shot of male face with beads of sweat, indicating the visual sign of labor.

encounters with racism in Moscow and a lack of knowledge about Africa as the underside of Soviet friendship with African nations during the Cold War. Returning to Mali in 1970, Cissé worked for a time with the Malian Ministry of Information while establishing his own practice. *Baara* marks a beginning of Cissé's sustained critique of the rising African elite and the postindependence political trajectory of Mali.

Cissé's three Bambara film titles—"labor," "wind," and "light"—show his various stances on cinematic realism and its elements. In *Baara* (Labor), the opening shots against a black background are of a male body, beads of sweat forming on his face, labor's most basic signifier. In *Finye*, the correlation of wind and political change relies more on perceptual shifts conditioned by nature. The film opens with a soundtrack of blowing wind, while Bambara script appears as intertitles against a Malian natural landscape, reading: "Wind awakens man's thought." By the time we get to *Yeelen*, the relationship of realism, whether social, political, or otherwise, is set in what some critics at the time called an "African science fiction" film because it operates according to grand cycles of destruction and creation. Some have compared *Yeelen* to Stanley Kubrick's *2001: A Space Odyssey* of 1968 because of their apocalyptic themes. Other critics complained that *Yeelen* was a calabash film meant to entertain northern audiences with the novelty of a "real" African tale.

The problem of film in Africa, beyond its instrumentalization by colonizing powers, is indigeneity. Manthia Diawara's intellectual project has been to argue for an African adaptation of film via the figure of the griot. The unification of the two modes of oral and film storytelling indeed follows much media theory, which contends that film in some ways can "skip over" written media and act almost as a trance. In a way that obviates what such a roots discourse looks like, *Yeelen* prominently features griots. It has been the contention of many critics that one cannot fully "understand" *Yeelen* unless one accesses the "deep" knowledge of Komo, Bambara culture, or Malian politics. Suzanne MacRae writes, "*Yeelen* is so firmly rooted in West African Mande culture that the full resonance of the plot, characterization, artistic intent, and social/political significance cannot be understood outside the cultural and historical context." She continues: "Without reference to the cosmology, anthropology, and ethics of the *Komo*, Cissé's social and cinematic purpose remains elusive."[14] MacRae contends that not only can viewers not understand the meaning of the film if they do not decode its cultural references, but they cannot even grasp its cinematic purpose.

But indigeneity or roots should indicate something beyond just the content of any film. Samuel Lelièvre's near opposite reading of *Yeelen* is that the story of Komo is a mere vehicle for the mythical time Cissé wants to create: a film within film.[15] He also suggests that we need to consider an aesthetic contextualism when situating Yeelen with other African films. He notes that in fact the idea of ethnographic certainty was deeply offensive to Cissé because of the long history of ethnographic film in French colonial Africa. Lelièvre writes that for these African filmmakers, "retuning the gaze" was not enough because it maintained the subject/object dichotomy at the base of all scientific discourse. In addition, the whole episode of colonialism in Mali is downplayed in Lelièvre's account: he writes of an interview where Cissé refers to it as a road accident.[16]

One way that many critics handle the film-as-film and film-as-content dichotomy in Africa is to focus on the political aims of the director, which is a sort of "in-between" theory of Afrocentric and Westerncentric interpretations of African film. *Yeelen* can be read, as such, as an allegorical commentary on the contemporary military dictatorship of Moussa Traoré (1968–1991). Cissé's first full-length feature film, *Den Muso* (Young Girl) (1975), was banned for its content (the rape of a mute girl) and its implicit criticism of the government. The way Cissé's films were treated by the government is complex, however, given that while *Den Muso* was banned, *Finye* was even more hostile to military rule and not banned. In the case of *Den Muso*, which was banned for four years and for which Cissé was jailed for two weeks, the army wanted to

destroy the negative, but Traoré himself stepped in to save it. Nevertheless, part of the mandate of Komo practitioners is that they are conditioned to check power and tyranny, and *Yeelen*'s didacticism was understood by many as a commentary on the military dictatorship. Certainly *Yeelen* draws a direct relationship between political power and the volatile substances of nature, but the film operates on many registers, according to Cissé's adherence to the Bambara preference for ambiguity and ambivalence.

But as a film theorist, Lelièvre is careful in his discussion of *Yeelen* as an allegory of contemporaneous politics because film is, according to his reading of the film theorist André Bazin, a "presence/absence." That is, film, a thing unto itself, already registers an absence, which complicates its relationship to current politics, as it does with any ethnographic accuracy or recovery of indigenous knowledge. These questions of ethnographic representation were at the heart of third cinema, a South American movement with which Cissé did not directly engage but was in his vocabulary and peer group. Some African filmmakers embraced its model, which proposed "first cinema" is Hollywood, commercial and hopeless wedded to capitalism; "second cinema" is art house film, aesthetically pleasing but ultimately inert; and "third cinema" is independently produced, clandestinely distributed, and impossible to be instrumentalized by the state. Aspects of Cissé's earlier work can be considered a politically committed cinema, in terms of making more specific story lines regarding corruption and exploitation set in contemporary times, but Cissé was also careful to explain that each film was a world unto itself and lived independently from any mandate. Also against the tenets of third cinema, Cissé relied on France for distribution and postproduction, something that bothered him but that he felt compelled to do in order to get the work out.

Cissé's training at the VGIK put him into contact with some of the major artistic questions of postindependence Africa echoed among intellectuals associated with *Présence Africaine*. Many of these discussions came up as part of a film criticism group called Groupe Africaine du Cinéma in Paris led by Paulin Vieyra.[17] Along with questions of the orientation of third cinema to reconfiguring the power relationships in film, African film directors debated the model of the "auteur" filmmaker and whether that was appropriate for African independence. Instead, as Vieyra argued in an article on film and revolution in 1960, film had the capacity to lead people to see and say differently.[18]

The landmark film screened at Cissé's retrospective exhibition in 2005 at Cissé's request—Alain Resnais and Chris Marker's *Les Statues Meurent Aussi* (Statues also die) (1953)—was famous for its anticolonial sentiments figured

in film language. Commissioned by *Présence Africaine*, the film was part of a moment among the avant-garde in France when they began to seriously consider the formal qualities of African art and to take seriously their makers as artists. *Les Statues Meurent Aussi* nevertheless maintained the myth of the holism of African art. In its attempt to enliven the museified African art object by picturing the live native (black, male) body, it likewise transfers materiality and objectness to that body; it is a political subject in addition to an aesthetic object. Along with the rejection of European culture came a tacit appreciation for what Europeans and increasingly Americans took as a perpetual sacred status for African art. That is, one of the markers of innocence for outsider readings of African art was a suspension of disbelief over the power of the object, the made over the natural. It demonstrates the desire to place these objects back into a milieu, which takes them instead into a new media world of film, where context is manufactured into a flat space of discourse and light. The film claimed that the artwork could never be restored to its context, noting that colonial trauma had irreparably transgressed societal order and disrupted the most basic and stable relationships. In its piety, the film is iconoclastic itself, using splicing and montage to demonstrate trauma while using its narrative power and flow to demonstrate a return to order and aesthetic stability. But to date, there are few statements as strong as this film that describe the stakes of representing African art.

The third cinema scholar Edouard de Laurot's manifesto on prolepsis is striking when thinking about the stakes for *Yeelen* beyond what Cissé might have intended. De Laurot writes that film is "that which is not yet, but ought to be, is more real than that which merely is."[19] Focused on political futures, the prolepsis in *Yeelen* resides less within the story but more in the potentiality of materials and substances that precedes the actualization of an image. Making the film "about" light, *Yeelen* presents a matrix of possibility—but, only seen in glimpses through the haze of mediation, a reading that might also be found in Lelièvre. As he writes,

> In this way, one would find the idea of a cinema beyond all "subjectivity" and proceeding from an integral realism, a recreation of the world in its image, an image on which the hypothesis of the freedom of interpretation of the artist and the irreversibility of time. Beyond the Marxist (and third world) criticism of a European ethnocentrism, one would have to appreciate a criticism of anthropocentrism which would directly enter into correspondence with the very nature of the graphic cinematic medium.[20]

Yeelen resides between the made and the natural: the film is remarkable to the extent that it obviates the porosity of those designations.

Yeelen took three years to film because of setbacks that included dust storms that lasted months and made the crew sick, the unexpected death of the first actor who played Soma, and delayed overseas shipping of equipment and film stock from France. Filming *Yeelen* was constantly hampered by harsh atmospheric light (morning and late afternoon), which also affected how far Cissé could position the camera from the actors because of limited artificial lighting (ten to fifteen meters). He told Manthia Diawara, "This led me to create a mise-en-scene which was more convenient and realistic for the means I had in place."[21] Cissé also talked about *Yeelen* in terms of an overall vision that had to be amended according to the real conditions in rural Mali—all of this critiquing the notion of the filmmaker as auteur with a metaphysical artistic intention. This included Cissé's recognition and manipulation of the chemical makeup of film, which has been calibrated to detect and record white skin. The racial calibration of film was an issue that became more visible when it was widely reported that Jean Luc Godard allegedly publicly accused Kodak of racism when he started a project in Mozambique, though to my knowledge, no proof of his having actually said this exists. Inventing new ways to counterbalance institutionalized color calibration and chemical formulas required a careful engagement with atmospheric light—approaching it as if it and the film had their own subjectivity.

At the time *Yeelen* made its way through the festival circuit, the French critic Serge Daney noticed the expansive mise-en-scène of *Yeelen*. He wrote that *Yeelen* places its characters in a universe "not by aestheticizing the world but by immediately inscribing bodies in their environment. So well so that there are no drum rolls to accompany the movement from the 'natural' to the 'supernatural.'"[22] Location was key to the idea of medium as milieu: *Yeelen* was shot in what's called "the bright country," a region only a few degrees north of the equator that receives strong sunlight all year, and according to Bambara lore, the bright country is the place where the physical world is in closest contact with the spiritual world. Cissé spoke about the overall effect of this attention to place: "'Damu' is the Bambara term for the positive impression that is left by the sight of a person or a thing which stays in the heart and the mind for a long time. 'Damu' is perhaps what grace is. When you see a man living, you observe all that he is, all that surrounds him. When you understand him, you have to depict him with 'damu.'"[23]

Yeelen registers "all that surrounds" its characters with its treatment of sound, most of which can be characterized by what Friedrich Kittler calls "the

continuous undulations [of analog] as signatures of the real, or raw material" afforded by early phonographic soundtrack technology, a collection of atmospheric sound and silence.[24] In just one example, a tense scene with two warriors head wrestling for victory, the only sound we hear is the snorting and rustling of the warriors' horses. Two scenes have no dialogue at all, just a series of glances between characters. In between sparse dialogue in other scenes, we hear roosters crowing and wind gusts. When extradiegetic music is used, it is sparingly. The music was created by the French jazz musician Michel Portal and Malian musician Salif Keita, a fusion of electronic jazz and vocals characteristic of Mali, which subtly punctuates the visual evidence of supernatural power, such as in the case of the spontaneously combusting chicken.

This refers to the natural media, or media diaphana, depicted in the opening sequence of *Finye*. Like the rising sun visible only because of interferences, or haze, wind is only heard when it encounters resistance, like a tree. This Aeolian mode is that of such instruments as wind harps and wind chimes, and as Douglas Kahn writes, it "also erodes hard and fast distinctions between nature and technology, a categorical cavitation that can occur wherever movement is involved."[25] It also echoes the preconceptual "wind of the mind" that Wise writes about when discussing nyama. All are transductive processes, whether it is an Aeolian harp, a microphone, or "the wind blowing across telegraph lines."[26] *Yeelen* uses this precognitive space to also deanthropomorphize film, allowing animals, trees, and dust storms to make their own sound as the camera and especially the microphone seemingly passively record.

With film, it becomes a challenge to indicate sound as a method of marking territory rather than its existence as a sign to be "read" alongside image—that is, sound as immersive or conceptual. In its inclusion of disembodied sound, *Yeelen* references the Komo use of masks that are purely aural and are both immersive and conceptual. Some of the masks are created with audible, modulated, but nonphoneticized voices: "these are generally masks that use the sound of various instruments (bull-roarers, flutes, horns, friction drums, etc.) and embody the perceptible presence of supernatural beings (as among the Bedik for example)."[27] Other masks are modulated voices using a kazoo and give long speeches. The culminating scene of *Yeelen* features a disembodied voice that makes the final declaration of guilt against Soma before he and Niananankoro are destroyed. It is unclear whether the characters hear the voice, but its origin is nevertheless tied to that of the dueling Korè wing and pylon. In this most "supernatural" of scenes in *Yeelen*, where the Korè also flies through the air via basic filmic special effects. The suggestion is that there

are manipulations of the senses that have been used to influence behavior since time immemorial.

If film is the first mechanized medium to unify sound and image, *Yeelen* also obviates that fact by using sound whose causal identity is obscure, a historical element of African artistic practice. Alexander Fisher writes that as part of the spare sound elements in the film, Cissé uses a mixture of mechanical and electronic instruments. One recurring sound throughout the film indicates otherness: "the flute chord aurally resembles a product of nature (the wind), produced outside of the control of humans."[28] The nondiegetic music is a mixture of synthesizer-based music that was experimented with in the early 1980s and which was part of the postproduction of *Yeelen* in Paris. What is produced at the moment of the chicken's immolation is a synthesized version of a wind instrument: a futurist rendering of an ancient method of instrumentation. Such techniques had already been employed in the electronic music scene and movies with special effects. In the culminating scene, we hear a few different sounds that accompany the screen whiteout. First is pulsing wind sound, followed by a piercing high-pitched noise. It is then broken by a loop of the rooster fire noise we heard at the beginning of the film. At the end of the squawk, the high pitch descends into a full whistle reminiscent of a boiling teapot. It was probably achieved using an early modular synthesizer that also handled another sampled sound reminiscent of thunder that comes just as the screen turns white. The "thunder" sample could have been created by blowing directly into a microphone diaphragm. In fact, all of the sound effects in this scene and others are made by transducing some physical or mechanical sound into electronic signal or playing the signal itself.

In *Finye*, as in *Yeelen*, the elemental aspects of media are set against their amplification. While the opening scenes of *Finye* suggest Aeolian and natural sound, Cissé at times contrasts it with various methods of its use in "artificial" mediation, such as a scene that opens with a loudspeaker that carries a political speech. Other scenes dramatize the amplifying effects of marijuana, depicted with prolonged, slow-moving close-up shots of the characters. All of these references to amplification are set against the opening of the film, which presents a naturalism embodied in the young boy who presents himself to a man. The wind operates metaphorically but is rooted in the original act of mediation, where earth sounds and signals are perceived within the milieu of the social. Cissé focuses on the aurality of original, "natural" mediation, in part because it is the best proof of the invisible medium that carries messages. Cissé claimed that he wished the audience to have freedom with the film; he

engineered a type of intellectual, "cool" participation based on the viewer's background. Even the rare show of emotion from Nianankoro in the final scene between his father and him is created with a curved tracking shot that conspicuously avoids a frontal zoom in on the character's emotional affect (see plate 1). That is to say, the unmediatedness of *Yeelen* is carefully constructed.

The Classical Avant-Garde and African Esoteric Thought

This proximity to nature, the operational fantasy of an unmediated art, is what initially drew European researchers and artists to Mande territory; the interaction between European researchers, artists, and the Dogon became foundational to the development of the historical avant-garde in France. The moment of the confluence of ethnography and art was the Mission Dakar-Djibouti of 1931–1933—a set of ecstatic descriptions of the trip lives on in the surrealist journals *Documents* and *Minotaur* and Michel Leiris's *L'Afrique fantôme* (1934). This expedition was an important confluence of artists and ethnographers, whose work focused heavily on the medium of language as explained to them by key Dogon interlocutors. Marcel Griaule's books *Masques Dogons* (Dogon masks) (1938), *Dieu d'Eau* (*Conversations with Ogotemmêli: An Introduction to Dogon Religious Ideas*) (1948), and *Le Renard Pâle* (*The Pale Fox*) (1965) became instant classics, not only because they were striking and rich literature but also because they presented such an elaborate and seemingly comprehensive legend for decoding art from the region. The uniqueness of the books was their contention that the Dogon "know and have analyzed all the facts, beings, and things which surround them; like others, they have attempted to make a synthesis of these."[29] This insistence that the Dogon and related peoples were intellectual beings was, sadly, unusual for the time. In all of the stories that Griaule told by way of Ogotemmêli and others, the blacksmith was the key ancestor, the civilizing hero, and the intermediary between man and God. Indeed, in any telling of this cultural complex, even ones that directly challenge Griaule's accuracy, the blacksmith maintains his status from being the possessor of nyama. Griaule writes, "The originality of [Dogon] thought lies in the fact that it postulates a series of correspondences . . . grouped in categories that can be broken up and linked together."[30] The relationship between signs, objects, plants, insects, games, and rituals—really everything—relies on a classification that is "decomposable" and "flexible," according to Griaule's literature. An idea of the medium of language in West Africa emerged from these encounters that would see language

as a creative act rooted in the *real*, which was posited as the Other of modern languages, which were figured as merely profane vehicles of meaning.

Griaule was somewhat carried away with his work, with many critics noting that *The Pale Fox* was a work of literature and not of science: a result of his own synthesis or even imagining of knowledge. A seismographic moment in this repositioning of the literature was Walter E. A. van Beek's 1991 article "Dogon Restudied."[31] The very feature of Griaule's work that made it so infectious was what van Beek used to undermine his work: that it was unverifiable and made too many interpretive leaps. The biggest issue, though, was that Griaule's findings relied too heavily on one informant, Ogotemmêli. Those things that Ogotemmêli told Griaule would be extrapolated to cover too large an area, the Sudanese cultural complex. Further, van Beek tells us that Griaule's theory is not even consistent across his own major publications. "Thus," van Beek writes, "even if we restrict ourselves to Griaule's work, we have not one Dogon ethnography, but three."[32]

Van Beek then enters into the very tricky territory of esoteric knowledge with his criticism, as well as the ways we can contextualize ethnology as a discipline. He acknowledges that some of the conflicts he detects in Griaule's work are due to the fact that symbols can be read on many levels depending on one's position within the society, their level of learning, and the level of integration from one village to the next. His problem, then, is that Griaule makes it too simple for us. Similarly, the publications that have taken Griaule's work as sui generis have continued the mistake by presenting too stable a picture of the relationship of art, ritual life, sacrifice, and everyday life. Van Beek's findings that argue that Griaule's work could not be replicated are summed up in several points. They undermined the most cherished aspects of Dogon religion still used around the world as interpretive tropes for Dogon art. Among those five are that the Dogon do not know a creation myth, astronomy is of little importance to them, symbolism is "restricted and fragmented," and Dogon society is not pervaded by religion.

The fourth claim was made that "the crucial concept of nyama, allegedly 'vital force,' is irrelevant to Dogon religion. The etymologies given in *Dieu d'Eau* and *Le Renard Pâle* are not retraceable and seem highly idiosyncratic."[33] This issue of nyama was addressed in the many heated responses to van Beek's article, including Mary Douglas's, which stated, "If the Dogon really do not have the concept of nyama (impersonal force) or any equivalent, how do they talk about the efficacy of magic and prayer?"[34] Indeed, the question of the valence of nyama strikes at the heart of philosophy in Africa. Christopher

Wise writes, "It is difficult if not impossible to discuss the Mande term *nyama* without subordinating it to Greek metaphysics," and Griaule was the seminal figure in attempting but ultimately failing to distinguish the two.[35] This impossibility of translating not just terminology but conceptual structure was part of the drama of this region and its spaces of contact throughout history.

However, it was the dream of many filmmakers that the particular combination of moving image and sound would finally provide the slippage needed to evoke certain ideas without having to literally translate them. For some, film could focus as much on the conception and translation of what appeared in front of the camera as on the reception by an audience that would enter a space suspended from the requirements of cultural specificity. Griaule's colleague, Jean Rouch, was taken by his own notions of West African culture, developing his theory of "cine-trance," in which he held that film could alter the viewer's consciousness in much the same way masquerade and trance did. Rouch attempted to do what his surrealist colleagues did: to bring film to the status of a medium always in flux, to eliminate the subject/object dichotomy in favor of art that emphasized perceptual process over representation. Rouch writes, "When I saw my first possession ritual, I was confronted with something I could not understand. For the first time in my life, I saw a dialogue between human beings and the spirits. And I thought of the 'possession' experiment of [the surrealist poets] Breton and Elouard. And from the very beginning, I said, 'There's only one way to study that, it's to make a film."[36] In other writings and interviews, Rouch distinguishes his films from "straight" documentary work, aligning himself in certain respects with the pioneer Russian filmmaker Dziga Vertov. His job, as he envisions it, is not simply anthropology. In his "visionary" words for the medium of film, "The dreams of Vertov and Flaherty will be combined into a mechanical 'cine-eye-ear' which is such a 'participant' camera that it will pass automatically into the hands of those who were, up to now, always in front of it."[37] Vertov was known for his experimental films that drew attention to the medium of film itself. Flaherty, considered one of the "fathers" of documentary film, made *Nanook of the North* in 1922, the first feature-length film of its type. These two filmmakers represent the two figures alive in Rouch's work, especially *Les maître fous*. Rouch's desire to "enter" the Hauka ceremony through the mechanical eye accepts the mandate to present good ethnographic information while maintaining a measure of self-consciousness about the medium through which it is apprehended.

Rouch's utopian prediction is the natural fruition of a filmic process where the mechanical eye melds with the human eye to the point that the camera

"perceives." Rouch anticipates the time when the "instant replay" of recorded image will create a democratic space of representation, where "the anthropologist will no longer monopolize the observation of things. Instead, both he and his culture will be observed and recorded."[38] Manthia Diawara's film *Rouch in Reverse* may seem to be the fulfillment of the latter prediction, but Rouch's (and Breton's) longing for the confluence of perception and representation is a surviving dream of modernism. Rouch was clearly enchanted by what the surrealists would call the "marvelous" in the spectacle of possession. His method and medium, for him the only way he could study the ritual, were similar to surrealist methods of inscribing/describing the marvelous. For the surrealist artist André Breton, the marvelous may be illustrated by a mannequin, which is both animate and inanimate, or the uncanny double of the human subject that disrupts subjectivity.[39] For Rouch, it was the sight of "possessed" men mimicking British colonial officers; they were at once familiar and strange. When circulated, Rouch's film becomes a sign in itself, no longer Rouch's act of perception but the representation of the Hauka spectacle, which is when it was declared to be racist and politically dangerous depending on the setting. Such is the impasse that the surrealists always encountered with their work: perception gets frozen into representation and thus upholds the distinction between subject and object but also reveals the positionality of the artist in the first place. Much has been said about the agency of the Hauka evidenced by their subversive mimicry of colonial power, most notably by Michael Taussig, who asks:

> Is this bizarre colonial conjunction of the man with the movie camera at the midpoint of the twentieth century a beguiling confirmation of Benjamin's "history" of the mimetic faculty—that strangely "dialectical-image" point in time that colonialism brings into being, wherein the mimetically capacious person, as possessed by the Hauka, meets the mimetic cripple blessed with the mimetically capacious machine (the movie camera), the one receiving an electroshock, the other, a ban?[40]

The ban refers to the fate of *Les maître fous* in Ghana, its punishment for mimicking British authority. The electroshock refers to Rouch's statement that a practitioner of trance should never see himself on film in a trance—a statement that reveals Rouch's belief in the practitioner's belief, one that could be threatened by a "real" image that transformed experience into an object. Sembène and Cissé were both suspicious of Rouch's work, regarding it more as ethnographic film that, at its worst, treated Africans as "insects."[41]

This collaging of marvelous reality "out there" as a primary component of the dialectical image was, as James Clifford argues, only possible with colonialism and its crossing of geographic, cultural, and political barriers. "Cultural reality was composed of artificial codes, ideological identities and objects susceptible to inventive recombination and juxtaposition: Lautreamont's umbrella and sewing machine, a violin and a pair of hands slapping the African dirt."[42] This "semiotic" principle that Clifford argues operates in the scholarship of Griaule and his compatriots was part of the same logics followed by black revolutionaries in Paris from the early to mid-twentieth century. Thus, the direct relationship between journals like *Documents* and *Présence Africaine* presented African filmmakers with a seemingly impossible choice as they went about their work. One sees the attempt to realize this type of relational world at work in *Yeelen*, where symbols and signs are strung together in associative chains. This would be the ultimate in a nonmediated immanence of film, where the filmic substance (light) becomes one with its linguistic conventions. This opens to the possibility of its becoming African in a way that the space is unmarked by conventional methods of identification. Indeed, by invoking (but not naming) nyama as the correlative of film, *Yeelen* bypasses the dangers of subordinating nyama to Westernism.

Cissé consulted the Malian historian Youssouf Tata Cissé for the project of *Yeelen*, who was his contact with community elders whose permission was asked to film more sensitive scenes that reenact Komo incantations. Youssouf Cissé wrote many works on the history and ethnography of oral cultures in Mali. He cowrote the widely consulted work on Komo religion *Principles of the Initiation Society of Komo* (1972) with his mentor, Germaine Dieterlen, previously Marcel Griaule's collaborator. Youssouf Cissé's work sharpened some of the contours of analysis that were dulled by the European romance with West Africa; he is careful in his discussion of how the Komo signs work and the fact that they are deployed in sacred situations and not by everyone. Some are compound ideograms but all can be connected back to the elements of air, water, fire, and earth. For instance, the sign for wind/air (*vent*), the title of *Finye* (1982), in Dieterlen's legend, is an elemental image; that is, it is not a compound ideogram but the simplest form (see plate 2).[43] In the estimation of both Dieterlen and Youssouf Cissé, Komo language is not a neutral carrier of meaning. They write of a "resonance" in Komo language that comes not only from the meaning but from the "vehicle" itself that at times even acts against the desired meaning of the user. The rendering of the ideograms is part of the process of learning

1.7 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Bambara ideogram for "wind" on lower right root of the tree, among other sacred communications and objects in the Korè shrine.

its logic and an important part of their ritual potency. Such is the treatment of ideograms in *Yeelen*, beginning with his idiosyncratic representation of the compound ideogram for the title of the film, "light." Souleymane Cissé chose to animate the graphic, rendering the line that designates the sky pointing down, the earth pointing up, and a vertical line drawn down to unite the two realms (as well as bisecting their angles), as the ideogram for *Yeelen*. The simple white line appears against a black background, and the process lasts no longer than two seconds. In essence, then, *Yeelen* creates another ideograph possible by not just a novel form but also the ability to animate its process of inscribing.

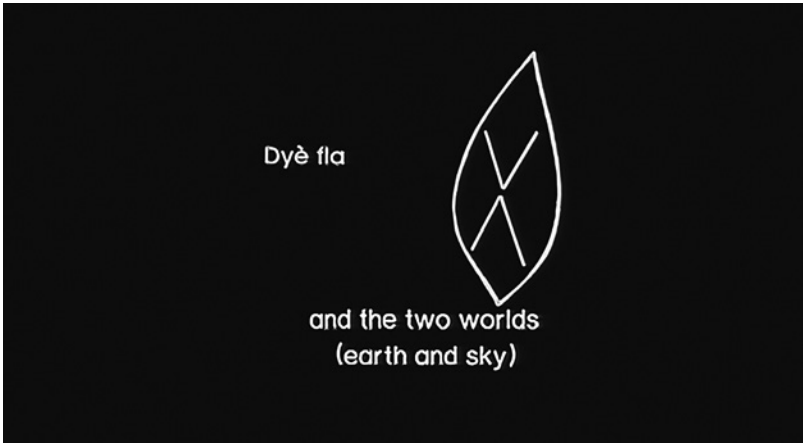
The 266 signs of the Komo are a ritual language, one described by Youssouf Cissé and Dieterlen as being somewhat like a prayer, calling for something to be enacted. The number 266 roughly corresponds to the gestational period in days for a human. All 266 ideograms belong to a web of "natural signs" that tie occult or esoteric knowledge to objects, substances, human and nonhuman bodies, and implements. When Michael Taussig asks us to "imagine living in a world whose signs are natural," he refers to logic systems where nature is full of signs

1.8 Film still, *Yeelen*, directed by Souleymane Cissé (1987). *Yeelen* opens with an animated graphic where he demonstrates the writing of his symbol for *Yeelen*: an angle drawn with the apex pointing down, then inverted; then a bisecting line unites the two and bisects them: first stage.

1.9 Film still, *Yeelen*, directed by Souleymane Cissé (1987). An angle drawn with the apex pointing down, then inverted; then a bisecting line unites the two and bisects them: second stage.

1.10 Film still, *Yeelen*, directed by Souleymane Cissé (1987). An angle drawn with the apex pointing down, then inverted; then a bisecting line unites the two and bisects them: finished ideogram.

1.11 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Pictogram showing the two angles in the pictographic version of the term *Dyè fla*, or "the two worlds" in Bambara, or, as Dieterlen and Cissé explain, the lower world and the world of the future.



to be read.[44] His larger point is that there is no separate sphere called "nature" or, thus, the supernatural, which makes it difficult to find approximate terms to describe how Komo language functions. In their relationships with the whole system, the symbols suggest the possibility of unseen causation. They become, in the parlance of media studies, extensions of man: not metaphysical but rather associative and approximate to the basic elements of air, water, fire, and earth. For Souleymane Cissé to introduce *Yeelen* with the Bambara script is a charged act, which sets it apart from most cinematic projects. Again, it signals to us that the film will be seen *through* Komo concepts; it sets forth a hermeneutic.

To build a film around Komo image-signs is a different endeavor than what Sergei Eisenstein argued in relation to film and ideograms in his 1929 essay "The Cinematographic Principle and the Ideogram." But there are correlatives in the way that both Cissé and Eisenstein desire an indexical, or more direct, function for film language. Eisenstein writes, "From separate hieroglyphs has been fused—the ideogram. By the combination of two 'depictables' is achieved the representation of something that is graphically undepictable."[45] On the naturalness of this activity, he writes, "The shot is a montage *cell*. Just as cells in their division form a phenomenon of another order, the organism or embryo, so, on the other side of the dialectical leap from the shot, there is montage."[46] This essay was remarkable in proposing montage not only as the logic behind filmmaking and language but also behind forms found in nature. He repeats this understanding in his essay "A Dialectical Approach to Film Form," writing of the tension between artistic purposeful action and "organic inertia." Eisenstein argues, therefore, that the driving force behind nature is collision and destruction. Behind all of this, on which he would expound in other writings, is purpose and unity.

Cissé's use of the ideogram in both films departs from the dialectical "collisional" understanding of film language and explores instead how processes of signification multiply on themselves "organically" and semirandomly in ever thickening levels of associative knowledge—a process not unlike the addition of charged fluids on sacred objects in Komo practice. And overall, *Yeelen* bears out the logic set out at the opening of the film that Komo script by nature is not inert but regularly asserts itself in its interface with humans. In the unfolding story of *Yeelen*, language belongs to the trees, charged substances, the animal and human world. Cissé's use of Komo as his structuring logic profoundly deanthropomorphizes film.

It is useful to compare *Yeelen*'s use of Dogon pictograms to Djibril Diop Mambéty's *Touki Bouki* (1973). In the much remarked-upon love scene be-

tween the two protagonists, Mambéty filmed the woman's hand grasping a metalwork Dogon cross that is strapped to the back of her lover's motorcycle as she makes love to him (see plate 3). Her hand and the cross are foregrounded against the pulsing ocean in the background. Many have commented on the "veiled" eroticism of this scene, what is usually read as a method of getting around censorship. However, although there are no explicit images of the two bodies making love, the erotics are explicitly channeled through the Dogon cross, a pictogram-cum-object. For a Dogon language so thoroughly invested in potency and life force, the scene is not veiling the lovers' sexual intercourse but rather gesturing to the extraindividual perpetuation of society.

Nyama and Filmic Light

Yeelen and *Finye* turning to the natural media of light, air, wind, and water also refers to the four basic elements in Dogon mythology. Even here, we cannot be sure that the recording of such knowledge came from early European and Dogon scholars' desire to link these concepts to analogous ones in Greek philosophy in those encounters—a "common language." The buildup to the final light scene is a series of references to the apparatuses through which we perceive such abstract concepts and substances. Throughout the film are found references to the ways in which light is detected and used: it is a film in many ways about optics. In an early scene, Nianankoro divines the truth of his father's intentions when he sees a reflection in a bowl of water that he spits into: a technique that diviners use to activate a different register of vision. The Korè wing and pylon both bear refractive crystals that are also seen on the forehead of the Komo anthropomorphic sculpture. The refractive crystal, incidentally, is not found in Bambara art; this was Cissé's addition and draws attention to the modernist development of optical glass to control light that gave rise to cinema. Similarly, light is seen in many registers and usually through the semidiaphanous dust-filled wind or atmospheric haze. The rising sun, for instance, is only depictable impeded by the haze of atmosphere, given the properties of the sun and the camera (eye) both. *Yeelen* not only depicts nature, what Lelièvre suggests as ecocriticism, but also allows nature's media substances to register themselves on the lens of the camera and membrane of the microphone. Thus, not only are we privy to the previousness of such media as wind (and, by association, air), light, and water, but we watch them functioning within film; they operate alongside the film medium. One could

1.12 Film still, *2001: A Space Odyssey*, directed by Stanley Kubrick (1968). "Dawn of Man" sequence wherein early hominids discover technology with the sudden realization that a bone can be used to hammer, thereby becoming a tool of dominance.

say, indeed, that the entire film is about technology and power, addressing the matter of how to approximate undepictables, such as light and nyama/power. The blacksmith cult was the technologically advanced population in West Africa in the period of the film. Cissé's work does not, however, celebrate the past of Africa as containing a once great class of technologists, but rather because of his mise-en-scène, it speaks to a baseline understanding of technology and what it is in each historical moment.

Cissé was especially interested in Stanley Kubrick's *2001: A Space Odyssey* (1968)—a tale of technological black boxes and their ambivalent relationship to what is figured as an emergent human species. *2001* was a film that meant to rely on nonverbal communication, a universal filmic language. It is precisely this invocation of a species and its first encounter with a black box in Kubrick's sweeping epic that Cissé undercuts as primitivist cliché. One short scene in *Yeelen* contains what I read as a subtle parody of the "Dawn of Man" sequence that opens *2001: A Space Odyssey*, particularly the scene in which a primate discovers that a bone can be used as a weapon and tool. After having a near religious encounter with a tall "monolith" (a black box), the primates retreat, and a single ape forges out on its own. It observes the sun peaking from behind the black box and then looks down to the pile of animal bones before

1.13 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Nianankoro hammers bone that he has rendered into an amulet with hidden power.

it, considering them. To the three trumpeted notes of "Sunrise" in Richard Strauss's *Thus Spoke Zarathustra*, the primate makes the first work of technology by realizing a theretofore hidden function for the bone, pounding the bone and crushing an animal skull in dramatic slow motion; the film then cuts to a falling live animal, the symbol of nature. The oft-quoted film still of the scene is of the primate raising up its thin hairy arm holding a thigh bone: the scene shot from a low angle, ape body against the sky.

Yeelen also features a bone as tool, but one with a critical difference: the bone becomes an amulet that is hammered into the earth with a tool forged by a blacksmith, an ax, to activate its full (hidden) power. We have seen a similar ax being forged in an earlier scene in *Yeelen* that is set near the Korè shrine, where Cissé has given us a close-up shot of the blade still glowing with heat (see plate 4). Nianankoro fulfills the Peul king's wish for him to cast a spell on his enemies to prove his loyalty by creating a medicine packet to insert into the middle of the thighbone of a horse after writing a symbol into its interior with charcoal, a common practice of including charged writing inside an amulet: language that remains hidden. He then takes the bone, binds it up, and hammers it with an ax into a large termite mound. The camera is at a slightly low angle and uses similar lighting as the "Dawn of Man" ape shot but from a distance; the unclothed Nianankoro lifts his arm to hit a bone that shatters as it is embedded into the earth—the sun and bone horizontally related within

1.14 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Nianankoro writes charged Bambara ideograms into the bone using hot charcoal in order to activate the spell.

the shot. Instead of a dramatic gesture, however, Nianankoro uses the precision of an engineer. The spell works and Nianankoro is hailed as a hero for his prowess as a sorcerer. The technology Nianankoro developed was functional, though archaic, operating by a different philosophy of energy, potency, and mystery. Obsolescence, of course, was a concept that was prevalent in media theory of the 1960s and matched up with the message of the "Dawn of Man" sequence: its signifier was commonly, generically, Africa. Cissé calls attention to *2001: A Space Odyssey*'s work with/as Hollywood in formulating a clichéd depiction of Africa and Africans, only now concerning technology.

This scene in *Yeelen* signals a declaration of independence from the by-then-dominant configuration of cinema, a machine that in many ways referred to itself in each film it produced. Referring to Kubrick's famous match cut of the tossed up bone/weapon with the orbiting weapons satellite three million years later, Janell Hobson writes, "Far away from planet Earth—the last view of which was of our ape ancestors—this technological divide is one of social and cultural 'evolution' in which the hierarchical order of white masculinist imperial power gets naturalized."[47] Naturalizing power was, of course, one of Hollywood's most enduring legacies, especially during the Cold War, even in what was considered liberal cinema. While the literature on *2001* vigorously debates whether the match cut signifies a divide or a continuation from "Africa," *Yeelen* activates prolepsis via the history of technology in Africa. In

this particular scene of *Yeelen*, our attention to medium shifts back to a localized specific object that is both tool and weapon, all dependent on the shift in perception of the bone as a latent tool—that is, possessing characteristics beyond what is visible.

The setting apart of two Africas in the respective "bones" scenes in *Yeelen* and *2001* is not just a matter of amending the content of what was shown or the representation of a generic Africa. Rather, Cissé's unique handling of the materials of film—siting in the bright country, minimal electric lighting, and field-like recording—produced an African film that would "naturally" be different. In *2001*, the footage from Africa was transferred to a scenographic image that was front projected onto screens on a sound stage in London. This corporate approach to film is why a contingent of film historians distinguish early cinema from Hollywood. The "Dawn of Man" scene is about Africa but not in Africa; it is in Hollywood. It is no longer the diaphanous medium or milieu but one of the many technological innovations of a mise-en-scène that *2001* achieved with its massive budget. In contrast, Cissé makes clear his intimacy with the process and the materials and its sitedness. *Yeelen*'s special effects are rather distilled into the simple irrealities and surrealities possible in film and found in other, some earlier, artifices. One scene uses a simple reverse motion in postproduction to illustrate a dog and albino man, two symbols of the supernatural power in much of Africa, walking backward to indicate they are under the spell of Soma (see plate 5).

Cissé's various methods of stripping away all but the basic functions of film, including gesturing toward the avoidance of the early avant-garde film's dialectical montage, culminate in the final scenes of *Yeelen*, where he eliminates the contours of signification and brings us to a baseline of film's apparatus. *Yeelen* does so within the confines of the narrative, which suggests that his real object of inquiry is how to represent nyama through film's conventions of sequential pictorial narrative and the substance of light. This reinforces what has been often said about *Yeelen*, that Cissé's "disavowal of [the invisible cinematography] in *Yeelen* reminds the spectator of the act of looking-at-the-camera-looking-at-the-pro-filmic-event," which "refuses to allow the spectator any kind of narcissistic identification with the protagonist."[48]

Cissé couldn't maintain the vérité of film and not address the lens itself as born of mixed Western and African philosophy of "reflection." He accesses the mythical time of the thirteenth-century Komo tale as a way of bringing his viewers (African and non-African) to a time of light before the lens or the screen, before the typical moment given for modernism. And this would have

been a facile act if he had not suggested its overcoming in the last scene, where light makes both nearly irrelevant. If we understood light in these frames, its substance, to be a priori, this substance would act as a grounding *real* that underlies all expression and communication. It would be outside of the realm of philosophy; it would approach a nonphilosophy. *Yeelen* does not go that far. The five-second pause in imagery is just long enough to be remarkable but not long enough to undermine the film's narrative. It does not evoke horror or dread. Instead, the five seconds of light live alongside all of the other depictions of light in the film: fire, the sun, reflection on water, and refracting crystals. It is rather like an abstract painting that depends on the edges of the screen to have its iconoclastic gesture be registered.

Nyama and light share some of the same problems of visuality in its approach to the undepictable. Cissé is not André Bazin, arguing for an essence of film, nor necessarily for a light-like philosophy that enhances understanding or reveals a hidden meaning. What it shares with nyama, the five-second duration of light, is closer to what McNaughton likens to electricity, or a fluctuating force that at times relies on its own obscurity. Film is built on this dualism of catoptric and dioptric light, or that which we see through (the sunrise and crystal) and that which reflects light (water and light scene). This dioptric luminosity is part of the cinematic experience and finds a corollary in the closing nondiegetic remarks by the disembodied voice of the wing of Korè, when he promises the Soma's death "will be luminous." This same phrase is spoken earlier in the film by a man wearing a hyena mask in a tree looking down on Nianankoro, a masquerade associated with the Korè blacksmith cult and the ability to transform into a reviled animal for the purposes of warning. Luminosity occurs in part because something is impeding light from passing through. *Yeelen* reveals the duality of the light in film. In the shot where nyama is released onto a white screen, all interference that is signification in film is removed, and the two light sources of the film projector and screen face one another in their dual functions of light, reflective and refractive. I, the body that occupies a space in between, am bathed in light.

TWO ELECTRONIC SOUND AS TRANCE AND RESONANCE

Trance mediumship and technological mediation are coextensive.

If light was framed in film as both material and immaterial, recorded sound emblematizes the idea of the nonlocal, there and not there: demonic. One scholar described sound art and its precursor, musique concrète, as being "devoid of causal identity," isolated as a sensuous object.[1] This "acousmatic situation" was made obvious by recording technology, but the natural logic of its development has been questioned by scholars who argue that the phonograph or tape recorder materializes ancient theories of acousmatic experience like Pythagoras's lectures behind a veil.[2] That is, the technology follows on the theory already in existence that sound can be removed from its source to be considered on its own, an aspect of aural masquerade. The wire recorder technology is born of the same technological realizations that made possible radio transmission; both use oscillation to facilitate electron induction. Both register and fix the flow of electrons. A further development, mass radio, which sends voice waves along with a low-frequency signal, is then decoded within the radio receiver. Instead of radio pulsing a signal to be decoded, the oscillations inside of the radio tube created an "electron stream," experienced sensuously and able to travel great distance.[3] Therefore, for voice to be heard in an unbroken transmission, it first had to be abstracted from the body and then reattached to the frequency of a wave that was strong enough to cover the distance: this is what is called modulation in radio.

This idea of abstraction, of occluding source, might seem to go against the idea of media primitivism, an orientation to mediation greatly attuned to sources and origins. However, it was the belief of many media practitioners that only by isolating sound from its visual counterpart could one present the possibility of reaching the essence of sound, waves striking the ear as the moment of perception. It is a method of listening that promises a pure experience, something that was attractive to many artists working in the very chaotic milieu of Cairo in the buildup to global war, who looked not to Pythagoras but to underground ecstatic performances that, they had assumed, were assuredly, authentically Egyptian. If sound was primary enough to be universal, the methods for its uncovering were culturally specific, but also of secondary importance. Halim El-Dabh put them together in one gesture, one artwork, that is now understood as being a foundational work of electronic music. It is difficult to put into words what I hear in Halim El-Dabh's *Ta'abir Al-Zaar* (Expression of zaar) (1944). A succession of haunting female voices, some overlapping one another, rise up as though they were attempting to mimic a ghostly sound. There is no background noise, just a reverberation so saturated as to make any outlines of a voice impossible to detect. I hear in *Ta'abir Al-Zaar* something radically different than what I do in his later work *Leila and the Poet* (1959), which has sharper sonic edges, a type of narrative progression, and a 1960s "experimental music" sound. *Ta'abir Al-Zaar* does not sound experimental to me; it sounds old and new at the same time. I hear "voices" that could also be flutes. Their echoes fold in on each other and, toward the end of the two-minute recording, reach a pitch so shrill that it can only be described as microphone interference. There is no discernible structure to *Ta'abir Al-Zaar*, and what sounds like a loop about halfway through might be that, or it might be part of what I know to be the original performance: a zaar ceremony in Cairo in 1944 that El-Dabh recorded. And that's the problem: almost nothing about what I hear in *Ta'abir Al-Zaar* correlates with what I know of how it was made. I say "almost" because it is possible that I am not fully examining my own listening. Perhaps this lack of correlation can be explained by my familiarity with the language of visual over sonic description.

The larger problem is that my listening cannot replicate the kind of listening that was activated at the time *Ta'abir Al-Zaar* was made. And historically, the genre of electronic music and sound art was part of an effort by artists and musicians to challenge both vision as the privileged sense and the burdened and distracted listening that I have described here. But while this particular use of electricity to move sound belongs to the modern period, the notion of veiling sensation's causation has a long history. Electronic music is similar to

practices of trance and possession. Both posit that sound can be removed from one place and become present within another. Both have specific techniques to achieve that movement and to make known the importance of the movement, the transmission. The philosophy at work in zaar is not one of a mysterious disembodiedness but rather of forces that remain outside the ability of the human apparatus to control. *Ta'abir Al-Zaar*'s conceptual universe does not include the notion of loss of an original or a removal from context in reproductive media but rather a full embrace of the multiplication of instances of performance.

Assembling indigenous genealogies of art practices also found in Europe was important to artists and musicians in Egypt in the 1940s; it was a global phenomenon. But the genealogy of *Ta'abir Al-Zaar* was never established because El-Dabh did not consider the work to be very important, and it did not gain much traction in the art scene at the time. As El-Dabh's work turned to more classical composition in the United States, his early electronic work fell out of the oeuvre. However, in 2007 *Wire* magazine ran a short article declaring Halim El-Dabh's *Wire Recorder Piece*, the widely available adaptation of *Ta'abir Al-Zaar*, the first work of electronic music. It replaced Pierre Schaeffer's work; Schaeffer, a French musician and theorist, began his work on musique concrète using a tape recorder in 1948.[4]

In 1944, El-Dabh (1921–2017), a Coptic Egyptian from a prominent family, borrowed a wire recorder from the studios of the Middle East Radio station in Cairo and took it to an all-women zaar, or spirit possession, ceremony in another part of the city, where as legend has it, he snuck in, dressed as a woman in a headscarf. El-Dabh later clarified that he was found out and willingly let in by the woman controlling the session, even becoming a recipient of a healing ceremony. The resulting piece is the end point of a series of manipulations and modulations El-Dabh performed on the original recording, performances of the wire that were recorded onto magnetic tape back at the radio station. He moved walls in the studio to change the reverb, modulated the voltage with various tools, and intensified the echo effects of the original recording and eliminated the drumming. El-Dabh added various other interruptions in the flow of magnetic charges on the strip of wire. Because it was created almost entirely during postproduction in the studio, using both wire and tape recorders as instruments, *Wire* was correct in declaring *Ta'abir Al-Zaar* the first work of electronic music.

However, Halim El-Dabh's electronic music is ill fitted for the history of sound art or experimental music as it has been told thus far, despite some of the moments where it possibly could have been integrated—such as during his time at the Columbia-Princeton Electronic Music Center (CPEMC) in

1959–1960 and his volatile professional relationship with the avant-garde dancer Martha Graham, which would ultimately fall apart. Although El-Dabh had a tremendously productive career, mostly in classical music and composition, his work with electronic music, especially his important and perhaps precursor work to Euro/American musique concrète, has not been contextualized within early experimental work with electric recording devices. In this chapter, there are two genealogies that I will write together: the wire recorder as manifestation of technological (and militaristic) hearing/sounding and the zaar practice and its philosophy of animation and performative embodiment. Both zaar and the wire recorder are mechanisms through which foreignness as such is postulated, animated, and then normalized (or recontextualized). Scholars postulate that zaar exists as a response to slavery, modernization, migration, and general situations of social ostracization, for women primarily. If foreignness is the condition of abstraction (removing something from its context), then a new convergence or contextualization is set into motion with zaar—this is what El-Dabh wanted from his work with the wire recorder. *Ta'abir Al-Zaar*, in its manipulation of a machine made as a medium existing between performances, controls time and sense perception. In its reperformance, its condition is amplified sound that becomes a new sound—the sound of the medium itself. That is, both the zaar ceremony and sound recording gesture to the possible reconfiguring of causation, or to at least make it the central point of consideration.

Ta'abir Al-Zaar opens up the problem of historicizing media art, an art without a country, a nonplace. The nonplace of media is based on the foundational narrative of removal, and the Cairene avant-garde art scene or Egyptian nationalism cannot serve as the sole art historical context; media art implies a departure from those things. Cairo is still a major center for new media and sound production in contemporary art, developing within an oft-times contradictory mix of state support and state repression and censorship. In this case, *Ta'abir Al-Zaar* presents more of a problem of genealogy than context, as it linked up to specific concepts of removal, or spirit possession as a method of performing disembodied sound. For El-Dabh, purity is not something to be realized, as Schaeffer claimed, but rather it is something to be performed as a suspension of disbelief; it is an event. Further, it is clear that one of the "distancing" effects of El-Dabh's music involved his performing his own difference in the United States and enhancing the ways that he was received as an artist of Egyptian descent. That is, if he indeed speaks of his work in terms of prevailing information and sound theory, which he did, his articulation was overtaken by a type of "noise" of what the audience saw as his "culture," including Martha

2.1 Halim El-Dabh with a reel-to-reel tape machine (ca. 1950s).

Graham, who El-Dabh thought was only interested in his music because of its exoticism. And El-Dabh, it should be said, always encouraged that type of interpretation, even embraced it in the production and circulation of his work.

El-Dabh's work has been historicized as neither sonic art nor electronic music, because of where it happened and also because he did not theorize his own music in the same way as did the French musician Pierre Schaeffer and later musicians like John Cage. The history of electronic music most often begins with the 1949–1951 advent of Schaeffer's musique concrète and so-called acousmatic sound. This particular history includes what Liz Kotz writes of John Cage: that he understood best the relationship of what was mapped on the magnetic tape as able to replace a score.[5] And though El-Dabh and Cage were friendly when they both lived in New York in the 1950s, Cage made the jump from pure sound to text in the moment of conceptual art, and historians like Kotz relate his sound art to a textcentric conceptualism, something totally absent in El-Dabh's work.[6] In fact, El-Dabh's disinterest in connecting conceptual art

and experimental music is one of the reasons his work until recently was absent from the record of midcentury sound art and experimental music. *Ta'abir Al-Zaar* was exhibited in a gallery in Cairo in 1944, but there seems to be little done to argue for it as an artwork at the time, since his concerns were more in the realm of classical music as he grew into his career. When he made *Ta'abir Al-Zaar*, he was a student at the Szulc Conservatory in Cairo.

Nevertheless, the similarities among El-Dabh, Schaeffer, and Cage are striking. Schaeffer and Cage seized on recording technology as a musical instrument. Cage's important realization was that recording technology was not only reproduction but was also source. El-Dabh had a similar realization when he attended the Congress of Arab Music held in Cairo in 1932 and saw recording technology used for the first time in conjunction with the performance and construction of Pan-Arab music. In later years at the famed Columbia-Princeton Electronic Music Center, El-Dabh collected sounds (field recording), filtered them and added reverb in the studio, and created from that a length of tape that he hung on the wall in his studio. El-Dabh's biographer Denise Seachrist narrates his process: "The magnetic tape, as a material, became a process in and of itself. Sometimes he scraped the tape with razor blades to eliminate the metal oxides, on which sound is encoded; the elimination of the oxides created new and unusual sounds as well."[7] The techniques that El-Dabh used came from his realizations about sound in 1944, similar to Pierre Schaeffer's a few years later.

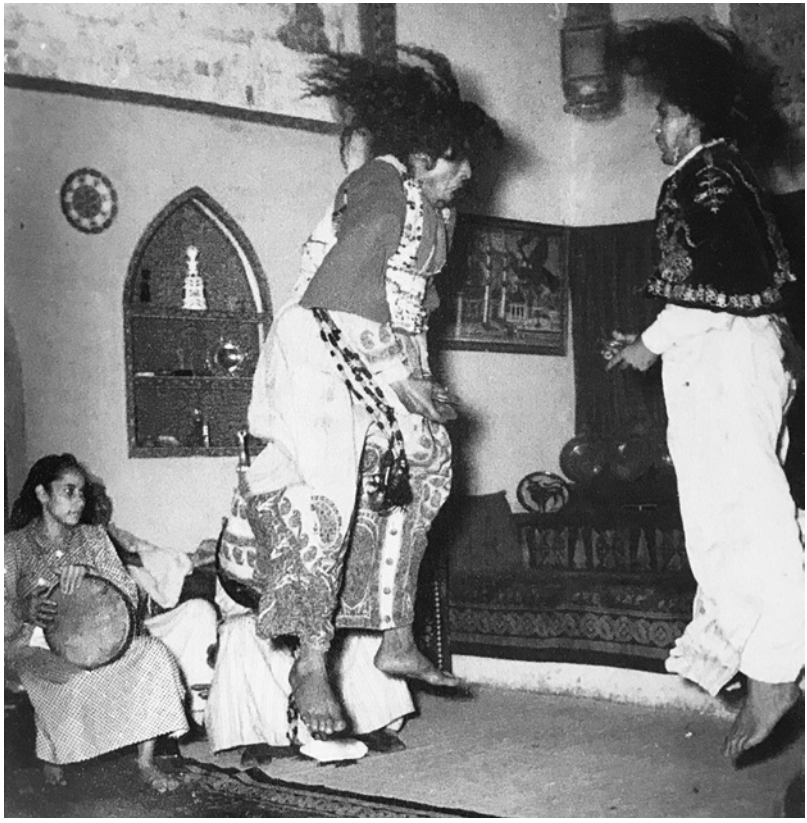
El-Dabh was geographically well positioned to be the first electronic music musician/artist, as the wire recorder arrived in Egypt during World War II. Indeed, he possessed magnetic recording technology before Schaeffer because he was in Cairo, which was, in the 1940s, a site of a World War II–era political maelstrom. Though independent in name, Egypt was still a de facto British veiled protectorate, having to submit itself to Allied forces as a base for the region. In 1944, the streets of Cairo were flooded with parades of paramilitary Blue Shirts, right-wing Green Shirts, Italian fascist sympathizer Black Shirts, and the Muslim Brotherhood.[8] The country was flooded with newly developed objects of war technology, visual art and musical theories, and ideas about the future and which ancient past would be included. Fascist sentiment arose during the decade of the 1930s; the Congress of Arab Music was convened by King Fouad, whose antidemocratic practices were seen as dangerous when viewed with a growing international fascism in the fine arts. In 1939, the journal *al-Risala* became a platform for visual artists to debate the notion of liberty and surrealism in art, responding to the Nazi "Degenerate Art" exhibition in 1937.[9] In spite of, or perhaps because of, this environment on the eve of World War II, the number

of independent art groups increased as the debate grew over what constituted Egyptian art.[10] The type of futurism and surrealism that Egyptian artists developed at the time was linked to Europe but was also part of a mix of ideological positions.

Ta'abir Al-Zaar was exhibited/heard at the Young Men's Christian Association (YMCA) in Heliopolis in 1944.[11] A global organization by then, the YMCA was a fee-based club that sought primarily to bring Christians worldwide into the fold and secondarily to provide cultural and community services. In Cairo, the YMCA thrived despite the growing Islamic nationalism. The attempt to integrate into the community so as to be taken seriously by locals was indicated by the director during the time that El-Dabh was affiliated; in 1946 he wrote that the YMCA "has been changing from an American institution into a truly Egyptian Association," which was surely reporting meant to shed the best possible light on the director's own efforts.[12] Nevertheless, the YMCA held classes, concerts, readings, and other activities and purported to turn over control of the local chapter to Egyptians, purposefully opening up to political speech in a country rife with censorship and practicing what the organizers thought was direct democracy and gender equality in the face of what they understood as an inflexible government. The library was stocked with 4,000 books, 1,500 of which were provided by the Division of Cultural Relations of the U.S. State Department. They were supplemented by a good deal of Arabic-language books so as to avoid the appearance that the YMCA was a medium of Western propaganda.[13] El-Dabh was nearly a fixture there, later being asked to represent Egypt at the centenary celebration of the YMCA in Cleveland in 1951, one year after he arrived in the United States to study at the University of New Mexico with support from a Fulbright grant.[14]

Thus El-Dabh's circles were always already full of expatriates. The organizations he frequented had the pretense of being apolitical, most likely distinct from the radical political art scene that was gathering momentum in the 1940s. In response to fascist futurist elements in the visual art scene in Cairo, the "Art and Liberty" movement embraced tenets of European surrealism and violently rejected the words of the Italian futurist Filippo Tommaso Marinetti in a talk he gave as a representative of Mussolini's government in Cairo in 1939.[15] Turning their attention rather to the working conditions of Egyptian laborers, the Art and Liberty group's rejection of bourgeois culture in Egypt came in the form of their investigating a folk culture that could not be mistaken for romantic Pharaonic nationalism, emblematized by Mahmoud Mukhtar's *Nahdat Misr (Egypt's Reawakening)* (1920–1928). Instead, they turned to the plight of everyday citizens, the *fellaheen* (peasants), whose culture was

2.2 Mahmoud Mukhtar, *Nahdat Misr (Egypt's Reawakening)* (1920–1928). Photograph by Alex Dika Seggerman of public sculpture in Cairo, Egypt.



2.3 Sufi *dhikr* at the Maison des Artistes, Darb el-Labbana, Citadel (early to mid-1940s). Reproduced in Bardaouil, *Surrealism in Egypt*.

being sacrificed for the sake of a technocratic and "rational" modernization of Egypt. They would fully embrace Sufic and other types of trance and technologies of the body that would lead them to connect with the subconscious. The group also embraced these practices, tactics of a politically radical surrealism, because they belonged to the lower classes of the city.[16] As Sam Bardaouil found in his research on the group, the Art and Liberty artists entered into trances and painted all night, burning the work in the morning.[17]

The plight of the "folk" would in the next decade move the architect Ramses Wissa Wassef to build a weaving workshop in Harrania outside of Cairo for the purpose of remediating those whose rural existence was threatened by the encroaching city and its industrialized labor. The workshop encouraged children especially to gather and learn a spontaneous type of weaving (without

2.4 Photograph of the filmmaker Peter Davis at the Ramses Wissa Wassef Art Center filming Zenab Badawi on the loom (1961).

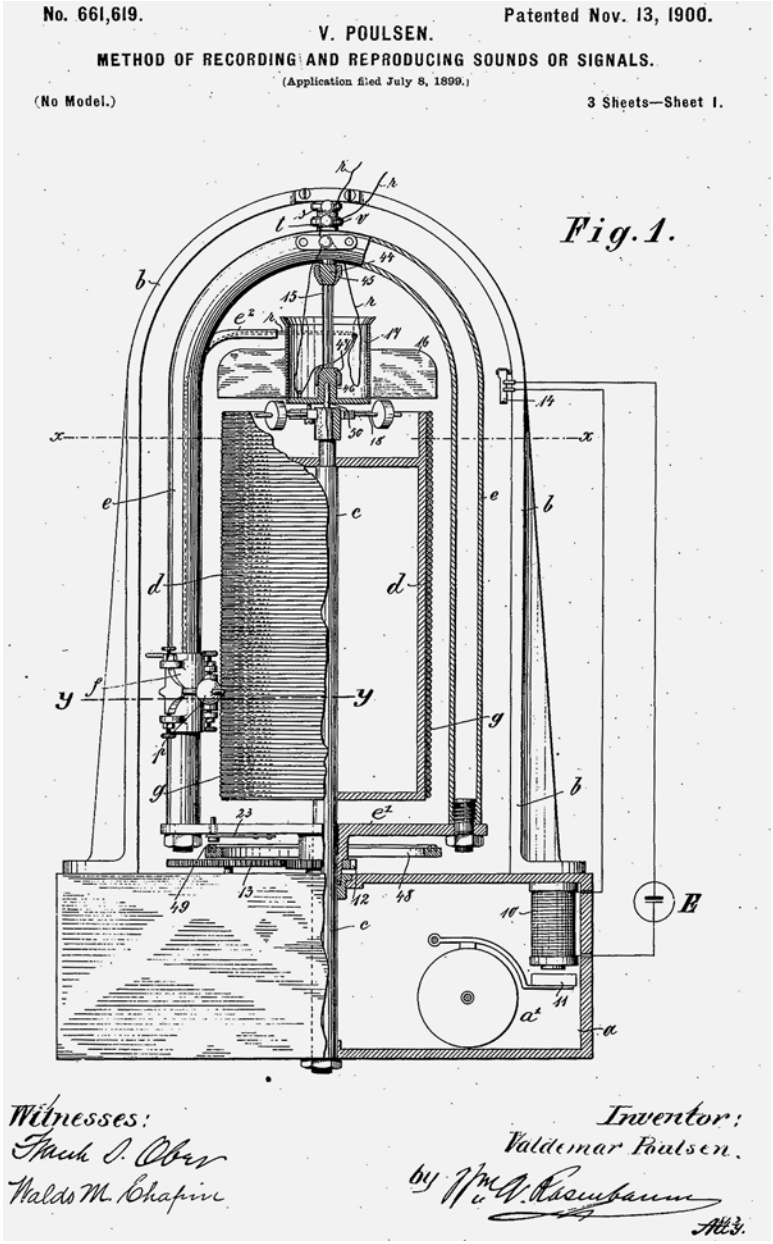
a pattern or design) that, according to Wissa Wassef, would build the self-determination of these youth by engaging their creativity and problem-solving skills while also supplying a living: in some cases the most lucrative for the participant's extended family. It was a type of model that the Egyptian scholar Magdi Wahba noted could be adapted anywhere in Africa, Islamo-Arab and black brought together by such community-based projects. In a publication dedicated to the emancipatory potential of art in 1976 that reprinted an essay he wrote for UNESCO, Wahba writes, "This integration of the arts into what can loosely be called 'life' is very much part of the general philosophy of the arts which has flourished in Egypt over the last thirty years or so. Hassen

Fathy's world-famous experiment in building the village of Gourna in Upper Egypt is another illustration of the desire to return to the roots of a culture without sinking into the pitfalls of folklore."[18] For Wissa Wassef and others like him, the embrace of community was both essentialist and revolutionary. There were always elements of cultural fetishism at work, but often that fetishism was done willingly and consciously for the purpose of new methods of self-determination. This "return," or self-primitivism, was particularly important at the end of World War II, as artists critiqued nationalism by referring to generalized spiritual references that were, as Alex Dika Seggerman argues, "neither clearly religious nor secular."[19]

El-Dabh had a similar interest in the folk, but not necessarily as a revolutionary artistic and political force; his work and statements at times repeat orientalist tropes. He was a romantic and mapped a type of disembodied experience onto cultural difference, emphasizing his own difference later in the United States. In addition, he was less interested in the internal and singular methods of sound making but instead repeated his belief about the dialogical and connective external existence of sound, sound that filled the universe. El-Dabh's own narrative of his entrée into electronic music contains a confluence with these various technologies: his work as an agricultural administrator for the state that allowed him to travel all over the country and collect music, his first witnessing of recorded sound at the 1932 Congress of Arab Music in Cairo, and the proliferation of radio stations before their state consolidation in the 1950s. All of these are contexts of change that are both natural and radical. As an agricultural administrator, he was part of the massive changes in Egypt that altered the chemistry of crops with pesticides, and at the same time he also experimented with a metal-on-metal sound deterrent for beetles that were attacking the crops.[20] That is to say, El-Dabh was an in-between figure. He moved around the worlds of music, visual arts, and even film, sampling methods of ordering a world via sensuousness.

The Wire Recorder

The wire recorder was the object of choice for both recorded music and sound-based tactics of war. It was an immediate and short-lived predecessor to the magnetic tape recorder and in use from the early 1900s but became a widely available and portable product from about 1940 until around 1945. Operating similarly



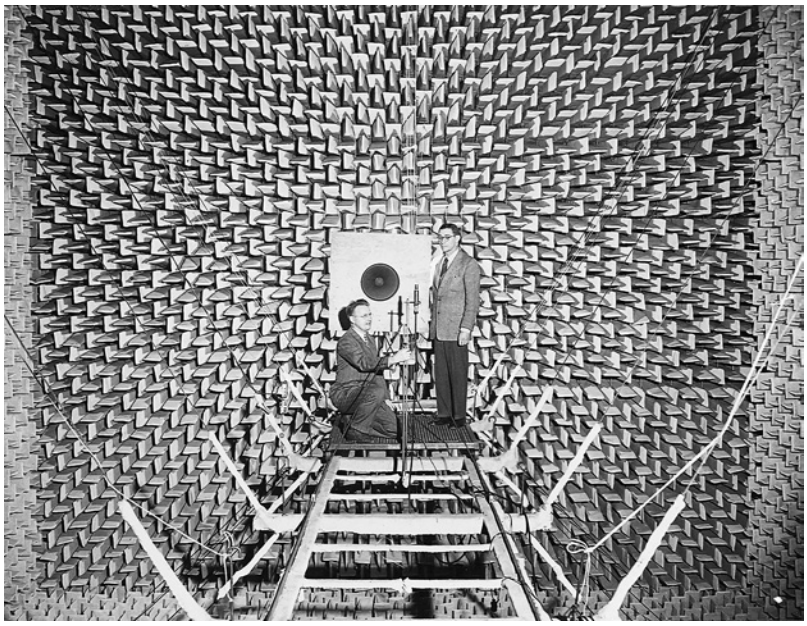
2.5 Figure 1 of U.S. Patent 661,619 by the Danish inventor Valdemar Poulsen: the first magnetic recorder. Issued November 13, 1900, by the U.S. Patent Office.

to cheaper magnetic tape, the wire runs past the magnetic head, which two components both record and play back magnetic charges. Magnetic recording was not new; the Danish inventor Valdemar Poulsen produced what he called a telegraphone in 1899. It was based on new theories of magnets that, at the time, defied common understanding of magnetism. Manipulating the different behaviors of magnetic charges, their pulling and pushing of voltage, there would be many more iterations of the wire recorder until its obsolescence in the 1950s. In a typical story of how technology intertwines both perceptual habit and business practice, Mark Clark and Henry Nielsen write of the time lag that magnetic recording experiences, given that the telegraphone was invented in 1898 but not commercialized until the 1940s. They argue that Poulsen and his collaborators were using a "telephone frame of meaning" for the technology, which led them to create a disastrous business plan.[21] Poulsen, once called the "translator" between the technological and the economic spheres, simply wanted people to be able to leave a message if their phone calls went unanswered.[22]

Wire recording accompanied the invention of broadcast radio and its use of the transmission tube that replaced the electric pulses of Morse-code transmission. In a way referring to this history, El-Dabh was not broadcasting from/in the Cairo radio station, but he was using the continuous flow of the electromagnetic field, which is the technology of broadcast radio. It would form one of the classic distinctions obtained between analog media and digital, continuous flow versus pulsed, discrete signals. But which wire recorder El-Dabh used is unclear, if the date that he gives for the work is correct. Commercial wire recorders flooded the global market by 1948 but were very difficult to obtain in 1944. When I interviewed him about a year before his death, El-Dabh had trouble recalling the exact model of wire recorder he had used.[23] He did recall that it weighed about thirteen kilograms, the size of a portable device. In determining likely models, it was either the portable version made by Armour Corporation during the early 1940s and used by the U.S. military or one made by the inventor Semi Begun and manufactured by the C. Lorenz Company of Germany. The latter choice is more likely, as C. Lorenz's machines were also bought by radio stations across Europe, including those that operated in Egypt.[24] The wire recorder history is one of networked inventors and developers who worked on both sides of the Allied/Axis divide. The Armour Corporation, part of the Armour Research Foundation (now the Illinois Institute of Technology [IIT]), was the first to transition out of military work to selling licenses to over a dozen production companies in the country.

The wire recorder became a critical tool of tactical practices developed by the U.S. Army's Ghost Army. Glibly referred to by some as demonstrating the "art of war" because of its mimetic trickery, the Ghost Army's job was to recreate the sound of invading and retreating troops as well as artillery fire—all using the wire recorder. The spools of wire were then taken to the field, mostly in France, where they were projected from loudspeakers mounted on the backs of trucks to be overheard by the acoustic spies of the Nazi forces. Using the basic power of electronics to fundamentally change sound, not just to remove it, opened the way for a deceptive practice appropriate for war. Hilton Howell Railey, a failed actor turned journalist, was asked to lead the army's "sonic deception" efforts.[25] In addition to creating dummy troops, the army created inflatable tanks and equipment in order to complete the deception that occurred within the realm of what Kahn calls the two public senses of sight and sound.[26] The team used various means of recording tank and artillery sound using phonographs in Massachusetts, taking care to avoid the Doppler effect of a tank passing by. They then used some of the first sound mixing techniques to combine the sounds and rerecord them onto the spool of wire.

The wire recorder was preferable to the phonograph, since the phonograph needle could skip when they were out in the field, which would reveal the deception. In a once-classified propaganda film on the Ghost Army that can be seen now in part on YouTube, the army explains that the wire recorder is much less cumbersome than gramophones.[27] To test the recording and playback without the enormous volume of sound being heard by the public, the military constructed an anechoic chamber to play the recordings over five-hundred-pound speakers.[28] The chamber that was developed for U.S. Army sound deception was the same place John Cage visited in 1951, where he claims to have been inspired to create *4′33″*. After the war, the same technology entered the realm of the traumatic and the personal effects of political events. Using the recorder achieved a fidelity that, for some, was beyond what was achievable in the visual domain. David P. Boder recorded 109 survivors of the Nazi death camps in 1946 to affirm the existence of those yet alive; to demonstrate the porous threshold of death using the sense of hearing to arouse a specific, perhaps more potent, affective response. *I Did Not Interview the Dead* transcribed over 120 hours of interviews with the survivors.[29] Boder introduces the project in terms of the importance of a different perceptual mode of recording the effects of war, writing "while untold thousands of feet of film had been collected to preserve the visual events of war, practically nothing had been preserved for that other perceptual avenue, the hearing."[30] Boder does not expound on this "different



2.6 Testing a loudspeaker in the anechoic chamber, Harvard University (1943). Harvard University Archives, UAV 605.270.1, box 8 (SC178).

mode," but as a teacher of perception psychology at IIT, he studied the types of memory corresponding to each sense perception. Boder's decision to transmit the archive by way of a book instead of reproduced recordings is at odds with his introduction, where he implies that a difference exists between the visual and the audial in determining whether this database is read as evidence or something else. At the time, a fellow psychiatrist in the field reviewed the book and found it lacking in methodology, writing that "it is not scientific study but propagandistic efforts at arousing emotion."[31] At the time of the archive's digitization in 2010, a historian remarked about the work again in terms of fidelity, writing, "In the transition from sound recording to writing, the interviews lost the very dimension that the wire recorder had so clearly accentuated: neither the quality of the voice nor the immediacy, speed, fleetingness, or duration of the testimonies could be captured in writing."[32] In his insistence by the title of the book that the recordings were meant to preserve those who avoided being obliterated by the machine of death, Boder nonetheless suggests the brink and the near futurity of death, those voices that did not survive and whose presences live in the testimony of their companions, or proxy voices.

Boder's and the U.S. military's experiments with the wire recorder illustrate early uses of portable recording technology that would shape what was understood by "field" recordings and "field" research, demonstrating also the range of disciplines (war, psychology, anthropology, etc.) where such terminology would be important. It was in the assembly of a context, artificially missing after its extraction, where the field had to be reconstituted. The obverse of recording technology was the radio transmission *into* the field as a way of territorializing colonial spaces and establishing a sonically familiar space for European expatriates, a practice much remarked on by scholars in recent decades. It is possible that the wire recorder used for the initial field recording of *Ta'abir Al-Zaar* was imported to Cairo by the Marconi Company, whose presence accompanied the explosive growth of radio stations in Cairo. Sawa El-Shawan Castelo-Branco compiles sources that indicate over a hundred amateur radio stations existed between 1924 and 1934, despite attempts by the government to gain control over the airwaves.[33] In 1934, the Egyptian government moved to control the airwaves and inaugurated the Egyptian State Radio Broadcast Station to clear the waves of conflicting broadcasts and multitudinous ads. In 1934, the Egyptian State Radio Broadcast Station partnered with the United Kingdom's Marconi Company to provide logistical services to the station. Egyptian State Broadcasting operated two stations, one for locals and one for expatriates that broadcast in French and English.

Sensuousness and Sound

The technological aspect of Egyptian modernism was a wholesale shift in the relationship between the sensuousness of sound and the believability and integrity of broadcasting as it penetrated both official and nonofficial sectors of the airwaves. El-Shawan Castelo-Branco indicates that it is difficult if not impossible to determine the level of saturation in the early days of radio transmission, noting that by late 1939, the number of receivers in Egypt had reached over 86,000.[34] These numbers may have been boosted by the period before state control over the airwaves, in that amateur stations gave the power of transmission to many Egyptians, thereby indigenizing the medium. Some of this history echoes the theorist Franz Fanon's narration of how radio became naturalized in Algeria.[35] He argued that the phenomenological experience of radio changed from "sharp, cutting sounds" (noise) to intelligible and important information (message) as soon as Arab North Africans heard Pan-Arab

anticolonial broadcasts, many of which were beamed from Cairo. Fanon's historicist critique of phenomenology led him to carefully describe the stakes of the "corporeal schema," namely, the unequal freedom that the black body has in relation to the white when moving throughout the world. Fanon is careful to refer to radio as a "technique," one aspect of phenomenology that allows an analytical suppleness to link it to other, supposedly nontechnological sonic practices. Magdi Wahba similarly notes that radio became the predominant medium used, noting the anxiety of scholars about developing countries skipping over "stages of development" past the printed word because of its stimulation of critical thought.[36]

The historical or cultural impact on what the phenomenologist philosopher Maurice Merleau-Ponty calls "reciprocal transfers," the realm of bodies interacting in a particular setting, does not seem to have concerned El-Dabh in his selection of the zaar ceremony for the source of *Ta'abir Al-Zaar* but rather its technique of sound the women practiced. In fact, I often wonder, when I listen to the piece, whether he was attempting to strip the sound of its cultural specificity, registering its otherness as indistinguishable from his sonic manipulation: art as alterity. For El-Dabh, the concept of the acousmatic, insofar as acousmatic suggests detachment from a visible source, had particular purchase, as a musician who was well versed in the many ways that detached sound had been philosophized across the African continent.

Finding and determining sonic purity precludes perceptual (embodied) or cultural specificity. The most common criticism against Pierre Schaeffer involves his claim that the sound object is conceived only when completely isolated. He writes, "I have coined the term *Musique Concrète* for this commitment to compose with materials taken from 'given' experimental sound in order to emphasize our dependence, no longer on preconceived sound abstractions, but on sound fragments that exist in reality, and that are considered as discrete and complete sound objects, even if and above all when they do not fit in with the elementary definitions of music theory."[37] That is, Schaeffer suggests that not only can we isolate sound into a thing unto itself but also that doing so was prior to pure listening. No longer were sounds necessarily attached to notes, which were then composed into music. This purity reveals Schaeffer as a modernist/purist, expressing a desire of his to make something discrete that was always already a technological assemblage or socially predetermined. In fact, it is telling that the more assemblage-like the technology of sound became, the more obsessed with purity that sonic artists such as Schaeffer became, as if they had to ignore the entire apparatus to create the fantasy of pure object of sound.

One of the critiques of sonic purity concerns the preconditioning of technology by philosophy. Brian Kane takes up Michel Chion's argument that "modern audio technology does not create acousmatic experience; rather, acousmatic experience, first discovered in the Pythagorean context, creates the conditions for modern audio technology."[38] Kane ultimately disagrees and attaches it instead to the Romantic tradition, which I will discuss shortly. Both authors nevertheless puzzle over which is a priori: cultural context and philosophy about sound or the technology of sound. A similar argument exists in *Ta'abir Al-Zaar*, which hovers among Western mythology (Pythagoras), the Romantic tradition, and zaar mythology—all of which posit a sound and/or energy detached from a visible source—and El-Dabh certainly was aware of all three. Neither zaar nor Pythagoras necessarily led to an atomization of the sensorium—the splitting of senses into observable units—but, rather, trance and Pythagorean practices of sound both created a space of play for "antinatural" acts of recontextualization.

El-Dabh's second major electronic music work was made after he moved to the United States, *Leila and the Prophet* (1959). He had been invited to work at the Columbia-Princeton Electronic Music Center (CPEMC) by Otto Leuning and Vladimir Ussachevsky along with other musicians from Japan, Turkey, and Argentina.[39] He was supported by a Guggenheim fellowship (1959 and 1961) and two Fulbright awards (1950 and 1967). These grants were developed as part of a Cold War strategy by the United States to encourage soft diplomacy of just the type that El-Dabh's music represented. In 1951, the CPEMC was the first center dedicated to the production of what was then called "tape music." In 1958, it expanded its purview to be a laboratory for "electronic music," and El-Dabh was an early prominent experimenter with the RCA synthesizer alongside the more mathematically minded Milton Babbitt. El-Dabh released eight works in 1959 alone. Most of his work was done in 1959, a productive time when El-Dabh met regularly with other students and faculty of the CPEMC and performed at the Five Spot Café in Greenwich Village. He recalls: "Dancer Yuriko Kikuchi, a member of the Martha Graham Dance Company, told me after the concert: 'Your music hit me in my stomach, so I had to scream!' In general, I found that most people, even Martha Graham, didn't look favourably upon electronic music. Few thought of it as a way to create serious art. However, *Leiyla and the Poet* has apparently inspired many electronic composers and popular musicians including Frank Zappa and the West Coast Pop Art Experimental Band."[40] This description of CPEMC in its setting and overall reception at the apex of the New York art scene speaks to

the difficulty that electronic artists, especially an African electronic artist, had in being recognized as serious artists rather than as eccentric outliers.

Leila and the Prophet is a duality of referential and nonreferential sound and more clearly than *Ta'abir Al-Zaar* relates cultural and sonic "otherness." The title refers to the Persian and later Pan–Middle Eastern tale of Layla and Majnun, which dates to seventh-century Arabia. The romance story contains references to obsessive love as a form of spirit possession, with Majnun being the epithet of someone possessed by jinn. *Leila and the Prophet* was composed and recorded among a group of disparate musicians who were brought together to experiment with electronics and ostensibly to expand its cultural purview. El-Dabh recalls, "In my own work, most of which I did in 1959, I brought international instruments such as oud, tabla, Ceylonese drum, bamboo flutes, and also my own speaking, chanting and singing voice, both in my own language and in English. To these I added sine waves, square waves and white noise, and treated all of the sounds with various filters, methods of layering the sounds, loops and voltage controls, as well as the Philips Black Box and, while working on a collaboration with Otto Luening entitled Electronic Fanfare, the RCA Sound Synthesizer."[41] The mixture of mechanical and Aeolian instruments with oscillators and effects of the studio set El-Dabh's work apart from much of the work at the CPEMC. His practice entailed collecting and exploiting as many musical instruments as he could, for archival purposes but also to expand the sample set of recorded and by then synthesized music. This interplay between instrument as an Aeolian or analog tool of sound and the recorder as introducing secondary effects is fully realized in *Leila and the Prophet*. It belongs to a late 1950s and 1960s practice at the CPEMC of transcoding "real" sound into both recorded and synthesized form.

While experimenting at the CPEMC, El-Dabh recalls that he started to understand the universe as being full of sounds of all types and that they were a force, perhaps the animating force of the galaxies. In a fit of panic over this realization, El-Dabh screamed at Otto Luening, his mentor at CPEMC, "Hey, if you don't watch it, I know this place is going to fly. . . . The whole building is going to end up in space."[42] After being reassured by Luening that he would notify the government about his concerns, El-Dabh went on with his research; Luening, from then on, kept a safe distance. El-Dabh's statement could be registered as one of paranoia, of an overworked artist in a moment of panic. It could also, however, be read as an expression of a philosophy of sound: sound as a resonance in "a larger energetic environment" that recording media could only glimpse.[43] El-Dabh would later write of his experience of a

festival celebrating Moulid in Cairo in 1980: "Ululations and cries of jubilation continued to swell and engulf everything around them. The voices increased in volume, expanding until their intensity compelled me to cry out in a state of mixed hilarity and awe, 'There is enough human energy here to build the pyramids!'"[44] Distancing himself in a manner similar to Luening, the editor of the *Middle East Journal* was compelled to note in a forword to the article that El-Dabh's writing was "outside our normal style" but that the author had "something worth saying."[45] Anticipating the eccentric artist/scholar performances of Sun Ra later in the 1970s, El-Dabh reasoned that the universe was full of such sound, and because it was outside the realm of human perception, it had a physical relationship to objects that humans could neither understand nor influence. Such musings rarely go accepted in art-academic circles.

El Dabh's work was influential on students of electronic music because it was distinct from what was produced at the CPEMC, specifically its "immersion."[46] El-Dabh wanted sonic processes to not only exist as pure sound but to cause a change in the recipient. Like zaar as "cure" or archive as symptom, he explains the sonic manipulation in an orientalist narration of the Nile in relation to *Ta'abir Al-Zaar*.[47] Made by acoustic and electromagnetic energy in the studio, *Ta'abir Al-Zaar* explicitly draws these into relationship with the dialogical energy of ritual performance. He recalled, "During the zaar ceremony, I was overwhelmed by the women's chanting voices accompanied by slow and fast progression in body movements, individually expressed. . . . The effect on me was magical—a sense of transformation that led me later to manipulate the recording to various intensities by removing the fundamentals of sound as well as using sound filters, echo chambers, and reverbs as well as voltage changes. I entered deep into their voices which led me to be part of the whole river Nile from which the healing deities were summoned."[48] In his mention of the "fundamentals of sound," we might understand El-Dabh to be referring to articulatory devices such as rhythm, syntax, or even musical notes. El-Dabh talks about his relationship to sound, which is both synesthetic and visceral. He told another interviewer, "My body feels it. That's how actually I can tell whether I like it or not. It's physical. The experience includes hearing, but I can also see sound, the different shapes, sounds and colours. Electronic music attracted me because I can actually see (representations of) the sound."[49] El-Dabh's interviewer likely inserted the "representations of," and I am not convinced that it should be there—in fact, the notion of sound as translated into verbal and visual representation has a long history that reaches back to the Enlightenment. Rather, El-Dabh often spoke of his experience of synesthesia, which

is the crossing and blurring of sense perceptions. The "common sense" that El-Dabh evokes in his statement reflects the work of early twentieth-century media artists interested in sensory crossovers, including Walter Ruttman's "visual music," which included sounds of hammers, sirens, voices, cash registers, and so on. El Dabh similarly collected sounds from his new home, New York City, fascinated by the sheer volume of sounds that existed. He was particularly interested in the sound of the subway wheels grinding against the tracks.[50]

El-Dabh was not interested in the distinction between vision and sound but rather spoke of engineering his work to follow the arc of an ecstatic event followed by integration: a therapeutic process. Further, he spoke of his process of manipulating sounds as being akin to sculpture, "taking chunks of sound and chiseling them into something beautiful."[51] Above all, El-Dabh was committed to classical music and composition, which makes *Ta'abir Al-Zaar* and his work at the CPEMC idiosyncratic in his oeuvre. In his commitment to composition, completion, and narrative, El-Dabh remained a classical musician: another reason he has not been folded into the genealogy of John Cage and conceptual (logocentric) art and sound. El-Dabh has composed over three hundred works, the vast majority of which are classical in style and subject matter. Most take up mythical themes sourced from all over the world.

El-Dabh's first witness of the wire recorder was when he was eleven years old and his brother took him to the Congress of Arab Music, where, in an early moment of the world music genre, Béla Bartók and Paul Hindemith presented their field recordings.[52] Bartók's interest in folk music globally was a type of musical primitivism wherein modern, notational music was defined against its Other. El-Dabh would follow Bartók and fashion himself both a musician and a technician who collected and preserved sonic diversity. He moved more fully into ethnomusicology with a Fulbright grant to North Africa in 1967 that allowed him to buy the newest portable tape-recording equipment. In fact, it was this trip that again prevented him from fully integrating into the New York scene, as he spent so much of his early career—indeed the height of his career—in Africa, collecting sonic practice.

The status of zaar as one of those "established" sonic practices to be collected is fraught. *Ta'abir Al-Zaar* is on the other hand a nationalist embrace of folk tradition corresponding to Egyptian modernism. However, at the time he recorded it, zaar was a tradition of cultural impurity that was quickly being eradicated from official national culture. From the 1930s through the 1950s, heated debates occurred in Egypt over the relationship of official culture to everyday and unsanctioned and ethnographically diverse practice. The question

of inclusion was central during the 1932 Congress of Arab Music. Meant to conceptualize Pan-Arab music with the performance, scholarly presentation, and, perhaps most importantly, recording of the music of the Arab world, the conference simultaneously raised questions of how to esteem Arab music using Western systems of musical notation and critique. Pan-Arabism is coterminous with recording technology. The encounter with European radio meant that "Arab" music could become erased within a dominant format, one that broadcast a culturally specific idea of music: that it was disembodied, predictable, and nonimprovised. In a common paradox of colonialist efforts to "save" folk music from disappearance, many of the musicians' names were not recorded, despite the voluminous amount of music that was recorded during and for the congress.

Modernism and Arab Music

By 1932, the urgent question of how Arab music should be recorded was related to determining what the bedrock features of Arab music were. It took specific bodily techniques to achieve a stable recording of what were live and public performances that were limiting to the techniques of the body used to produce most vocal music in Egypt. The acoustics of the recording studio and recording equipment were not suited to capturing the "extreme frequencies" of the performance, and the length of the phonograph constricted the amount of time a vocalist could improvise.[53] Ali Jihad Racy puts the beginning of the phonograph era in Egypt as 1905, reading from the ads that appeared in the newspapers in those decades. He writes that record stores sold all types of music, but local music was preferred. A typical ad "referred to about a dozen well-known performers by name, preceded by courteous titles of respect familiar to all Arabic speakers, as if the ad were a confirmation of the full respectability and grandeur of the performers now appearing as recording artists."[54] In just one example of the shifts in perception that took place because of the infiltration of radio, the Qur'an recitation at the end of the local broadcasts no longer had to emphasize the volume of the singer, as the volume control was no longer an aspect of live performance. El-Shawan Castelo-Branco explains that this all happened in an atmosphere of division over what should constitute Egyptian secular music on the radio, with two camps forming: one that supported integrationist and Western music and one for *al turath* (heritage).[55]

The congress of 1932 also debated whether Arab music should be standardized on the twelve-note scale or if musicians should use Western instru-

ments, something that Bartók advocated as a method of modernizing Arab music. The response by Arab scholars would characterize deliberations concerning the Arab *nahda* (renaissance), which was variously an anticolonial regionalism based on a selective borrowing of European musical conventions and a conservative nationalism that included demarcations of race and folk culture.[56] Both of these strands of anticolonialism (appropriation and rejection) concerned the focused listening brought about by recording technology and corresponded to the question of sensuousness versus meaning in Arab music. Racy cites Muhammad Fathi as arguing at the 1932 Congress for Arab Music that Arab music should integrate European instruments, as "Oriental" instruments were too emotive.[57] The Syrian composer Tawfīq Bin Fatḥallah al-Ṣabbāgh noted that the technical prowess of Western music was anathema to the emotive power of Arab music: a statement against cold, logical European music. Isolating sense perceptions through recording technology, that is, introduced new anxieties about losing the total experience of music. The anxiety was compounded by colonialist ethnographic practices that displaced the body from musical techniques and concepts. In order to expand on techniques of the body in Arab music, Racy elaborates on the prevalence of jinn in Pan-Arab discourses of modernity: for many artists, ecstatic possession became emblematic of creativity, feeling, and authenticity. For many Arab scholars, the ability to feel music was a condition of locality and, importantly, untranslatable. The ability to perform and feel Arab music represented nothing less than the perpetuation of musical aesthetics outside of the West.

In these same years, French phenomenologists debated the opposition between the Idea and sensuousness in music, developing the idea that sound could be split off from the source. Sublimating the *technē* after its initial embrace, Schaeffer and others studied the condition of pure sound to understand the state of pure listening. Schaeffer attempted to parse out a pure listening from a "thinking" listening. According to Brian Kane, Schaeffer's studies centered on "the sound object, which functions as an eidetic object, [and] is made sensually available in the *concréte* work."[58] Kane ultimately argues that acousmatic sound "is not tied to the Pythagorean legend or the baptism of the term *acousmate*, but to a tradition of musical phantasmagoria."[59] It is a compelling argument because it suggests that this type of perceptual purity is not conditioned by technology but rather from the occlusion of technology. It also suggests that there are multiple strands through music history that can lead to acousmatic sound, thus muddying the line between music, sound art, and things like electronic music. El-Dabh, who came to his electronic music by

way of a Romantic orientation to music, attended to the "bodily techniques" involved in reaching a place of intense attentiveness prescribed by Arthur Schopenhauer, which are key to perceiving the statement that "music as such only knows the tones or notes, not the causes that produce them."[60] The genealogy of such detachment was contested as soon as it was proposed, one clue that it was never only about the sound. Francis Bebey, another pioneer electronic musician, wrote that Léopold Sédar Senghor contested the novelty of musique concrète based on the "concreteness" of African music and longtime practices of disembodied noise masquerades, like the bull-roarer.[61]

In *Ta'abir Al-Zaar* the performance of the artificial object, the "made," is akin to the performance of zaar, which not only accepts the obviation of mediation but relies on a shared acceptance of it to enact a transfer of spirit (jinn). It does not simply require the suspension of disbelief but really a dismissal of the conditions under which disbelief would matter—a different relationship to evidence. Indeed, we might think of anthropology as being akin to what Bruno Latour calls the iconoclastic gesture, "the trick to uncover the trick."[62] A kind of distancing from proprietary purpose is required to "uncover the trick" of a wire or tape recorder and use it as an instrument. Sound without a visible cause was familiar to El-Dabh, who studied the many ways that detached sound had been practiced in North and West Africa. While the European avant-garde looked to Africa as a gesture of iconoclasm, the medium, for African artists, was already natural. There was, for the most part, no conflict.

Zaar

Zaar is a famously difficult practice to locate historically, and it is this resistance to codification that interested El-Dabh, as the practice was going underground in Cairo with modernization policies. In terms of the origins of zaar, most scholars posit that Ethiopian women taken into slavery overlaid zaar spirits and practice onto Islamic jinn philosophy in North Africa and the Middle East. In early literature, zaar is associated with dark skin color and/or foreignness. Zaar is also written as possibly one classification of jinn and usually afflicts women. Like jinn, zaar posits disembodied beings that can be good or evil and occupy the same space as humans but are free from the constraints of physicality. They occupy space but can relocate immediately and generally have more freedom than humans. Hani Fakhouri notes that it could come from Zara in northern Iran, from the Arabic word *zeyarah* (meaning "visitation"), or Ethiopia.[63] Fakhouri

recounts the common belief that Ethiopian slave women brought zaar into Egypt in the late eighteenth or early nineteenth century, but there is no way to confirm this. Its openness, its constant morphing, is part of the ambiguity and power of zaar. In Fakhouri's retelling of performances that he observed, for instance, there are spirits identified by various nationalities; thus, zaar is a way to cope with migrancy, movement, exile, and dislocation. Janice Boddy claims that zaar works as a therapeutic device, not necessarily to rid the zaar from the body, which is seen as nearly impossible, but rather to help the possessed cope with the possession's negative effects. Boddy writes that in Sudan, "the zar rite is a cultural therapy; its curative powers derive less from a virtual experience of trance than from the entire possession context that renders it, and countless other experiences, meaningful."[64] For Boddy, whose analysis agrees with much scholarship on spirit possession practices, the zaar ceremony recontextualizes.[65] Susan Kenyon writes of zaar in terms of the changes that come with modernism, a related concern to Boddy but broader. She concludes of zaar in Ethiopia, "Zar *is* modernization," a curious statement of equivalence that does not bear out in the rest of her article. Nevertheless, both authors attribute to zaar a type of inoculation against the unexplained and unseen effects of society. The softening of "shock" and illness has been a feature of Western modernist writings, particularly in mid-twentieth-century Germany, but it is a topic that has rarely been written of or about Africa outside of anthropology. This is no doubt ascribed to the prevailing attitude that non-Western acts are unintentional, while European surrealist and Dada trance practices were read as intentional, ironic, and/or conceptual primitivism. But this estrangement is key to both the proposition that sound is an object—intentional—and that modernism changes "native" life.

At the time of *Ta'abir Al-Zaar*, the zaar ceremony was indicative for some in El-Dabh's elite class in Cairo as a cultural plague, practiced by lower-class women. In 1936, the Egyptian economic scholar Eva Garzouzi wrote:

> [Zaar] contradicts religion, and government officials are trying to suppress its very occurrence. Being one of the very old customs, it has lost, with the advent of modern times, much of its former popularity, and, as a matter of fact, it only owes its existence at the present time to some very emotive, bigoted women of the lower classes. These women are so primitive that they are led to attribute any more or less serious ailment that may befall them to the action of inhabitants of the underworld (*afarit*, as they call them). . . . It should be added, however, that to the educated Egyptian lady the Zaar means nothing more than an insipid ordeal practised by illiterate narrow-minded women.[66]

Such statements were typical of the educated cosmopolitan elite in Cairo. Note the dismissal of the practice based on the accusation of mistaken causality and bad religion, like the accusation embedded in the term *fetishism* or *myth*. Egyptian nationalism was fraught with anxieties about race, class, and gender, with many white Ottoman Egyptian elites threatened, as Seggerman writes, "amid ascendant indigenous nationalism."[67] Like the Egyptian surrealists, El-Dabh was fascinated in primitivist fashion by such provincial and cross-cultural mystical and musical practices across Egypt; it was what he considered the best thing to come of his time as an agricultural minister for the government before his status as a full-time musician. Coming from a prosperous Coptic family, El-Dabh had a freedom of movement that was available to elite male Egyptians. He also seems to have been determined not to let Egyptian and North African music generally be regarded as inferior to Western music, which, as scholars like Racy point out, was becoming more common. Nevertheless, his appropriation of zaar was a fairly standard appropriating primitivism.

Indeed, the presentation of zaar (including its scholarship) contains the danger of its mischaracterization of gender and autonomy. Boddy warns, "One cannot explain the cult away merely by documenting its instrumental potential," but instead it should be thought of as an incredibly productive practice with individualized reasons for its performance, including pleasure.[68] And though similar observations about inoculation have been made about early twentieth-century European art, one would not, for instance, instrumentalize Dadaist art and practice as solely responding to societal upheaval in Europe. Fritz Kramer argues that zaar is "practiced in the shadow of advanced monotheistic religions, as opposed to alongside the ancestor cult."[69] Further, according to Kramer's schema of abstraction and empathy (following Worringer), for zaar, "the women, excluded from open society and having little differentiation among themselves, created a cultic sphere of animation and differentiation among themselves in which they represented 'worldliness' as the 'other' to their own women's culture, i.e. in which they empathized themselves into the 'world' which was closed to them."[70] Kramer's interpretation is based on his claim that believers project an ideal equality that exists in the world of the ancestors. Boddy sees it much more practically, as women who are severely constrained by their social roles and are able to escape those, playing off of men's perception of their being more susceptible to "folk" beliefs; she points out that the zaar rite is also referred to as a party.[71]

Though there are many accounts of the cultural and historical emergence of zaar and, for that matter, jinn, the relationship of the woman vocalist and the wire recorder constitutes the "pure sound," the majority of what is heard in *Ta'abir Al-Zaar*. The zaar medium, she who delivers the sonic element in the ceremony, uses sound to coax the zaar to the room and to entertain them, in a certain way, to attract and appease them. Her voice and the drumming flows out from the vocal instrument or the membrane, enacting what has historically obsessed theorists—the moment of transmission when the vibrations take on a life of their own; that is, they have their own agency, suspended between sender and receiver. Then, the tape or wire recorder was both, and the proof of the moment of disembodiedness was evidenced by the index of the magnetic charge. That is, this relationship between sound and its material index (electric charge on tape or wire) was not metaphorical as was language. It is in this nonmetaphorical but physical "meaning" that we can understand the relationship struck in *Ta'abir Al-Zaar* between the tape and the zaar performance.

We do not have any visual evidence of or knowledge about a thin strand of wire wrapped tightly into a spool as it unfurls and registers magnetic charges translated from ambient sound. No one can see the magnetic charges on the wire spool, bouncing off of the walls of a radio studio and registering those new charges onto its flat, petroleum-based surface of tape. The isolation and focus on sound in *Ta'abir Al-Zaar* is as much about the sensuous experience of sound as it is addressing the membrane between the seen and unseen—of evidence and science—so contested at the time in Egypt. Nowhere does this problem of evidence-based knowledge, or "the seen," matter more than the evaluation of possession ceremonies. *Ta'abir Al-Zaar* was produced during a critical time in Egypt, amid a widespread crisis of "nature" itself and the advent of new, cellular or "invisible," understandings of nature. El-Dabh was transitioning out of a career as an agricultural scientist for the government in Cairo just as Egypt was seeing its first large-scale effects of the massive intervention into the Nile and surrounding lands. Timothy Mitchell writes of the year 1942 that it was a confluence of war, famine, and disease: all crises of nature resulting from "some of the most powerful transformations of the twentieth century."[72] The four major factors in such dramatic change for the social and natural environment—the damming of the Nile, synthetic chemicals, malaria, and World War II—affected cellular to national structure in Egypt.[73] The work El-Dabh was involved in with the agricultural sector was as consequential for the nation as Egypt's geopolitical positioning during the Second World War.

So, to bring those seemingly invisible forces to bear on the particular understanding of performance and music as ecstatic, El-Dabh developed a theory of the physical encounter of vocal sound and magnetic wire resulting in a bond that can be reperformed, manipulated, and distilled while retaining the same transformative power of the original performance. Repetition/reproduction does not dilute the potency. This dialogical use of sound is what ultimately distinguishes El-Dabh's work from Schaeffer's and, subsequently, Cage's. For El-Dabh, the tape recorder as conceptual art object required not bracketing out the cultural background of the sound act but rather matching cultural specificity with the potency of what technology was said to possess in the first place, the sound object as a pure vibration with therapeutic power.

This is perhaps why El-Dabh was troubled by the fact that there are more frequencies that exist in the world than the human apparatus is able to perceive. Moved by Arab medieval philosophy that pure sound and music was connected to the cosmos, El-Dabh tried to capture the frequencies he knew were outside of human perception, attempting to extend the human apparatus and also shape the affordances of reproductive sound technology. His stretching of the affordances of the recorder as player and recorder could only go so far in attaining what was, for him, the paramount result of music: transcendence. The fact that human perception was handicapped, he reasoned, did not make the imperceptible sounds any less real, but they could in fact be made perceivable by creating sounds that clashed with the higher frequencies, making a lower frequency sound that would be perceivable to the human apparatus. He would later describe this as "heteroharmony" in contradistinction to the sonic result of dissonance.[74] The "new sensualities," described by Kittler as conditioned by the "separation or differentiation" and militarism of the technological epoch, coincides with vernacular responses to such militarism and its isolation of sensuality.[75]

The event of *Ta'abir Al-Zaar* stages the encounter not simply of tradition and modernity but an intimate and physical excitement of electrons, a transduction of sound waves via its atomic elements. That is, sound is not knowable as a matter of fact but only as a heard event. The desire to build some measure of flux within that fixing is repeated throughout the history of avant-garde tape pieces and the subject of Liz Kotz's work on John Cage. The event of the magnetism and the introduction of more electromagnetism onto that which was fixed on the wire (or later, the tape) was what El-Dabh called the "second generation" of sound that, for him, "no longer seemed to be raw."[76] It was a medium that mediated, a choice he did not have to make between the real and the made. Influenced by "the utopian and almost mythical status given to

surrealism" in Egyptian modern art, El-Dabh used an ecstatic performance to register the sonic version of the disarticulation of form and content.[77]

The link between trance/performance and mechanical media of sound, photography, and film would become solidified in artistic practices that sought to stretch the capacity of the machines. It is significant that *Ta'abir Al-Zaar* begins with a performance in which the woman who sings is, herself, a medium. In this scenario, the person-as-medium relies on an agreement among the participants to suspend their disbelief about the real presence of the spirits that are mediated. It has been the subject of countless anthropological tracts because the veracity of the claim hinges on the social. For those who used photography, film, and other recording media to channel the dead or the nonpresent, the same suspension of disbelief had to occur, one that would lead to people rejecting photography as too invasive or too real. Taussig's thoroughgoing analysis of this mimetic faculty demonstrates how high were the stakes, and others have noted the link: "apparition and apparatus are linked through ritual techniques."[78] The apparatus, the assemblage with demons, becomes part of the foundational story of Egyptian modernism, only recently narrated alongside—and in some cases cutting through—what had been a folk nationalism that was its emblematic form.

I conclude with a comparison of *Ta'abir Al-Zaar* to a work by an Art and Liberty group artist who participated in a Sufic trance and whose concerns extended to the surrealism of technology. Abdel-Hadi Al-Gazzar's *Untitled* (1964) is a pen and ink drawing with wash, depicting a standing, mechanical, wingless bird: half tattered feathers and half plates strung together with wires, with a crooked beak and toes. Emblematic of Al-Gazzar's surrealism, the bird is also a clunky technological object, or really a hybrid of nature and technology in the useless and burdened, flightless bird. Al-Gazzar continued the surrealism that had flourished in the late 1930s and 1940s, a practice that was antithetical to state power. Al-Gazzar completed many works throughout his career that took on themes of trance, jinn, and generic mystical practice, including *Un djinn amoureux* (1953), a crowded composition of a lizard/human floating above three earthbound figures, one of which is an assemblage being with elements of cat, human, and vulture. The jinn figure that floats above the scene is holding an apparatus with multiple strings that attach themselves to the other figures and objects. An illustration of causation, the jinn is not beholden to gravity but at the same time has the pull of force that is indicated by these force lines. The textual references are mixed: Avinoam Shalem refers to the "metaphorical text and its illogical syntax"; the jinn lover and his libido meet with imagery evocative of Buraq, the fantastical horse that Muhammad used to ascend to heaven.[79]

2.7 Abdel-Hadi Al-Gazzar, *Untitled* (1964). Barjeel Art Foundation Collection. Photograph by the author.

Al-Gazzar, like El-Dabh, was fascinated by the section of Cairo where underground cultural practices took place, a primitivism that meant, according to Alex Dika Seggerman, "greater accessibility" and was "more primitive (or less majestic) than the ancient Egyptian sources."[80] *The Green Man* (1953) (see plate 6) references the Qur'anic figure of al-Khidr, the verdant or "green one," a mystic refigured in Al-Gazzar's work as the seat of inspiration. As Seggerman argues, creativity or inspiration was accessed not through the unconscious, as in theories of European surrealism, but through populist mysticism.[81] The painting contains references to Islamic symbolism. Al-Gazzar was a principled political voice during an increasingly repressive Nasser regime, the same leadership that El-Dabh was convinced would be luminous. After all, El-Dabh wrote a composition for Nasser, *Ya Gamul Ya Nasser* (1947), "to capture Nasser's attempt to return to a period of enlightened Arabic civilization."[82] One can see the development of this early sense of hope and technology with El-Dabh's *Tabir al-Zaar* as ambiguously related to the state form as it developed in Egypt, similar to the "engineered enchantments" in the work of Al-Gazzar.[83]

In conclusion, Laura U. Marks writes of an enigma that has grown increasingly urgent in the decades since El-Dabh left Egypt: new media artists in Egypt reference a long history of algorithmic design in art but also have "an ingrained skepticism about structures, systems, and top-down control."[84] She goes on to argue that autonomous design, multiplicity, and an algorithmic sublime are all undermined by the knowledge that encryption also relies on algorithms. Indeed, Ahmed Basiony, a prolific sound, digital, and media artist, was perhaps the emblematic figure of the media art scene in Cairo, a vibrant new media art center in Africa. He was killed by security forces in Tahrir Square during the uprisings in 2011. In a planned performance for the Egyptian Pavilion at the 2011 Venice Biennale, Basiony was to combine two performances to study the relationship between personal energy expenditure and that of large crowds of protesters.[85] The first performance, already completed, consisted of his running in place for one hour each day for thirty days in a hermetic suit, while measuring and projecting his physiological data. The second one was to measure the "sound and movements" of the crowd as evidence. Because of his untimely death within the uprising he wanted to study, Egyptian media art was once again featured in the international realm at the Venice Biennale; before his death, the pavilion was in financial trouble and might not have been staged. Basiony's beautiful idea of mapping together these energetic environments, the self-contained body and the social body formed of political solidarity, relied on both visible and invisible communication.

Linking, that is, to the ritual process that itself mediates between the visible and the aural, the singular and the mass, Gaston Gordillo wrote in his blog at the time: "What has coalesced as a powerful, unstoppable force on the streets of Egypt is resonance: the assertive collective empathy created by multitudes fighting for the control of space. Resonance is an intensely bodily, spatial, political affair, materialized in the masses of bodies coming together in the streets of Egyptian cities in the past thirteen days, clashing with the police, temporarily dispersed by tear gas and bullets, and regrouping again like a relentless swarm to reclaim the streets, push the police back, and saturate space with a collective effervescence."[86]

THREE THE SONG AS PRIVATE PROPERTY

The wire recorder was not just an invention that allowed for the smooth recording of the human voice; it gave engineers a model for how radio could also become a smooth "broadcast" as opposed to a bit-by-bit transmission of sparks and signals characteristic of Morse code and early radio. The media archaeologist Wolfgang Ernst writes, "Previously, Valdemar Poulsen had already developed a process to electromagnetically record telephone conversations through induction onto an uncoiling wire. In the Telegraphone, electric voice transmission has found its congenial storage medium, forming, so to speak, a continuum of both processes in the electromagnetic field."[1] This flow of music was made possible, as Ernst explains, by the invention of the tube and antennae, which made radio a medium rather than a machine. He continues: "Electromagnetic sparks are no longer transmitted *as* encoded information (Morse code); instead they themselves constitute a high-frequency medium through which low-frequency signals (speech, music) can be sent—an escalation of epistemological dimensions."[2] The development of the electron tube, Ernst writes, draws to a close one hundred years of electromagnetic phenomena analysis.

One artwork in particular maps together the history of the invention of popular South African radio and the closing of the age of broadcast radio with internet streaming and file sharing. *Song of Solomon* (2006) is an eight-channel "aleatoric sound collage," as the artists Julian Jonker and Ralph Borland describe it, of about seventy of the hundreds of versions of Solomon Linda and the Evening Bird's 1939 hit radio song "Mbube." They are mixed and played on

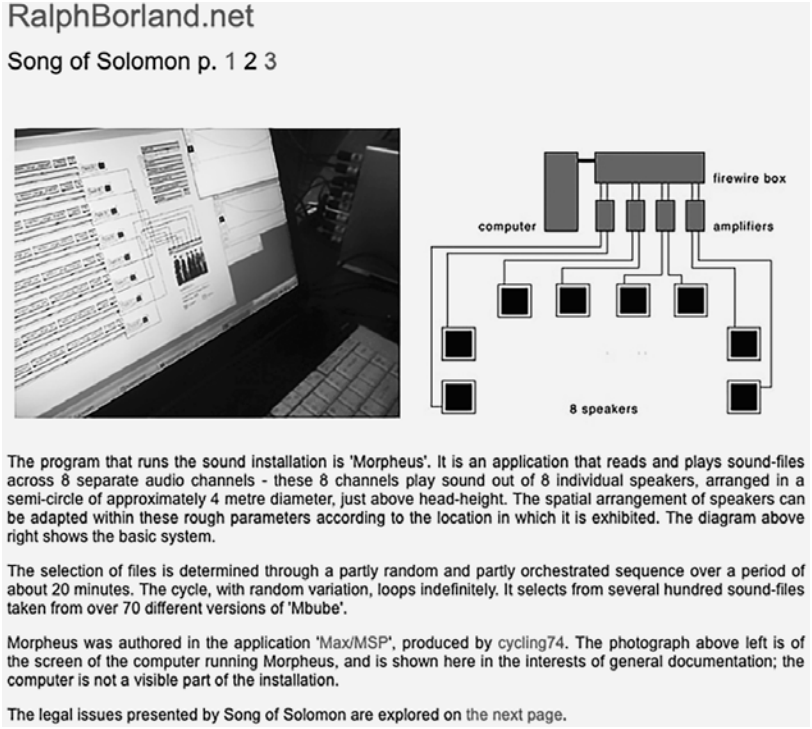
3.1 Julian Jonker and Ralph Borland, *Song of Solomon* (2006), installation view at the Project Art Centre, Dublin, 2008.

the multimedia digital platform Max/MSP, a program that visual artists and DJs use. Mbube is also the name of a type of early twentieth-century Zulu song that was popular with displaced miners in the urban centers of South Africa, both as choir competitions and as versions in recorded songs. Borland and Jonker's *Song of Solomon* is exhibited as an array of eight speakers mounted on tripod stands at about head height in a semicircle. The arrangement references the stage presence of a choir. It has been exhibited three times, the first in 2006 at the Durban Art Gallery and the latest at the 2010 Vancouver Olympics. Jonker and Borland constrained each sample to 2.18 seconds, partly for an aesthetic of the cut and partly to gesture to an outdated copyright law's designation of a substantial—de minimis—portion for musical copies. Borland, a digital artist, authored the program he named Morpheus using Max/MSP, which is a visual programming language for multimedia inputs used by composers, artists, programmers, and researchers. Morpheus is programmed to find similar sonic elements in each clip, going from the most random sonic samples to the most similar in the first half of the loop. Morpheus decreases the randomness of the selections, and at about eight minutes, the program

arrives at Solomon Linda's 1939 "version" of "Mbube" and plays it in full on all eight of the speakers simultaneously. The form of the work in that section mimics the choral structure of the Mbube/*isicathamiya* performance. Then, the program reverses course and increases randomness until it arrives back at the starting point of the fractured and disparate samples and starts over. It is never a recording, but Morpheus always plays live according to the parameters of the algorithm. The Max/MSP software platform allows us to examine something that has vexed musicians and sound artists since the beginning: how (or, indeed, why) to invoke origins and liveness in a removed studio environment divorced from context.

Song of Solomon currently does not exist fully because it violates the protocols of copyright law, which required the artists to dismantle the work and leave it dormant in a set of obsolescing hard drives. *Song of Solomon* is in practical terms defunct as a work fully present in the art institution and also as it approaches its inevitable technical obsolescence. Acting as a harbinger of old media, *Song of Solomon* exhibits layers of media sedimentation that correspond to the history of apartheid's ethnographic project, transnational black popular music, and the advent of intellectual property law. In fact, it is this relationship between the media history in *Song of Solomon* and the biography of Solomon Linda that can be understood via the metaphor of "content" as a modulated frequency that rides atop the movement of and violence against bodies during apartheid.

Thus, a sound object, the epistemological prerequisite of collage, is fictional and instrumental. In 1968, the American art historian and curator Jack Burnham made a bold attempt to argue for the art historical relevance of technological art based on its objecthood in his book *Beyond Modern Sculpture: The Effects of Science and Technology on the Sculpture of Our Time*. In one section close to the beginning, Burnham writes about the tendency in modern sculpture to "thingness," based on Marx's ideas of turning all ideas into objects, the process of making a commodity fetish. The "thing" for Burnham became a complex question for art with the spread of computers and tech art. Art made from software, in particular, has a complex relationship to thingness. Alan Kay wrote that interfaces should treat bits of software as "things," not just because they should relate to the "real" world, but also so they could be manipulated: that is, manipulated in the sense of using hands, pushing software toward the haptic. The easiest example to (currently) use is the touch screen on a tablet or phone: I move my file or app around a screen. I move these things that are both object and operation. Kay wanted software to work



3.2 Screenshot of the remaining documentation of the project at Ralph Borland's website. Borland, "Song of Solomon, p. 1 2 3."

just like this, with programmers also using software "objects" that would be easier to conceptualize compared to writing complex lines of code.

Wendy Hui Kyong Chun explains that software code has become so mysterious as to be considered a "super-agent," or a fetish.[3] In her essays, Chun charts a history of software as it was increasingly disarticulated from hardware: "In the 1940s software did not exist: there literally was no software."[4] Chun argues that assigning an undue amount of agency to source code in software is surrendering agency within the act of mediation, which is the site of intervention and politics. Especially problematic is that the "source" is only identified after a successful execution, so the source is given an unbalanced amount of power as having possessed an inevitability when that is not the way that software works. Chun likens this to conceptual art: an undue importance is given to the artist and his (gender is key in the text) command, regardless of whether the programmers' fictional pure intention results in execution.[5]

Where some critics have critiqued the dematerialized aspect of conceptual art, arguing that there is always an object, if only in a paper trail of contracts, Chun's work gives us a concrete example of the problem with relying on intention as determined by a command.

The overlay of software onto hardware corresponds to the conceptual art of the 1970s, when the object took a secondary concern as artists asserted more control over the immaterial, "purely" conceptual elements of an artwork. Chun writes, "The current prominence of transparency in product design and political and scholarly discourse is a compensatory gesture. As our machines increasingly read and write without us, as our machines become more and more unreadable, so that seeing no longer guarantees knowing (if it ever did), we the so-called users are offered more to see, more to read. The computer—that most nonvisual and nontransparent device—has paradoxically fostered 'visual culture' and 'transparency.'"[6] Art made with computers and digital devices prioritize content, even if the object or programming logic is designed to be seductive, because computers mask the deeper representational work they do that most users do not understand. Chun calls this complexity of software "demonic" and refers to the power imbalances it engenders. Katherine Hayles likewise adopts the depth model, writing, "As the unconscious is to the conscious, so computer code is to language."[7] When the artwork cannot be seen or heard because of breakdowns of software or hardware, the work arguably does not exist; it cannot be discussed. Similarly, folk music or the folk tune *avant la lettre* is a process that, only after the fact of its recording or performance, becomes significant.

Song of Solomon gestures to this as a long history of song and media object fetishization, when a collection of sounds becomes a song or when a collection of code becomes a thing. Along with the ancestor Solomon Linda, it also revives the textures of the various remediations of Linda's song. It includes the textural sound of a media object that traveled from South Africa to the United States in the form of a record pressed by Decca and handed off to Pete Seeger. The record became a talisman for Seeger as he worked his way through the song and attempted to reverse engineer it and to transcribe the sound into a score. It is a fetish again when the song enters into copyright protocol with the declaration of a "unique melody" that constituted "The Lion Sleeps Tonight." And in *Song of Solomon*, the "object" status relates to its use of the platform Max/MSP, one of the direct results of Alan Kay's work on software.

Solomon Ntsele, under his stage name Solomon Linda, adapted a version of the *mbube* style of Zulu isicathamiya song and recorded it with South Africa's first home-grown record company, Gallo Records. There are two variations

3.3 78 rpm, ten-inch shellac record of Solomon Linda's Original Evening Birds, "Mbube" (1939).

of Zulu choral performance, mbube and isicathamiya, the former loud and powerful and the latter focusing more on harmony and blending (after the isiZulu *cathama*, meaning "walking softly"). The talent scout at Gallo convinced Solomon Linda to record "Mbube" (isiZulu for "lion") and took the copyright for ten shillings, which was about the same amount of money that the group would make to perform at a wedding. The song was wildly popular among a newly forming black radio audience in the country, and the group went on to perform widely in isicathamiya competitions around the country. Solomon Linda died in 1962 never having seen royalties from his or any subsequent versions of the song. The record made its way to the United States where, in 1949, it was handed to the socialist folk singer Pete Seeger by the folklorist Alan Lomax in a pile of records discarded from Decca. Seeger listened to "Mbube" and adapted its basic structure. As he completed the song, he misinterpreted "Mbube" as "Wimoweh," which formed the rhythmic background and the solo voice. In the third version of the song, the American songwriter George David Weiss wrote a version for the Tokens, wherein he took one characteristic melodic phrase and added the lyric, "in the jungle the mighty jungle, the lion sleeps tonight." Now part of the massive Disney musical the Lion King, "The Lion Sleeps Tonight" is arguably the most widely recognized sonic stereotype of Africa in the Global North, where it has made untold amounts of money.

In addition to the folk status, the specific ownership issue of "Mbube"/"The Lion Sleeps Tonight" concerns what is the characteristic, or "recognizable,"

element of the song. Copyright claims by Weiss for the Tokens established that it was the melody that accompanies the lyric "in the jungle, the mighty jungle." Weiss's argument rested on his authorship of the lyric. He picked up the melody, however, from an improvised vocal line by Pete Seeger, who adapted a line sung by Solomon Linda, which—as Rian Malan, the adversarial South African long-form journalist, writes—was "a haunting skein of fifteen notes that flowed down the wires and into a trembling stylus that cut tiny grooves into a spinning block of beeswax."[8] It is this refrain and the pulsing "wim-oh-weh" syncopation from Seeger, a nonrepresentational refrain only later branded by a lyric, that creates the unique identity of this song in its many forms. That is, ownership of "Mbube" hinges on characteristic lines and objects of originality, figures set against a supposed background of folk production and knowledge.

Jonker and Borland's *Song of Solomon* randomly samples hundreds of 2.18-second-long pieces of over seventy versions of the song that they could access; there are over five hundred in existence. The work was produced to commemorate the 2006 out-of-court settlement Solomon Linda's family reached with US-based Abilene Music to finally repatriate an undisclosed percentage of royalties to his surviving family. Malan wrote an exposé for *Rolling Stone* in 2000, and his reporting turned into activism on the part of the Ntsele family, pressing Disney and other companies to settle. The case became emblematic of copyright abuse because it was so obviously connected to a long history of resource extraction and labor in South Africa, a steady flow of material and information from the South to the North and from black labor to white-owned capital within South Africa. In the same year, for its twenty-fifth anniversary in 2006, Brian Eno and David Byrne rereleased their 1981 album *My Life in the Bush of Ghosts*, a foundational album for remix, electronic, and ethnographic sound. A record of privileged listening and sampling, the album is emblematic of ethnographic allegory, a late Cold War version of primitivism. Cary Wolfe reflected on the album that "seemed to come from everywhere and nowhere," calling it "a radical form of exteriority and materiality that constitutes what Jacques Derrida calls the 'noncontemporaneity with itself of the living present.'"[9]

In a 2008 talk on *Song of Solomon*, Jonker said, "We decided to perform a requiem that would remember Linda not as the victim of copyright abuse, but rather celebrate him as a kind of spectral ancestor, one whose name may have been forgotten but whose ghost still haunts in the hundreds of versions of this song about a lion. Indeed, the perfect tribute would not be to deny these descendants of the Lacanian father, but to bring them back to the fold. So we

decided to play DJ, and make a mix."[10] Jonker invokes uses of the concept of medium as in a person who conveys spiritual messages, a use of the word that was first recorded in 1853 and adapted from the notion of a substance through which something is conveyed. Far from an obsolescent notion, more recent theorizing of "magic" in software studies concerns the internal functioning (the black box) of computers.

Song of Solomon examines the kind of strange qualities that attach themselves to a song as it goes from being an unformed, unmelodic tone or set of tones to an object. An entire pop music industry has built up around this effort to make song-objects that can be bought and sold but require an origin and usually the myth of a collective authorship. *Song of Solomon* addresses the lack of recognition in terms of both reproductive and representational media and the moral landscape of a society coded into copyright law—making the crucial link between the code of a computer and that of law. RCA Victor's "His Master's Voice" represents the set hierarchies within an assemblage of human and nonhuman elements. It sets forth a "dutiful servant" in the process of making music an object of private property. The song's claim to originality is always fraught and is ritually undermined by scandals of theft, appropriation, or mimicry, as if those weren't the entire condition of the mediascape that songs inhabit. *Song of Solomon* was an homage to hacktivist and DJ culture that turned away from this single-author model of a song toward fluid and open mediation, celebrating the political and material vicissitudes of the work.

Song of Solomon also references the earliest instances of recorded music as a detachment from origins among a collection of moments when the black body was removed from the land and transformed into an object of labor. Solomon Linda is emblematic of what was by then the widespread calculated dispossession of land, and his unrecognized status underwrote the denial of ownership of the song and also his labor status as a record packer for Gallo. For if we trace the origin of the *song* "Mbube," we will ultimately hit a bedrock of irreducible moments, when the object status is clearly associated with an exercise of power, whether civilizational or granular.

Isicathamiya

One of the claims of the many agents who have appropriated "Mbube" is that the song was folk, was from a "tribe," suggesting that it could not be owned or bought. Veit Erlmann writes, isicathamiya is a genre of "the dichotomous

3.4 Upmarket studio photograph of Orpheus McAdoo, director and proprietor of the Original Jubilee Singers (ca. 1900). Talma Photographic Studio, Melbourne Australia.

'here' and 'home,'" which begins to mark out the itineracy of melody and its relationship to genre.[11] Historians note that isicathamiya was developed in response to African American traveling minstrel shows that were very popular in urban centers in South Africa in the late nineteenth century. Erlmann explains, "[The American performer Orpheus] McAdoo's visits became so deeply engrained in popular consciousness as a turning point in black South African musical history that the *Ilanga* critic placed the beginning of *isicathamiya* in 1890, and that Thembinkosi Phewa, member of the legendary Evening Birds under Edwin Mkhise declared: 'Our oldest brothers, the first to sing *isicathamiya*, were the Jubilee Brothers. That was 1891."[12] Isicathamiya developed alongside a rapid urbanization in South Africa, which included the recording industry and telecommunications, electrification and transmission. It was a genre born of the clubs and meeting places of mostly male workers, a genre forged through competition: "To be in the possession of that core fetish of Western music, the tune, becomes a crucial asset in the kind of competitive strategies of migrants of which isicathamiya performance forms part."[13]

That isicathamiya derives from American minstrel shows opens a host of representational issues for scholars of the genre, including the question of why a black audience would find pleasure and community in racist American minstrelsy. The terminology is built into the language, a sort of transcoding of racialist terms that are absorbed into the Zulu language at the turn of the twentieth century. The derogatory term *coon* became in South Africa the image of a "slick urbanite" and becomes, using the Zulu prefix, *amacoon*: denoting a well-dressed impresario walking the streets of Durban or Johannesburg.[14] Within this transcoding is a shift in meaning, ownership, and thus territory for minstrelsy: from one of marking out the boundaries of polite society in the United States to marking an affective community for black South Africans. Minstrelsy in South Africa is full of contradictions: McAdoo's work on behalf of the black community but support for British colonialism, the apartheid apologist Paul Kruger weeping at McAdoo's performance of "Nobody Knows the Trouble I Have Seen," and the African National Congress activist Sol Plaatje's alleged enjoyment of the performance.[15]

Writing about minstrelsy in the United States, Lisa Gitelman argues that sheet music was a compensatory act to retrieve the visual in racialized music right at the cusp of recording technology. Recording technology thus shifted the ability of race and other differences to be apprehended via live performance, something remarked on by Walter Benjamin in terms of an overall perceptual shift.[16] What media scholars have not frequently attended to is the methods by which race and gender have acted as obstacles that block recognition within the media circuit; the concepts of race and gender are coterminous with philosophies of technology. The introduction of phonography into the genre of blackface minstrelsy came at exactly the time that "the transnational reach of American popular culture and the economic structures of the recording industry" were at the forefront of the creation of intellectual property law in conjunction with the constantly changing status of the work of art. The transnational appropriation of blackface occurred as intellectual property was further parsed and each performance protected as property: at first to purchase a work of sheet music meant that you also owned its performance, but copyright spread to include any recording of music, its performance, and its playback. Gitelman notes the mimesis and alterity dyad, writing, "As if a harbinger of all copyright quarrels to come, blackface minstrelsy was rooted in a confusion of origins."[17] *Song of Solomon* links its challenged status to that of race and its mimicry in and between South Africa and the United States.

In effect, when American singers and songwriters narrate the folk origins of "Mbube," they sublimate, as tales often do, the mimetic loop within nineteenth-century minstrel shows in the United States and isicathamiya performance in South Africa. Indeed, Erlmann suggests that a genre taken from jubilee performances that closely resembles isicathamiya sprung up in Birmingham, Alabama.[18] Erlmann has carefully noted the melodic components of "Mbube" that were adapted and changed in the so-called transcription of the Zulu wedding song to the recorded hit song—according to him "only a few features." They include the male adaptation of the usual female voice used to perform wedding songs, the lack of overlapping solo and chorus, the relative lack of polyphony, and a basic triadic structure that would be "one of the lowest common denominators of all early urban African music regardless of class origin and specific ideological functions."[19] "Mbube" was designed to be a melodic scaffolding onto which others add elements, the most exotic and melodic of which would be added once it returned to the United States.

Solomon Linda had taken a job at Gallo Records in 1939, which was the first major recording company in South Africa and, most likely, on the continent. At first he was a record packer, the one who would prepare the very acetate disks that were shipped to other parts of the world. Shipping was key to media business in South Africa, a market that has vacillated between creating a healthy domestic market and shipping itself overseas. In fact, for a long time before there were record presses in the country, record companies like Gallo instead sent the actual musicians to London to record and had the records shipped back to promote and sell them. Eric Gallo enlisted an engineer to build a studio in Johannesburg in 1932.[20] Evoking rural Africa and lion hunts within the music required Gallo to move their first studio, which was housed in the basement of the embassy, to the sixth floor of a building in Johannesburg because "it proved impossible to properly isolate heavy traffic noise from the street outside."[21] Thus isolating sound from its urban, globally networked, studio, "Mbube" became the pure African sound that it stands for today. As Meintjes writes, "By its function and the quality of its form, the studio marks sound as privileged, fantastic, enchanted, and enchanting."[22] The recording industry had to bracket out the sound of its own modernism to create the sonic space of rural Africa.

The first radio broadcast occurred on December 18, 1923, during the British Empire Exhibition by South African Railways. Commercial broadcasting came one year later in English, with Afrikaans included by 1931. By 1936, the South African Broadcast Company (SABC) absorbed all of the radio stations,

thus consolidating all broadcasting into the arm of the state. Linda's recording of "Mbube" corresponds to the founding and development of Radio Bantu in South Africa, an effort by the Bureau of Information and the infamous Department of Native Affairs. The radio, remarkably, was carried by telephone lines to "subscribing households in black 'locations' near major cities."[23] Radio Bantu operated from the assumption that "the overwhelming majority of Africans are illiterate, and, therefore, unreachable except through the spoken word."[24]

The combination of business and ethnomusicology constitutes the uniqueness of the recording industry in South Africa as it was not only concerned with sales but also the collection of sounds from rural areas of the country. Gallo, spurred by similar pursuits by competitors, collaborated with the ethnomusicologist Hugh Tracey, whose research area at the time went into Mozambique and Angola, on the arrangement that he would collect sounds for research in exchange for acting as a talent scout for the company.[25] Much has been made of the collaboration between ethnomusicologists and their ethnographer colleagues in the creation of apartheid systems of governance and the industrialization of South Africa, but less discussed is the recording industry's related development of listener demographics for marketing purposes.[26] That is, Gallo, Hugh Tracey, and the SABC cannot be disentangled; they together make up the sonic space of apartheid South Africa.

It would be up to others in their reception and redirection through pirate radio to penetrate the racializing mechanism of radio.[27] Revolutionary radio from Tanzania was broadcast into South African airspace and carried the messages of the African National Congress (ANC), South West Africa People's Organisation (SWAPO), Zimbabwe African National Union (ZANU), and Zimbabwe African People's Union (ZAPU) by 1968, and Radio Freedom was broadcast from an ANC hideout in Johannesburg starting in 1963.[28] As Marissa Moorman points out in her important study on radio in nationalist movements in southern Africa, the danger in broadcasting surreptitious signals precluded the ability for its practitioners to create an archive.[29] In their usurpation of the radio waves, anticolonial activists used radio's sensuousness, its intimacy as well as its public making, within a new territory that overlaid stolen land. Both black antiapartheid activists and white South African broadcasters had to plan carefully for the topography as that very land that was contested shaped the range that their culturally inflected message could penetrate and claim as territory. Copyrighting sound and music is a protocol invented in Europe alongside the concept of media, and in South Africa, it became a tool of white supremacy. In one editorial written for the journal *African Music*,

Tracey encapsulates the inequality that we now read into this story of Solomon Linda's contract. It echoes closely Jan Smuts's theory of apartheid as an aegis of culture and not as a facilitator of equality, as formed in his many speeches on the concept. After a lengthy tour of the United States for the journal, Tracey expresses doubt about the founding statement of the country, that "all men are created equal." Instead, he writes, "The study of musical and artistic compositions by indigenous Africans, which clearly reveal this appreciation of the meaning of life and their Negrohood, now makes it essential to emphasize that all men are created special. We suggest that a cultural statement of this kind holds far more promise for future recognition of individual talent in a highly competitive world than the egalitarian shibboleths of popular politicians."[30]

As Pete Seeger entered the picture, a format transfer occurred between a folk singer literally handed a pile of records that were decommissioned by Alan Lomax, the ethnomusicologist. Seeger, a lifelong labor activist, was in 1960 relatively unknown when he heard and transcribed "Mbube" from the Gallo record. Seeger was part of the much celebrated folk music revival, where artists not only found and sang pre-recording-industry songs but also saved them through projects like the Smithsonian Folkways collection. In the years following the stunning success of the song and the subsequent lawsuit by the Linda family, Seeger has spoken about his regrets about not protecting Solomon Linda and making sure the money got to his family.[31] He gave many statements about the song, arguing that the entire ecosystem of folk music and its ownership needed to be renovated to allow for accruals, versions, and generations of songs, a musical practice only contested when large amounts of money are at stake with claims of ownership. Indeed, intellectual property law is coterminous with the deterritorialization of digital music and proliferating media of transmission. File sharing multiplies ownership and theft, and programs like Max/MSP mimic the logic of file collaging and sharing and the new code-based definition of tangibility, property, and territory.

Graceland

Seeger's serendipitous gift of Linda's discarded record from Decca has an interesting parallel in Paul Simon's supremely studio-crafted album *Graceland* (1986). Paul Simon, as he tells it, received a cassette tape of *Gumboots: Accordion Jive Hits, Volume 2*. Seeger's and Simon's talismanic objects came from

3.5 Film still, *The African Concert*, directed by Michael Lindsay-Hogg (1988). The film documents a 1987 Paul Simon concert in Zimbabwe with guest stars Ladysmith Black Mambazo, Miriam Makeba, and Hugh Masekela, the latter two exiled from South Africa at the time. It is widely understood that Makeba's and Masekela's presence at the concert helped Simon quell criticism that he received for breaking the cultural boycott against South Africa.

elsewhere, collapsing distance of two types, geographical and chronological. *Graceland* accompanied the bourgeoning of the world music scene in the 1980s, reaching its apex in the recording label Putumayo (est. 1991). "World music" was a term coined in the 1960s by the ethnomusicologist Robert E. Brown but would take on a market identity and renewed popularity in the 1980s. On the one hand, it reestablished the hegemony of American pop culture, as David Byrne wrote, by relegating the rest of the world's music to a special bin in the music store ("A bold and audacious move, White Man!").[32] World music was always marked by "collaboration," where North American and European artists sampled, collaborated, and collaged various types of "unmediated" folk music, always ethnographically marked, usually to resuscitate their flagging careers.[33] Paul Simon's collaboration with South African musicians broke the cultural boycott against South Africa in the mid-1980s, but he was determined to find and play with the musicians he had discovered on a tape from South

Africa. "Diamonds on the Soles of Her Shoes" and "Homeless" were written and performed in collaboration with the isicathamiya choir Ladysmith Black Mambazo, who already had a following in South Africa. After the release of *Graceland* and the subsequent international tour, their popularity exploded worldwide. Suddenly, the choral group become a household name for middle-class white Americans (as spoofed in Mark Waters's 2004 film *Mean Girls*) and were folded into the white media mechanism of world music. The album credits are careful to note the negotiations that constituted the collaboration between Simon and the group's leader Joseph Shabala to mitigate the criticism coming from many corners that Simon stole African music.

Graceland is a meticulously engineered album crafted almost entirely in the studio, "almost inconceivable in any era before the diffusion of multi-track studio technology."[34] Indeed, the studio sessions in South Africa were, essentially, a type of fieldwork comparable to field recordings or sketches. Simon did not intend to create a finished album in South Africa but went there to gather raw material that he could take relatively quickly back to New York. Simon and the sound engineer Roy Haylee traveled to South Africa in 1985 and recorded melodies and free-ranging jam sessions in studios with South African musicians. The analog tapes were then brought back to the United States where they were all uploaded onto a digital console and used in various configurations with many sound effects and amplifications introduced. Indeed, Haylee's imprint is larger than Simon's on *Graceland*. This type of special effects and collage album had been naturalized with the creation of MIDI multitrack mixing in the early 1980s and reaches a sonic naturalism on *Graceland*, with the skill of both the musicians and the engineers occurring in postproduction.

True to media logic, the naturalness of the African sound of *Graceland* is a precisely controlled, systematic parsing out of sound, voice, and instrumentation. Haylee has often spoken of the precision with which he both recorded and finished *Graceland*, recalling that he used a mixture of analog and digital technology to preserve the richness of the sound he wanted and to also handle the number of inputs he orchestrated to create each song. The initial recording sessions in Johannesburg in 1985 and 1986 were a challenge in terms of Haylee's ability to isolate each musician and still allow there to be eye contact. Simon and his team needed the track isolation so that they would have "the flexibility to erase" when they returned to New York City to mix at the Hit Factory.[35] Haylee used a technique for the bass lines of "You Can Call Me Al" and "Under African Skies" that recalls Cissé's filmic "special effect"

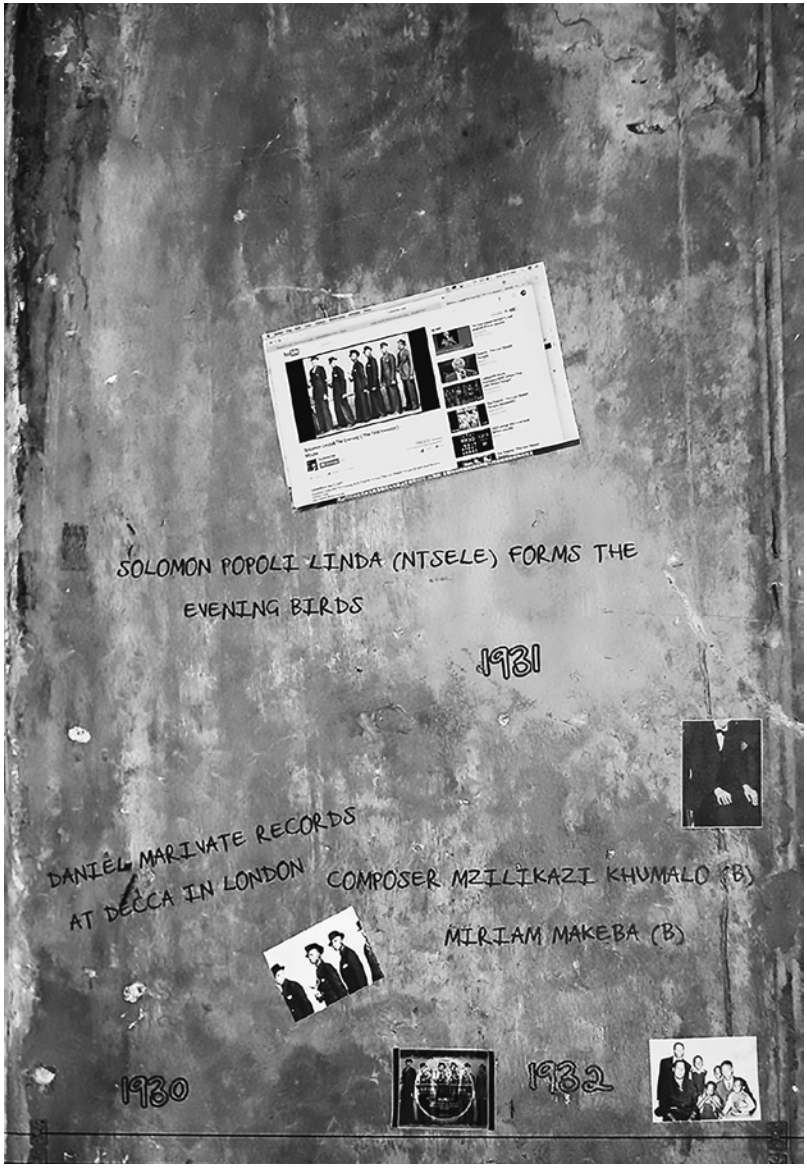
in *Yeelen* of simply reversing a playback. Baghiti Khumalo, the bass guitarist for the album's most famous single, "You Can Call Me Al," recalls, "When I started to slap the bass, the engineer recognized that idea and came up with the backwards tape effect. Then he took the two bars and looped it. . . . That engineer was a big part of my bass lines. It turned out to be a great piece."[36] The simple backward playback occurs within the album as a moment of constrained strangeness that matches the safe exoticism of world music. However, the album would imitate many aspects of isicathamiya, making it more complicated than just the borrowing of melody or the use of Ladysmith Black Mambazo. Louise Meintjes argues that in the track "You Can Call Me Al," "Several identifiable features of the Zulu choral mbube style are apparent in this instrumental music. Among them are the prominence of the bass, the call and response pattern in the bass line, and the presence of traditional 'vocal' effects, such as glides."[37] Meintjes argues that various listeners will hear various things in the album, according to race, ethnicity, cultural group, nationality, and level of music training. She notes that the album's lack of direct lyrical references to South Africa made it at once apolitical but also ambiguously related to South Africa generally. Indeed, this lack of lyrical specificity has been one of the challenges of its reception as either political or apolitical. Simon seemed intent on making a statement about music's ability to transcend politics, perpetuating the myth of musicians' free and neutral collaboration.

Meintjes writes of Simon's and the other musicians' power differential, saying that "genuine collaborative projects in which all participants contribute and benefit mutually cannot readily occur within the contemporary international music industry without challenging the institution's power structure."[38] In fact, the debate over *Graceland* mirrors what was asked of Pete Seeger and the Weavers in the 1950s and 1960s with Seeger's adaptation of Muddy Waters's "Irene" into "Goodnight Irene" shortly after Waters's death and, of course, his adaptation of "Mbube." Although Seeger was blacklisted during the McCarthy era, members of the Left excoriated him for these appropriations, with one editorial in the folk song magazine *Sing Out!* asking, "Can an all-white group sing songs from negro culture?" That is, questions of the racialized appropriation of music are implicated within the other debate, whether folk music could coexist with electronic tech, emblematized by the collective sense of betrayal on "the night Dylan went electric."[39] The issue of racial inequality with *Graceland* was of immediate concern for black South African musicians and the international audience who supported the boycott, as they relied on public gestures of solidarity in order to press for state action. The tour was meant to

assuage people's criticisms about the apolitical stance of Paul Simon, and its wide release on VHS and DVD would reintroduce the optics of race: an undeniably white musician made whiter by surrounding himself by decidedly performative, costumed, and politically active black musicians. It is perhaps in the marketing and circulation of this DVD that we most clearly see whiteness synonymous with the industry that created intellectual property law, one of many instances of whiteness as property.[40] As Tsitsi Jaji notes, "Piracy and copyright protection are not merely imported concerns in Africa, but rather grounds on which struggles over free expression and fair trade have long been waged."[41]

The choir form has become a way to invoke cultural ownership on behalf of the collective. In a more recent installation artwork that emphasizes the radicality of choral history in modern South Africa, Dineo Seshe Bopape's *Sa koša ke lerole* (2017) compiled the history of the Polokwane Chorale Society and installed it as a timeline written in black marker onto the circular raw cement walls in the basement of the 1820 Settlers Monument.[42] The Sotho title, which is also a Northern Sotho proverb, is literally translated as "of a song is dust." Madimabe Geoff Mapaya explains, "It is only considered a song if it is performative (implicating dance). In other words, what constitutes a song is its performance"[43] (see plate 7). Bopape's installation included overhead projector didactics, photographs taped to the wall, video of her and others' making, and paper-covered boxes bearing archival photographs. The rawness of its installation inside the depths of this politically charged monument reflects on the sublimation of specific, particular histories within global narratives of black and folk music. The monument is now the site of the National Arts Festival, and while the building commemorates British settler colonialism, it is now being refigured as "part of the cultural heritage of all South Africans."[44] Bopape, whose parents were part of the choral tradition in the Eastern Cape, implicitly argues through this work that the acoustic space of choral music was key to creating a black mediaspace that was at once pleasurable, celebratory, and political. Choral music, then, bridges the collective and the mediatized, voice and radio: not necessarily temporally but experientially.

Sa koša ke lerole and *Song of Solomon* illustrate that the intermediality of installation art and technologies like Max/MSP are underpinned by the twin experiential and representational functions of media art. Alexander Weheliye argues, "Black sounds are made perceptible in the modern era by sonic technologies, and these technologies have been shaped significantly by black music."[45] Noting what Gitelman writes, that popular recorded music split off the visuality of the black performer from her or his music, Weheliye further



3.6 Dineo Seshe Bopape, installation view of *Sa koša ke lerole* (2017) at the National Arts Festival, in the basement gallery of the 1820 Settlers National Monument. Images courtesy of the artist and the Grahamstown National Arts Festival.

links this splitting to the "pure sound" aspect of recording, the acousmatic loss of source. For him, this disappearance of the source creates a new space for black subjectivity to emerge, however tenuous. All of this is premised on the split between the white *signing voice* versus the black *singing voice*.[46] He notes the anxiety over the loss or at least the deferral of the source of writing and its link to the copy and the original and all of the claims of truth and veracity. With this, then, comes the primacy of the machine, when as Kittler notes, writing can only store (and read) writing.

The portability of the LP record was key to marking out a certain but limited technology: the vibrations of Linda's voice were duplicated as acetate markings, territorialized on an object that would see endless proliferation based on its status as "pure acoustics." Friedrich Kittler argues that with the inception of the gramophone, music breaks with meter to the physical time of frequencies: "Pythagorean music turns into irrational, that is, logarithmic, functions."[47] It is no coincidence, then, that ethnomusicology is of the same moment as recording technology. Not only was storage media marshaled to save "dying" cultures, but it seemed to have a similar, primitive logic as the gramophone. The frequencies that were collected in the field both matched and tested the limits of the technology; the limits of the range of frequencies were something remarked on by many recording practitioners.[48] The gramophone was originally invented to preserve and thus replicate what was considered the most pure form of temporality, the voice. The act of mediation/preservation resulted in related objects: the record and song.

In 1984 with the wide release of the personal computer and graphic interface, Alan Kay, an early software theorist, wrote in *Scientific American*, "The protean nature of the computer is such that it can act like a machine or like a language to be shaped and exploited. It is a medium that can dynamically simulate the details of any other medium, including media that cannot exist physically. It is not a tool, though it can act like many tools. It is the first metamedium, and as such it has degrees of freedom for representation and expression never before encountered and as yet barely investigated."[49] Kay suggests that the fundamental function of a computer and its use in the arts is to simulate other media. Long past performing calculations, the modern computer, as Kay understood it, was to become a "personal dynamic medium."[50] While working at Xerox PARC, Kay and his colleagues developed the graphical user interface, the basis of what we now know in everyday computer use. They combined program types, such as word processors and music editing, drawing and animation. From these early models of software came the first Macintosh

computer in 1984, based on this combination of text, drawing, and sound applications. Max/MSP is "used" in real time; it is not an end point representational platform but rather a program that performs. This metamedium then relies on music as data that will manifest as a sonic interface and metadata to indicate its status and provenance. The first all-digital computer-controlled synthesizer was invented by Giuseppi di Giugno in 1976, which allowed for the control of individual instrumentation as well as the interactivity between devices. In its later iteration, Max/MSP refined users' ability to handle packets of code using a graphical interface, thereby visualizing each input and turning it into an "object."[51] Users could manipulate the objects on the screen with either a mouse or a touch screen and move them around using gestures and hearing the results in real time.

Max/MSP has been popular for musicians because it enables the body, an aspect of authorial control based on intention physically manifest. The gesture is a deciding factor in determining the source of sound, as traditional instruments would register some sort of movement that activated a sound-producing object, such as the strum of the strings on a guitar. Since the advent of electrified sound, the gesture has been at risk, with perhaps its oddest moment coming in the form of the Theremin, the musical instrument consisting of two antennae that register the position of the user's hands as they go between creating sound from the oscillating frequency of electricity. While based on gesture, the Theremin was not touched and thus the sound required no physical contact or visible friction (other than with waves) but only gesture. The Theremin challenges one of the philosophical aspects that determines whether music is being made or played, rooted as it is in the connection between the body's cognitive apparatus and the "thing" status of the instrument.

Max/MSP, using modes of representation and computation, replicates other media and commonly combines sound and image. Max/MSP is an environment designed to facilitate the interplay of vision, sound, and gesture and manifests Kay's theory of the objectness of software, objects to be moved around an interface. That is, the Max/MSP platform in many ways allows us to examine something that has vexed musicians and sound artists since the beginning: how to define the artistic gesture, or the "sign of life," within digital technology. These two issues of agency as gesture and the programmability of computers thus have interesting similarities to the issues that have continually been raised about African art by outsider writers. Recall the artists' claim that *Song of Solomon* is aleatoric, which indicates that it is only pseudorandom. It is an interesting mimicry of spurious surrender to chance that many early

avant-garde artists attempted throughout the twentieth century, figures like Marcel Duchamp, John Cage, and Samuel Beckett. In a journal of literature and computers, published in the early days of computers' penetration among cultural practitioners, the South African writer J. M. Coetzee, concluding on the "critical use" of Samuel Beckett's *Lessness*, wrote, "The subject of *Lessness* is the plight of consciousness in a void, compelled to reflect on itself, capable of doing so only by splitting itself and recombining the fragments into wholes which are never greater than the sums of their parts. This endless enterprise of splitting and recombining is language, and it offers not the promise of the charm, the ever-awaited magical combination that will bring wealth or salvation, but the solace of the game, the killing of time."[52] The object's objectness, therefore, is undermined by its combinatory and recombinatory structure, a succession of substitutions.

But as computer theorists have noted, the mechanized recombinatory production of art or literature goes back to Gottfried Liebniz and his adoption of thirteenth-century methods into his *Dissertatio de arte combinatoria* (1666). In it, Liebniz argued that all thought is combinatorial, based on a set and small amount of concepts. Citationally, *ars combinatoria* is connected to the thirteenth-century writer Ramon Llull, whose writing on mathematics could have been inspired by an Arab combinatorial astrological instrument called a *zairja*. The mixed genealogies of combinatorial, and thus computational, art are another example of a logic born of contact and conquest, as both Ron Eglash and Laura U. Marks write.[53] Marks notes that the figure of the monad in Liebniz, the one around whom the world unfolds to reveal truth, is in black cultural theory only able to see fragments and disunity.[54] For Marks, the "data thief," dramatized in John Akomfrah's film about remix culture, *Last Angel of History* (1996), is a necessary figure who recovers the parts of African culture that have been obliterated or remain enfolded. The data thief, the sampling musician, "perceives the power of the remix to release energy from hitherto unimagined connections."[55]

Indeed, *Song of Solomon* is a remixed and profoundly goal-oriented work; it mimics intention as a method of undermining central concepts of freedom and autonomy in cultural production. Suspended between a random program and one designed by the artists, the decision by Jonker and Borland to program an end point of melodic resolution gives the work a telos but is then undone by its chiasmic structure. A form that resists logocentrism and historicist thinking, the chiasmus suggests an ancient, cyclical form of cultural transmission. Despite Borland and Jonker's stated interest in not restoring a

type of authorship to Solomon Linda, the program's protocol is to find melodic structures that are similar to Linda's version of "Mbube" and to allow those to characterize what could even be called a completion but is immediately undone, as if we have to survive the constant enfolding and unfolding of combinatorial logic. With the MP3 format, this dispersion and aggregation is nearly instant, as the files have been compressed to eliminate redundancy. The MP3 format, its fast transmission, contains the twin histories of telephony and music as audio technologies, defining "what it means to hear."[56]

Intellectual Property

Morpheus is the locus of copyright infringement in *Song of Solomon*, as copyright is triggered by transmission. And as it happens, this all became apparent when Jonker and Borland were approached to sell the work to the Durban Art Gallery after it was exhibited there in 2006. Jonker, a law philosopher by training, wrote a legal opinion on what the work was. He made a provocative argument that Morpheus, the computer program, was the author of the work, thereby indemnifying himself and Borland from legal responsibility for copyright infringement. He knew the argument would not be accepted but wanted to gesture to the possibility of a near future where such questions would not rely on a notion of private property in art production and the past of the song's theft from Solomon Linda. The work was not, in fact, sold but remains in storage and has only been exhibited two other times. Logically coterminous with colonial constructions of native art, intellectual property rests on the assumption of an original author, while at the same time figuring African music as collective and authorless—that is, a raw resource. Clearly *Song of Solomon* presents the issue of intellectual property, but the literature on the topic has not fully addressed the problem of human/machine interaction and what constitutes an intellect when a machine is doing compositional work.

In the 1990s and early 2000s, remix theory took on the debate of automated copyright infringement in terms of sampling ready-made fragments of vision or sound. Paul D. Miller, a.k.a. DJ Spooky, argued that when a voice has left a human body and entered a media object, it becomes part of a collective memory—part of the greater collection of "information" out there. "[I want to] interrogate the communal response to collective consciousness. [That is, I want to examine what happens if, say,] I share this record with you, and we share this memory: does each of us have an interpretation of that memory?

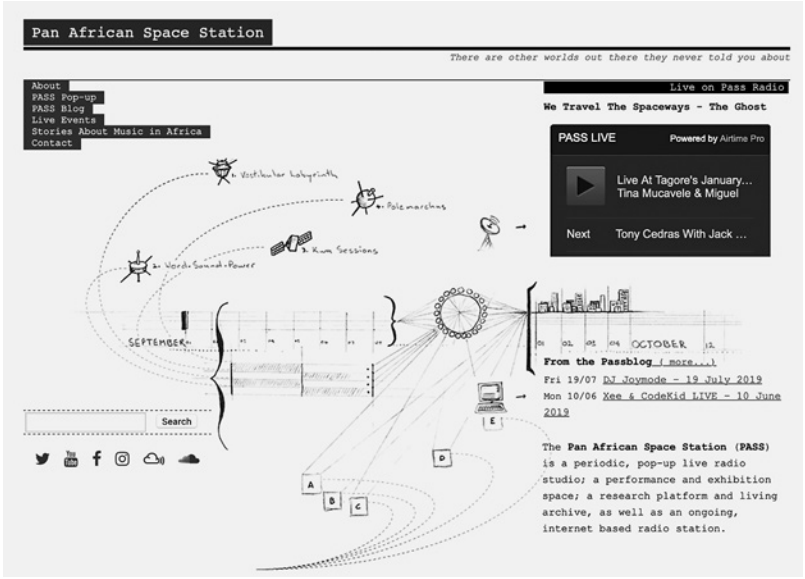
How does that memory influence [our interpretation of] the sample, or the data set?"[57] Miller theorizes that improvisation is pattern recognition, the articulation of an individual within the whole. Miller's remix theory is a humanism of technology, invoking a folk where creativity and expression is conjured en masse. Critical theorists of remix theory take on the issue of piracy in the face of the expansion of intellectual property claims, making ethical claims against corporations that use intellectual property to public disadvantage, say in the case of AIDS medication. Lawrence Liang compares the ambiguous illegality of piracy to unevenly incorporated urban spaces and the mix of legal statuses in globalization.[58] This type of provisional infrastructure that is coterminous with intellectual property is exactly the precarious status that was created by the illegitimate and at times illegal appropriation of land and resources under British colonial and apartheid law.

To collect the various versions of "The Lion Sleeps Tonight," Jonker used a file-sharing protocol called BitTorrent, a decentralized transmission system with various iterations. Torrent networks operate via metadata "trackers" that contain instructions on how to assemble files from as many sources as are available at the moment. This dispersal of the file allows torrent sites to argue that they were not illegally sharing a movie, PDF, song, and so forth but were rather providing instructions on where bits and pieces of those objects could be obtained and how they could be connected. Increasingly, metadata is the site of contestation for intellectual property, including all of the data on smartphones and email exchanges. But the metadata in the case of torrent files creates peers in a type of gift economy of digital files. Digital visual artists in the South African art scene used torrent networks liberally and variously. In one remarkable multilayered performance called *Video Party 4* (2014), the Cuss Group broadcast a music video on a screen in downtown Harare, Zimbabwe. *Felony/Stalker 7* by the British conceptual artist / pop musician Dean Blunt was projected onto a screen mounted atop a car, played by a laptop computer in the trunk of another car. *Video Party 4* is both video documentation and a standalone work that layers various sources of sound, ambient sound from the scene in Harare and direct sound from Blunt's music video, and sources of video. The technology used in both Blunt's and Cuss Group's work is low quality, as part of a network of artists globally associated with lo-fi, glitch, hypnagogic pop, and vaporwave. This fully digital art traffics in a nostalgia for old media aesthetics and objects from the 1980s and is distributed freely through YouTube and Vimeo; the group made it available for direct download for two hours as a "torrent to own." Cuss Group mixes this global aesthetic

3.7 Screenshot of documentation of the Johannesburg-based digital art collective Cuss Group's *Video Party 4* (2014), with work by the multidisciplinary artist Dean Blunt (London). It was performed on the fringes of the Harare International Art Festival.

with a commitment to street performance and extragallery space. It is a type of digital folk art, variously layered with irony and sincerity.

This mythical idea that somehow dead ancestors—the folk—can be interred in media objects is one that has long been held about media storage devices, and particularly the phonograph and photograph. As Douglas Kahn reminds us, however, the fascination with technology as an "indiscriminate" keeper of the dead belied "the specifications of the technology," which "betrayed its ethical dimensions."[59] Media formats do not last forever because as proprietary objects, they are programmed to obsolesce. Digital information remains hierarchical until it is purposefully glitched, bent, or taken out to the street (wherever a street culture exists). Such practice is also found in the ongoing *Pungwe*, a collaboration between Memory Biwa and Robert Machiri that began in 2015. In their performances called "Pungwe Nights," Biwa and Machiri draw together media sources of many different formats—reel-to-reel tapes, acetate LPs, computer-based MP3s—and contained in many archives in South Africa and Zimbabwe. They argue that this "future present" of playing older sound in real time instantiates a type of performance coterminous with live bodies. Again, the media object becomes a type of proxy ancestor for those that were implied as being dead through media *and* societal obsolescence through the plight of ethnomusicology. Biwa and Machiri write



3.8 Homepage of the Pan African Space Station, a live-streaming and broadcast audio signal cocurated by artists and musicians in the Chimurenga collective in Cape Town, particularly the composer Neo Muyanga and the *Chimurenga* editor and founder Ntone Edjabe.

that this celebration of the splitting of sound from its source, the basis of all sonic art, must be reframed by the fleeting instance of its performance and a creation of a new commons.[60] *Pungwe* is a "living with" instead of a "claiming of"; it is an orientation to sound that frees it from its status as intellectual property and speaks once more of the collective.

Similarly, the ongoing project by Pan African Space Station, a project of Chimurenga under the directorship of Ntone Edjabe and musical direction of Neo Muyanga, attempts to create a transnational space that does the work of creating attachments that are both virtual and physical. Launched in 2008, Pan African Space Station references the long history of radio and record labels in the black Atlantic. Pan African Space Station is broadcast by both radio and internet streaming, in addition to hosting live shows and DJ sets, a fact of its transmission that relies on bit stream flow as well as radio-wave modulation. Jaji calls Pan African Space Station "a riff on pirate radio" and links it to projects long associated with radical and/or anarchic politics worldwide.[61] Pan African Space Station restages many foundational moments of black music

worldwide, calling attention to the sonic universe as being equally operational with the print media and visual space of black radical art. Thus, referring back to projects like Radio Freedom, Pan African Space Station operates out of the shadow of pirate radio. Using satellite space as well as air space—and both Chimurenga's and *Song of Solomon*'s use of gallery space—sonic flow has been foundational in growing the space of black cultural solidarity. Like the alchemy of a choir, the merging of many voices has a moral authority of the "many" that yet relies on the primal sound of a voice, assembled as a song, a territory with media ancestors.

Song of Solomon does not simply return to an original version of "Mbube" or "The Lion Sleeps Tonight" for the purpose of reclaiming ancestors but frames the ongoing set of commands and responses that trigger recognition and property law. As Jonker writes in his legal opinion / artist statement, "The risk of infringement is part of the artistic integrity of the work. It is the intention of the work to be antagonistic to the framework of intellectual law that has been adopted by the South African legal system, and the artists have consciously interrogated the limits and bounds of that law."[62] In later philosophical writings, Jonker has formulated opinions on the morality of law and what each member of society owes one another interpersonally.[63] *Song of Solomon* is part of his ongoing interest in the philosophical implications of recognition, which he points out is a central component of our moral lives.[64] *Song of Solomon*'s reference to the copyright case by the Ntsele family addresses the crucial issue of repair as we understand it in postcolonial theory, the overarching issues of justice and emancipation, and the type of moral coding in law. Emancipation, that is, does not free the postcolonial subject but realigns it with correct attachments.

FOUR ARTIFICIAL BLACKNESS, OR EXTRACTION AS ABSTRACTION

All roads and railways led down to the sea.

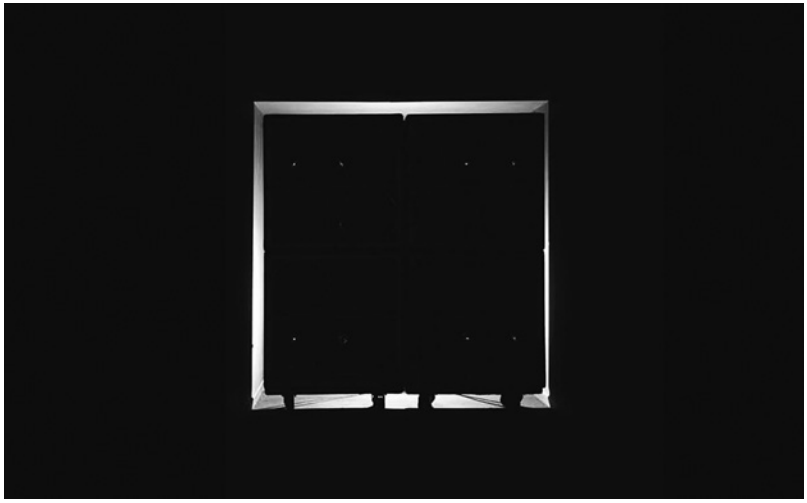
If I go to the mines, where shall I find the courage
to get into the cage?

This chapter takes on the uneasy displacement of Western myths onto Africa, the superimposition of classical Western culture onto other lands as an act of allegory, exacerbating the distanciation of the Dark Continent. The history of displacing classical myth is as old as contact, the most iconic of which is the trope of Black Orpheus. In modern media, the displaced, or "black," Orpheus was the theme of Jean-Paul Sartre's "Orphée Noir," which prefaced Léopold Sédar Senghor's *Anthologie de la nouvelle poésie nègre et malgache* (1948); a film set in Brazil, *Orfeu Negro* (dir. Marcel Camus, 1959); and the art journal *Black Orpheus*, started in 1957 by Ulli Beier and his colleagues at the Mbari Arts Club. The blackened Orpheus universalizes poetic thought. Beyond that, it narrates the unreadability of blackness as a metaphor for the condition of modernity. Black Orpheus redefines the mythical foundation of racism in Europe, race's groundlessness narrated through other myths and metaphors: Leo Frobenius proposing Atlantis in northern Africa, the ruins of Great Zimbabwe as King Solomon's mines, Egyptians as an extraterrestrial race, and so on. Wulf Sachs's 1937 psychoanalytic study *Black Hamlet* was an attempt to superimpose a generic madness onto a black South African subject. "Black"

is shorthand for quintessentially modern allegoricity: the condition of extremes of artificiality and authenticity roiled by political and psychological contradiction.

Electrified light and its epistemological twin, artificial darkness, are analogous to the modernist tension between figuration and abstraction: a sort of positive and negative charge related to representation. In Africa, electricity is fraught; it has never become second nature. Despite the dominance of industrial mining, which requires more energy than what is used in most European countries, the electrified/nonelectrified dichotomy, the lack of electricity for black areas, created an artificially dark continent. Such a story of infrastructural change is due to the inhuman scale of a built environment that is out of the reach of one body, one humanity. It is a story of rapid transformation that competes for the transformative power of art, poetry, or religion, as in Henry Adams's essay "The Dynamo and the Virgin," a work that registers the religiosity of experiencing the transformation of steam into electricity.[1] In it, Adams builds up the figure of the electricity-producing mechanism as being so astounding as to replace the mysterious power of the Christian Virgin icon and other previous religious symbols. As in religion, Adams described the symbols of modernism experienced as religion at the Paris World's Fair: "[Adams, writing in the third person,] wrapped himself in vibrations and rays which were new, and he would have hugged Marconi and Branly had he met them, as he hugged the dynamo; while he lost his arithmetic in trying to figure out the equation between the discoveries and the economies of force."[2] Against Adams's transcendent extralogical experience of love and warmth, the literal on/off mechanism of electricity controls the conditions of light and darkness. It mapped onto the worlds of the diurnal and nocturnal that Achille Mbembe associates with slavery and the creation of blackness.[3] Regarding the racialized implementation of electricity during the abolitionist period, the epistemological void of blackness was transposed into a positivist sign of race. "Black" was folded into an arsenal of significations of skin pigmentation and morph, differently signifying bodies and triggering various associations with and access to technology.

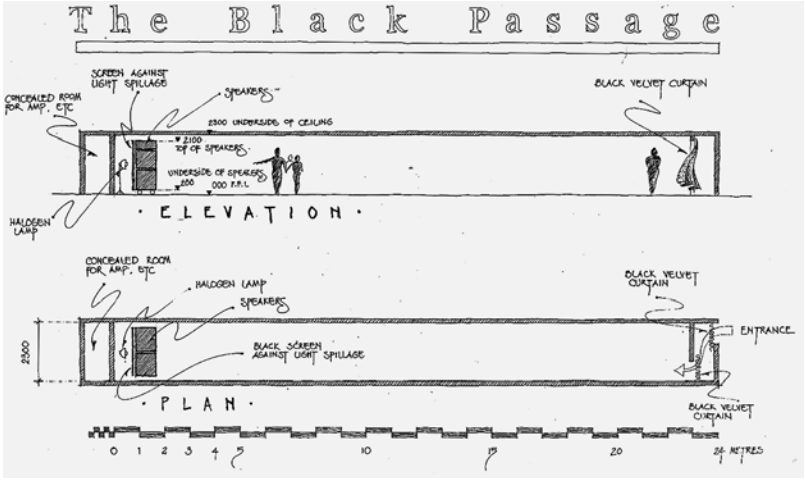
If we are to "scratch that vitalist itch," electricity is the emblematic "mysterious" material/nonmaterial phenomenon that courses through the veins of industrial modernism.[4] Electricity is a manifestation of a philosophy, particularly the light and dark metaphor of knowledge. Electricity also has a relationship to substance that is emblematic of transformation and transmutation, a progressive obscuring of its sources. Daniel French writes, "As technological



4.1 James Webb, *The Black Passage* (2006). Courtesy of James Webb.

advancements allowed for increased physical distance between power generation and power consumption, the commodity of electricity became an independent actor, consciously detached from the infrastructure of production."[5] Departing from historical time, electricity is extracted and abstracted from ancient matter: fossils (coal, oil, and natural gas), wind, sun, water, uranium, and plutonium. Electricity (the word itself a confusion of essence and apparatus) is emblematic of the myth that modernism doesn't need myths, bringing about a renewed desire for esotericism and allegory in art. As Adams wrote: "Among the thousand symbols of ultimate energy the dynamo was not so human as some, but it was the most expressive."[6]

James Webb's *The Black Passage* (2006) is a corridor 66 feet long by 7.5 feet wide by 7.5 feet high, totally unlit and black but for a golden halo at the opposite end from the entrance, created by a halogen light that spills out from behind a stack of speakers that are lifted slightly off the floor by a set of casters. The speaker set hovers exactly square within the rectangular corridor. The speakers vibrate a thunderous recording of a machine on a loop in stereo; the volume is meant to test the endurance of the listener. An ambient humming is punctuated every few seconds by scrapes, screeches, knocks, and pings. Toward the end of the thirteen-minute loop, a tremendous grinding noise is heard in a descending pitch, which acts as a sort of denouement for the work, and one that suggests its source—a sound imprint of some "real" apparatus



4.2 James Webb, *The Black Passage* (2006). Elevation plan of installation. Courtesy of James Webb.

that has been traveling and is now stopping. Sensing the pressure of a great moving object grinding to a halt, the final sound has the contours of a gate rolling open and slamming against its governor.

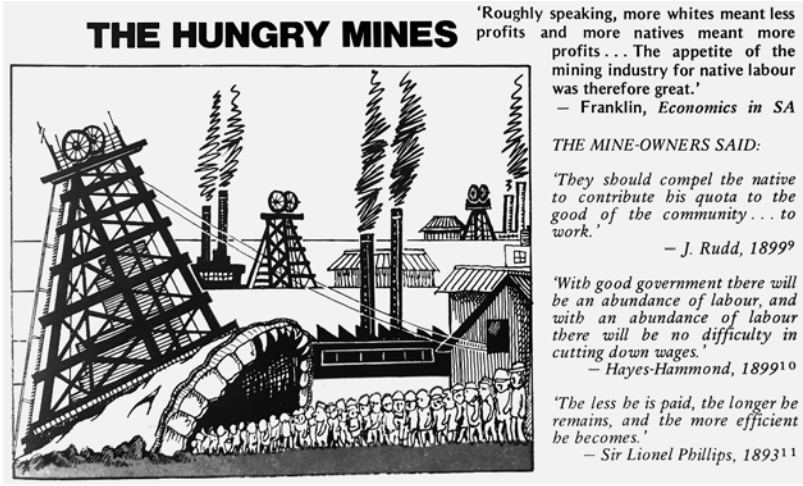
The label outside of the corridor entrance informs the audience that the sound is an eleven-minute audio recording of an empty elevator descending into and ascending out of the shaft of the South Deep mine in South Africa. The installation label also tells us that scenography of the light-framed wall of speakers refers to Kazimir Malevich's *Black Square* (1915). Webb writes further on his website statement for the work that the "sound is diffused at a high volume that can be experienced as both an auditory and a physical sensation."[7] It is this aspect of *The Black Passage* that connects the two art historical references made in Webb's artist statement—Malevich and Orpheus—in that sensuous experience overcompensates for that which is lacking, the referent. A recording of a mine elevator that visually refers to the *Black Square*, *The Black Passage* sets up a spatial corridor where one is drawn into a relationship with a visual referent that, when approached, reveals itself as a blockage in the black passage. The obstacle (the speaker stack) is both visual and aurally perceived. But it is in the aural maelstrom that *The Black Passage* enacts what Webb calls "Orpheus descending." The installation is an amplified and artificial environment akin to a theater, where the experiencer is placed somewhere

4.3 James Webb, *The Black Passage* (2006). Artist's photograph of installation in progress. Courtesy of James Webb.

radically different and characterized by otherworldly levels of sound within layers of insulation that cocoon the tunnel. Webb's work is characterized by various philosophical and artistic references, usually ancient Western, and foundational to the way art has been defined. *The Black Passage* uses allegory to negotiate the mythical descriptions of the physical realities of mining and extraction in South Africa. South Deep is emblematic of a mining industry where workers often meet their early death, sacrificed to South Africa's pursuit to be the most industrialized nation on the African continent. The mine has, as Webb says, a force that has turned Johannesburg into both a symbol of gold, the Zulu name for the city is "Egoli," and what he calls the "drain" of the African continent, where people are drawn to work out of desperation. Increasingly throughout the twentieth century, this trip to Egoli became a sort of transformational journey described in terms of the black masculine hero in between a coming-of-age journey and forced migration—most famously described in Alan Paton's 1948 novel *Cry the Beloved Country*. But on the problem of the mining industry's ethics, the "is" and the "ought to be," *The Black Passage* is decidedly silent.

The Black Passage was recorded in the South Deep, or Mponeng, mine in South Africa, which is owned and operated by Gold Fields Limited. It is the deepest mine shaft in the world, where the elevator descends 2.5 miles straight down at a speed of 36 miles per hour to a rock face that can reach 140 degrees, artificially cooled to 80 degrees. There are 236 miles of tunnels that are accessible only on foot. It is a massive operation that employs 4,000 workers and carries them down in a double-decker elevator, 120 people at a time. In 2008, 8 miners died when the cable snapped on the elevator, just one accident among many through the years. Aside from the unsafe conditions of mines, which account for the immediate deaths in mines, miners also die from untracked diseases, such as silicosis, tuberculosis, and HIV.[8] South Deep is a veritable city underground, complete with black market and so-called ghost miners, who clandestinely live for months at a time, guarding themselves with AK-47s and beer bottle grenades, their skin turning gray from lack of sunlight. The mining industry has tested the limits of social and mechanical engineering: it has been the most circumstantial for technological development, has the worst labor conditions and the best financial returns in the country, and was entangled with the most infamous social engineering project, apartheid.

Mining has become such a prevalent part of black South African identity that myths and legends developed to describe its enormity, its profoundly strange and unnatural space. A cartoon drawn by Andy Mason for a 1980 volume of the *People's History of South Africa*, a prolabor antiracist publication, is just one example of pictorial resistance, where the mine is shown to devour the collective black body. Today, a mine shaft elevator is one ride among many in an amusement park called Gold Reef Park, which occupies the same property as the Apartheid Museum. These twin properties exist at a time when the state has abdicated responsibility for the mining industry, except to police its laborers. With the two tourist sites together standing in for "history" in South Africa, visitors could emerge oblivious to the continuing operations of the mines, which continue to exploit miners' bodies and lives. The sameness of life before and after apartheid was most dramatically demonstrated in the Marikana mine massacre of 2012, where police, acting as proxies for company officials, killed thirty-six miners who had been engaged in a complicated wage strike.



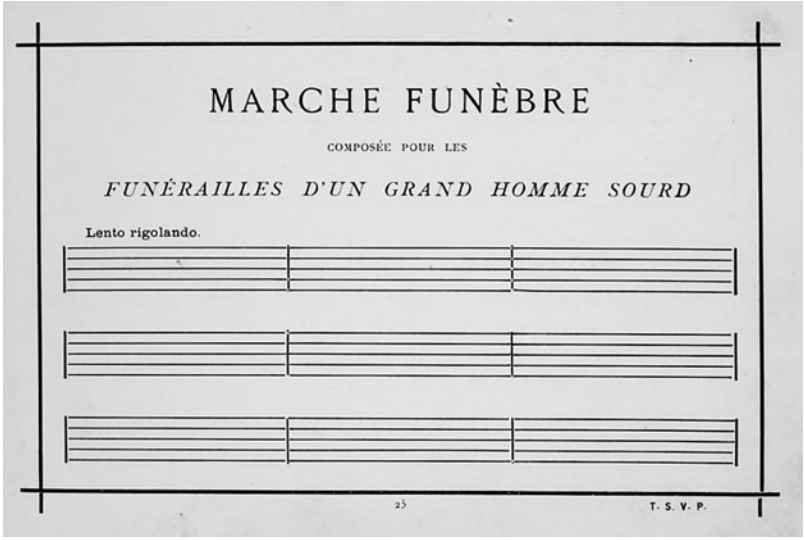
4.4 Andy Mason, cartoon published in Callinicos, *People's History*, 57.

Abstraction

The Black Passage conflates the figure/ground problem in modern art via *Black Square* and infrastructure with the South Deep recording. Noam Elcott's book *Artificial Darkness: An Obscure History of Modern Art and Media* unites the two as media environments, profoundly "unnatural" spaces made possible with electrification and modern art.[9] He writes of darkness as it relates to a set of cartoons by Alphonse Allais in 1897 in the book *April 1 Album*, where seven monochrome squares, fancily framed, are captioned with text. The first is a black rectangle and reads: "A Battle of Negroes in a Cave on a Dark Night." In 2015 (after Elcott finished his book), the Tretyakov Gallery examined the damaged painting in preparation for the centenary of its making and found the beginning of the phrase "A Battle of Negroes in a Cave" under a layer of white paint that frames the internal black square in Malevich's *Black Square* (see plate 8). Total abstraction had long been a preoccupation, as well as the notion of a secular infinity. The discovery stunned some scholars, who realized that Malevich's inscription deals a blow to "Modernism's pretensions to natural signs."[10] Hannah Black argues via Fred Moten, Saidiya V. Hartman, and others that the inscription confirms the racialized mechanism at work in notions of freedom and modernist abstraction.[11]

4.5 Page from Allais, *Album Primo-Avrilesque*, 7.

Allais's racist joke works because one cannot, as it were, distinguish figure from ground, which, for Black, is the subject/object dyad. But this absolute self-sameness is only possible—only funny—because it occurs within a culture where typology is naturalized: a secular modernism that creates gender, sexual, and racial difference. Recall that this set of cartoons includes the colors blue, green, ochre, red, and gray, each of which corresponds to social roles, class and age demographics, or clothing. But the black square is the only type that corresponds to corporeal "ground." It is again confirmed, with Malevich's hidden message behind a manifestly flat surface (the fetishized planarity of modernism), that the myth of racial difference is the conceptual precondition of modernist purity and underwrites the figure/ground relationship of Enlightenment philosophy. Noam Elcott reminds us via Alois Riegl that "absolute darkness was a limit, a joke."[12] Alphonse Allais didn't just create his pun using a visual prompt but included the aural in his *Funeral March for the Obsequies of a Deaf Man* (1897), a composition notated by nine blank measures that prefigures John Cage's *4′33″*. In both the monochrome and the silent music composition, the issue of medium, the framing device, is crucial to any perceived experience of pure vision or hearing. Seth Kim-Cohen writes of the tendency in the sonic arts for sound to "know what it is," which his argument seeks to undo by linking sonic art to conceptual art and minimalism.[13] *The*



4.6 Page from Allais, *Album Primo-Avrilesque*, 25.

Black Passage references the unrepresentable conditions of mining external to art and discourse, including the literal scarring, scraping, and carving of extraction.

In *The Black Passage*, Orpheus's song is refigured as a stereophonic sound sculpture—Malevich's *Black Square* exploding outward to create a total environment of darkness. The participating body enters the black square, the depth of which only further enfeebles the myth of absolute flatness in *Black Square*—the painting now cracking as it surrenders to the elements, reluctantly revealing the (open) secret of the racial pun within. *The Black Passage* engulfs the visitor's body deep in its conceptual condition, the amplified sound and blackened space—a body, however, assured of its safety. The elevator, as Webb elaborates, is "this metal cage, flashing down one of the deepest holes in the ground."[14] He goes on to say that *The Black Passage* attempts to both enact and reference a rite of passage. This revealing of "true" elevator noise reaches out toward the truth of what the elevator does: shuttles black bodies back and forth to an unbearably hot rock face where, slowly, layers are peeled away to reveal an element that will be refined into saleable gold. The elevator is a medium: in a process that never rests, it brings bodies down and minerals up, shuttling back and forth the objects, substances, and energy of a never-ending cycle of capital.

The Black Passage was first installed for the 2006 MTN (Mobile Telephone Networks) New Contemporaries Award art exhibition given to five emerging artists. Since then, it was installed in 2007 at the National Arts Festival in Grahamstown, South Africa; the Palazzo delle Papesse Centro Arte Contemporanea, Siena, Italy, in 2008; the Ninth Biennale d'Art Contemporain de Lyon, Lyon, France, in September 2007; and in a solo show at the Midlands Art Centre in Birmingham, United Kingdom, in 2010. At the time, the art critic Sean O'Toole wrote that the piece is "[a]n absence meditating on an ephemeral sound presence, this invisible sound sculpture is also a black nothing."[15] Webb's work engages in classical Western art-historical investigations of the relationship between sound and vision, as in the work *Scream*, where the gallery staff of the Reina Sofia were invited to scream in front of Picasso's *Guernica*; the work was then displayed as a quadraphonic sound installation with the signed certificate of permission from the Reina Sofia displayed alongside the sound waves.[16] Other direct interactions with urban space manifest in Webb's work, as in his *In Living Memory of What Never Happened* in Cape Town and Johannesburg (2013), which announces a recorded message of calm to an unsuspecting public, and *Siren* (2010), which consists of an air raid siren mounted on a building in Johannesburg, the switch of which is locked with two keys, one belonging to the collector and the other to Webb; the work can only be unlocked in the case of an aerial or ground attack within South Africa.

Webb has an enormous database of field recordings, both significant and eclectic, and he teaches field recording in community workshops. This aspect of his work, its place in the history of field recording, is noted in several works, like *There's No Place Called Home* (2004–present), Webb's ongoing work that broadcasts foreign birdcalls from speakers concealed in trees in Johannesburg, Argentina, Japan, China, and Italy. The birdcall, a mark of territory, is in this work transformed and deterritorialized—the bird now resides in the ether of media and is thus able to be pumped into a different physical territory, still marking its territory. *Prayer* (2002–present), a profound work of empathic connection, records various prayers from spaces of worship around a given city and replays them for visitors in a gallery setting. The speakers are set into the carpeted floor, where visitors remove their shoes and prostrate themselves to hear the residents of their own city offer their most intimate and publicly expressed messages. Field recording straddles the line of signal and noise, where the ambient sound is not seen as interference but as gaining significance through the proposition that it is without a motivated message and thus "pure." Webb's work is part of the ethos of Julian Jonker and Ralph Bor-

land's *Song of Solomon*; they share the critique of the history of field recording as a practice of ethnomusicology. And like *Song of Solomon*, *The Black Passage* maps together extraction economies and the literary and art philosophical tradition of abstraction.

Field recording had a history of being an ethnographic process that would only intensify throughout the twentieth century. Both human-made and natural sound was collected beginning with the first recording devices, with records having a particularly complicated technological history in the field. Field recording relies on a precious nearness to unfiltered sound, relying on the ambient (as opposed to the sonically controlled studio). Webb collaborated with the sound artist and experimental musician Francisco López during his field recording workshop in 2013 in Limpopo Province. López, a prolific sound artist with an enormous database of sounds, runs the annual workshop, an "extensive exploration of natural sound environments."[17] Webb, however, departs from López's preference for African sound as rural Limpopo—the field recording of *The Black Passage*—is perhaps the most artificial but now naturalized sound of the South African landscape.

The history of the field requires the collector to distinguish between signal and noise; here the elevator as a piece of infrastructure is neither. One way to think about noise, in addition to its status in communication theory as ambience or the opposite of message, is disorganized sound. The noise that emanates from a mechanical assemblage like a mining elevator is transformed into a thing: in Webb's recording, a digital file. Adorno once wrote about this in terms of a phonograph, the object that "acknowledges the dominance of things over people," referring to Marxist fetish capitalism, as was Adorno's orientation to mass communication.[18] The particular ambiguity of this thing, the recording of the elevator, nearly requires that we build up associations of context, such as the mineral being mined, the history of mining, and the Third World as a site of extraction. These slippages of allegory that many have written of in relation to artists who work in the Global South in *The Black Passage* is ambiguously decided by the artist and/or the visitor to the work. That is, the sound waves only become signal after the fact of their capture and transmission. A mining elevator is perhaps the most rote piece of infrastructure there is in a subterranean mining economy. As Brian Larkin writes, "Taken thoughtfully, [infrastructure] comprises a cultural analytic that highlights the epistemological and political commitments involved in selecting what one sees as infrastructural (and thus causal) and what one leaves out."[19] The causal identity of the mining elevator multiplies the more one focuses on it:

its history of displacing the laboring body, its status as a medium penetrating and retreating from deep earth, its care of the body as providing the way out of intense pressure and work.

Actions of association are key to the *The Black Passage*. The light serves to make visual reference to Malevich's *Black Square*, while the constructed tunnel renders Orpheus's journey as a spatial experience that is essentially bidirectional. The agency of the visitor to the installation is limited by a menacing, trickster-like work that robs the body of orientation by sight. The two choices for the Orphic imitator are to go toward a wall of sound that is also the only visual stimulus, the terminus of the tunnel, or to turn away from it and distance oneself from the felt pressure of the amplified sound. If I choose to turn away and walk out of the tunnel into the light, I walk away from, essentially, the representational elements of *The Black Passage*: the recording of the elevator and the black square. This inverts the usual reading of the Orphic journey, in that the trip toward the light for Orpheus was the plight of representation, the chance to finally render and keep Eurydice. *The Black Passage* references alchemy, as in base metals turning into "gold," and the consequences of that transformation, the inevitable pull into an underworld, of which there are countless and multiplying manifestations.[20]

The Black Passage does not visually refer to the labor conditions of South Africa but imprints its ambience—its condition—through the ambiguous sound of the elevator. Moreover, its amplification attempts to compensate for its removal from the source. The experience of the corridor in its test of sensory endurance also tests the limits of the artist's function in producing a specific aspect of modernism that Webb, as a white artist, has not lived, nor most of his audience. That is, as a work of abstraction, the laboring black body is only implied in *The Black Passage*. The absence extends to the ambivalent modernist art shuttling of background and foreground as an index of the Enlightenment subject and object. But as one is drawn closer to the likeness of Malevich's *Black Square*, it becomes clear that we have again been redirected to another elusive target, a wall of sound framed by light, artificially rendered black. Paralleled by the development of artificial light and the advent of controlled electricity especially, artificial darkness was part of an increased attention on spaces of vision divorced from the situated body. Elcott connects this modernist impulse to blackness to photography and theater space. He historicizes the isolation of vision, for him epitomized by Richard Wagner's Festival Theater at Bayreuth and Étienne-Jules Marey's dark shed made to view chronophotography. Precursors

to the darkened movie theater, these dark spaces engineered a "spacelessness" and disembodiment that can genericize and virtualize the body.[21] Elcott writes, "Cited, imitated, and amplified across the globe, Wagner's darkened theater and Marey's black screen were the paradigmatic sites of controlled darkness in the late nineteenth and early twentieth centuries. But they were in no way site specific. Bayreuth and the Physiological Station were at most metonyms for the larger apparatus of artificial darkness soon reproduced the world over with nearly identical results. Indeed, the specificity of these two sites lay partly in their capacity to negate site, along with space."[22] This reliance on darkness as a method of abstraction is embedded in film and abstract art: both relied on the competing desires for immediacy.

That *The Black Passage* comes in the form of a type of artificially darkened shed indicates the history of darkened spaces, such as theaters or the various spaces of photography, and also a related spacelessness of installation art that arose as the preeminent global form by the 1990s boom of global exhibitions. The isolation of the senses parallels immersive experiences—the amplification of sensory experience. Indeed, the history of amplification is that of heightening experience where all other sense perception is dulled. Frances Dyson writes, "The diverse technologies we associate with new media reconstitute experiences characteristic of the aural, for sound is the immersive medium par excellence."[23] This immersion creates an awareness of the immediate apparatus of the body as housing the various senses, locating specificity in immediate, phenomenological experience. Blackness exists at the threshold of arbitrarity and association.[24] Indeed, the condition of blackness in art shifts from the artist to the artwork to the audience, depending on the identities of all three and the social context in which they exist. Allais's racist joke relies on a culturally specific, shared (in)ability to distinguish the figure from the ground in Malevich's monochrome and in *The Black Passage* as being created by backlighting the speaker stack (see fig. 4.1 above). Such tricks of perception were part of popular culture in early twentieth-century Europe, not only in the Allais cartoons but also the 1915 "wife/mother-in-law" cartoon in *Puck* by William Ely Hill. In addition to a joke that relies on an unspecified "we," it is also the emblematic problem of modernist art, the vacillation between total abstraction and figuration—both of which are culturally marked and experienced. Both, in various points of the history of avant-garde art, are iconoclastic. When the sum is zero, as it was so often in the historical avant-garde and its aftermath, anything can be radical.

Sound Art in South Africa

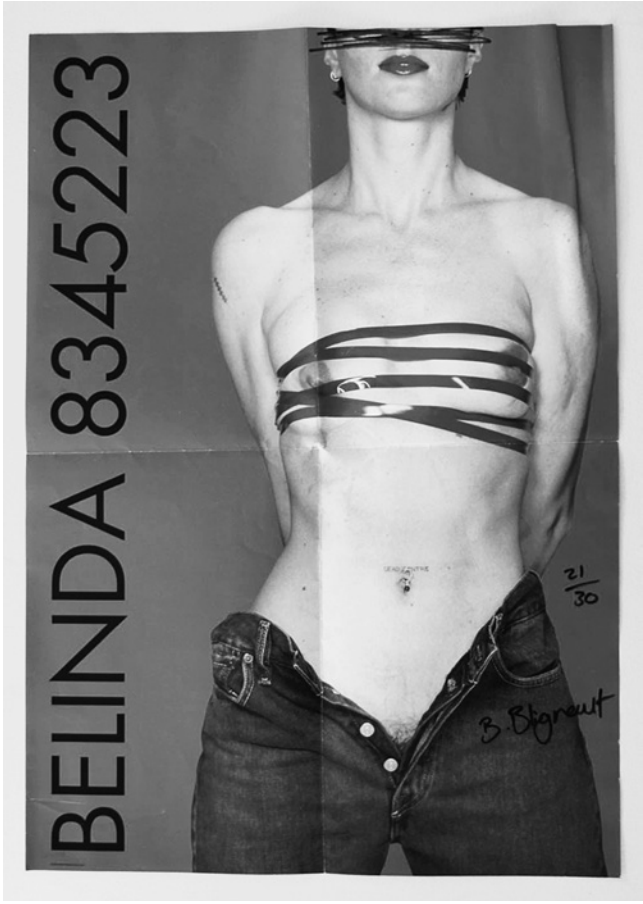
The term *sound art* did not come into circulation globally until the 1980s, paralleling the rise of installation and immersive art in global exhibitions. While most scholars and artists do not like the term *sound art*, it has become useful shorthand to describe an experience- or event-based artwork that uses electronically mediated sound. In Africa, sound art usually appears in urban centers with developed tech infrastructure and a globally facing gallery scene. Self-identified sound artists in South Africa are usually white, though this is quickly changing as the field metastasizes. Continentwide, there have been a few cities that have sustained sound art, most notably Cairo, Lagos, Nairobi, Johannesburg, and Cape Town, and to a lesser extent Luanda. Emeka Ogboh has long been active on the international circuit, having participated in both the Greek and Kassel sites of *documenta 14* in 2017. In Cairo, the work of Shady El Noshokaty and the late Ahmed Basiony have been influential and interfaced with contemporary Arabic-language art. In other parts of the continent, sound art is less precise of a term, bleeding into the realms of recorded and live music. In South Africa, sound art arose during the transition to the democratic election of Nelson Mandela in 1990. Similarly, sound art in Johannesburg corresponds to the city's transition from a mining town to an information economy, or a "global city." Sound transcends the normal spatiality of the mining city of early twentieth-century Johannesburg and, after 1994, becomes part of a broader and more contested space described by Achille Mbembe and Sarah Nutall as an elusive metropolis.[25]

The Trinity Session, founded in 2001, is a broad-based initiative in Johannesburg through which new media artists began to address the apartheid tectonics of the city in more serious ways, using mapping devices and projection in various space-shifting interventions. Stephen Hobbs and Marcus Neustetter started the Trinity Session to intervene in an urban space that was both perceived and experienced as precarious and dangerous. It was also an effort to use technology against its normal fetishization of virtual global space and rather for the creation and integration of local artists. Neustetter began to harness the power of low-tech projects like downloadable picture SMS artworks that use the single pixel as the common ground of an ever-growing and shrinking picture-resolution economy.[26]

It is rare to find a tech-forward arts initiative in South Africa that does not in some way critically reflect on the history and legacy of apartheid in the urban spaces of South Africa. In many new media initiatives, this problematic genealogy is confronted or at least attempted to be bridged through

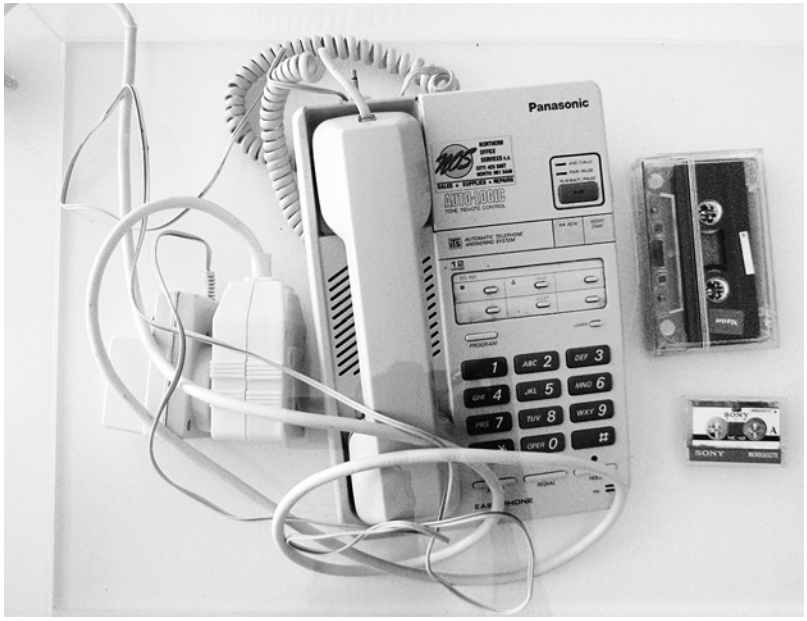
participatory modules. Webb and other major tech artists created the Unyazi electronic music festival in 2005, which was billed as the first electronic music festival and conference in South Africa. The term *Unyazi*, it is worth noting, is isiZulu for "lightning," because there is no Zulu word for electricity. Naming festivals using African-derived words has been a common tactic to signal a shifted orientation to technology (as well as being a successful branding practice). Halim El-Dabh was invited to present his older electronic music recordings, which corresponded to the time that his *Tabir al-Zaar* was recognized by *Wire* magazine as the first work of electronic experimental music. Other participants included Louis Moholo, Yannis Kyriakidis, Francisco López, Lukas Ligeti and Burkina Electric, and Matthew Ostrowski.[27] Others performed audio and video performances, like Rodrigo Sigal's eight-channel audio and video production *Digital Ear*. Though the festival had an international roster of participants, Unyazi was still a relatively specialized group of mostly male, European-derived performers and scholars, reflecting the cult status of the electronic music scene until then, what Theo Herbst called "a very real hemispherical technological divide [and] the reduction of cultural heritage to easily digestible sound-bite length portions."[28] However, it introduced the wider consideration of tech and its history in Africa, which has been amplified in recent years with a related festival, Fak'ugesi.

In addition to having a white racial specificity, sound art, like much of North Atlantic tech art, has also had a gender specificity, so it is remarkable that Belinda Blignaut's *8345223* (1995) was the first contemporary sonic artwork to be exhibited in the country; it appeared in the Australian section of the first Johannesburg Biennale, Africus (1995). The work consisted of a limited-edition poster of a seminude white woman set against a red background, her breasts bound by red ribbon and hands seemingly bound behind her back. Blignaut listed a phone number, and the phone was installed in the Museum Africa and hooked up to an answering machine where the biennale public could listen to the incoming messages. A work that references the impetus for recorded sound—that is, all of what we know of the modern music industry—is based on Valdemar Poulsen's desire in the nineteenth century to leave a message (see chapter 2). Poulsen famously unwittingly invented recorded sound because he understood the frustrated potential of the phone when there was no one there to pick up the receiver. That is, when the desire for connection is frustrated, the secondary and compensatory action is to deliver the message despite the returned desire for communication and despite there being no promise of a future consummated communication. In *8345223*



4.7 Belinda Blignaut, *8345223* (1995). Courtesy of Belinda Blignaut.

Blignaut makes explicit the gendered relationship in any circuit of communication, the aspect of Poulsen's desire that leads him to deliver a message anyway, when faced with an incomplete communication circuit. In the act of an anonymized call, the stakes are even higher: the caller would ostensibly have no way of knowing that what they would encounter was a recording machine, but the circuit could have been complete. The anonymized medium resulted in expressions of unveiled sexual violence and domination from a wide array of voices. The sexualized power relationship that the telephone and its use as a device of potential physical connection stages the amount of aggressive, at times violent, sexual energy that the tape captured.[29]



4.8 Belinda Blignaut, *8345223* (1995). Courtesy of Belinda Blignaut.

Hence, the first sound artwork in South Africa occurred under two auspices: the introduction of the biennial international exhibition form into the country and the postapartheid period with the years-long truth and reconciliation hearings. Africus sought to reintegrate the segregation of South Africa by a curatorial program that practiced radical inclusion. It was a short-lived attempt at large-scale consensus, a "coming-out of the South African art community after four decades of isolation."[30] The next iteration in 1997, Trade Routes, was curated by the Nigerian American curator Okwui Enwezor and was much more attuned to the international art world. This relative isolation of South Africa's art world was due to many factors, including an international cultural boycott and the relative lack of resources for travel. Additionally, the mediascape in South Africa was much more constricted than most countries, with full-scale censorship practiced by the Nationalist Party in power and the lack of television in the country until 1976. To say that South African contemporary art was behind its time is one way to describe what happens to art under protracted authoritarian regimes, especially those with Christian conservative ideologies. It was a scene that was provincial and run

by a majority of white curators, educators, and artists. Africus illustrated this well, with installation art and the work of three hundred international artists shown alongside woodcarvers like Noria Mabasa and Jackson Hlunghwane. The South African media artist Candice Breitz wrote of the exhibition venue in an industrial warehouse downtown: "With its dank corners and network of pipes, the building became a strange metaphor for post-Apartheid South Africa, a giant skeleton replete with reminders of its violent past."[31] That is, installation art appears in South Africa as always already an allegory of the fractured urban space of apartheid.

Command and Control

Webb's performance *The World Will Listen* (2005) switches off the power breaker for a gallery during an opening for four minutes and thirty-three seconds, a reference to Cage's *4′33″*. The performance of this work that I experienced was at a sound art exhibition at the Bag Factory in Fordsburg, Johannesburg, in 2012 during an exhibition that demonstrated the broadening field of sound art. The gallery, which was very noisy, suddenly went quiet and black. As if by second nature, all of us visitors clicked on our mobile phone flashlights. I was queueing for a drink; we all remained in line; I retrieved my drink and strolled outside onto the small urban street where there were two oil-barrel fires that had already been lit for ambience. I assumed that the cut was due to a common power failure in the city. In fact, the audience would not have any way of knowing that the piece existed as an intentional power cut unless they came across documentation of the artwork after the fact or, as in my case, spoke to someone in the know at the exhibition. The command of *The World Will Listen* is thus undermined by an unknown agency well beyond the purview of the artist or his audience.

The title *The World Will Listen* obliquely referred to the 1987 album *The World Won't Listen* by the British indie-rock band the Smiths; Webb has named another work after the Smiths song called *There Is a Light That Never Goes Out* (2010), a lighted sign of the Arabic transliteration of the song title that was installed at the Daran al Funun Foundation in Amman. At the time, the many responses to the song varied from cynicism to resolve, indicative of the speech that the Smiths engaged in during the 1980s in their criticism of Margaret Thatcher. Such criticisms of Thatcher are, that is, leftist credentials that allow the lyric to travel relatively frictionlessly. However, the suspicion

about an ambiguous lyric, a command, on the Smiths album *Hang the* DJ, was deepened by the band leader Morrissey's comments in a press interview about the supposed existence of a black pop conspiracy in the United Kingdom and his curious claim that reggae music glorified "black supremacy."[32] Like the inclusion of the joke underneath Malevich's *Black Square*, the accusation of Morrissey's racism is premised on the integrity of reading when text is steeped in sarcasm and irony. This same album was used by another UK-based artist after Webb's work: Phil Collins's *The World Won't Listen* (2007), which entailed his filming people singing karaoke versions of the album in Indonesia, Turkey, and Colombia. In contrast to the Smiths' many album covers formulating the desiring white (if queer) body, Collins's characters return the repressed racialized body as evidencing the world of influences that any pop artist by 1987 could draw on.[33]

In turn, Webb's work inverts the stakes of the title, from a type of cynical defeatism characteristic of the Smiths' affect to a meaning and orientation that is menacing. In a title that borders on a threat, *The World Will Listen* implicates itself, if not Cage's *4′33″*, in the arbitrary power relationship of the command language of electricity. In fact, Webb lists the materials of the artwork to be, simply, "electricity." The statement also states that the power is cut, thereby "killing the lights and all electrical current." If *The World Will Listen* also looks to Malevich's zero of form, the electrical cut now performs a type of zero of flow. The set of instructions embedded in electrical language is the basis of the protocological language of data processing, the sets of commands by which machines run. *The World Will Listen* matches Deleuze and Guattari's declaration that the "radical transformation of language with capitalism" is found in an electric language that is a set of instructions and not signifiers. They write, "Electric language does not go by way of the voice or writing, data processing does without them both."[34] For them and subsequent media theorists, this lesson has not quite been internalized in the arts and letters, where most still focus on signification. Both *The World Will Listen* and *The Black Passage* combine the command language of conceptual art and information processing, while also referring to Deleuze and Guattari's ur-figure of nomadism, the antistate outsider, the metallurgist.[35]

Comparing *The World Will Listen* to John Cage's work, there was a qualitatively different method of notating music once it was understood as electronically reproducible signal and noise. Cage was equally moved to reorient himself to figuration as a method of representation, particularly when composing *4′33″*. Liz Kotz argues that Cagean philosophy is "partly the result of

changes in material support and medium," and *4′33″* is "part of a perverse turn to language that occurs in reaction to the electronic inscription of sound."[36] Kotz argues that Cage only arrived at *4′33″* after his experimentation with magnetic tape recording, when he realized that it was written on a tape. That is, the magnetic tape registered sound as a field of positive or negative charges and not as the traditional figure/ground relationship of musical notation. Language becomes synonymous with charge, existing as a physical phenomenon and as representation.

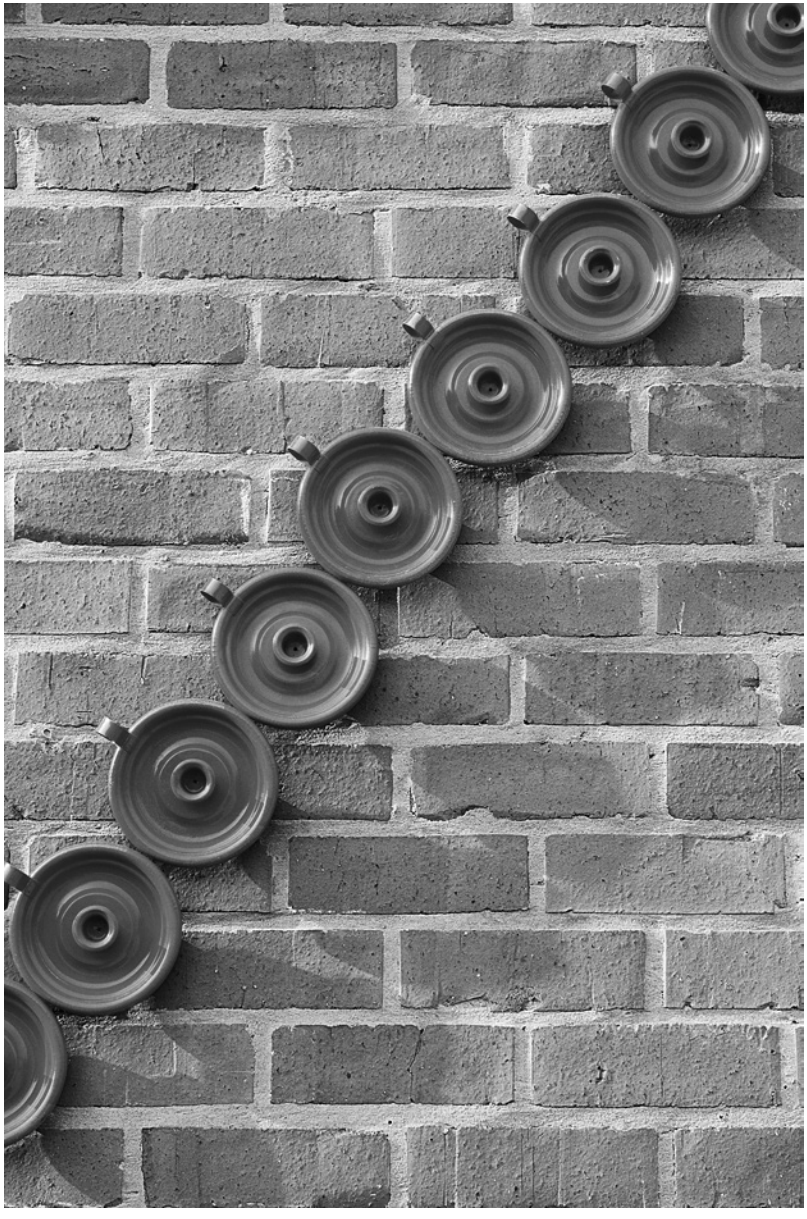
The on/off characteristic of *The World Will Listen* contains elements of the digital also found in Martin Creed's *Work No. 227 (The Lights Going On and Off)* (2000). Inspired in part by George Brecht's 1960 set of instructions called *Three Lamp Events*, *Work No. 227* belongs to what Ina Blom calls "a late 1990s 'lamp discourse'" that recalled the art/life continuum and aspects of domesticity after electrification.[37] Part of the purpose of the gallery changed in the 1990s, she writes, where the gallery was outfitted with furniture and mundane objects, such as lamps, all meant to signal that it was a place to spend one's free time. She goes on to a longer discussion of lamps within contemporary art, which act to link the Romantic concept of art to our current media reality: "The lamp works evoke both the networked continuity of electronic wiring and the continuous activity of projection that subtends our current way of living, thinking, and producing."[38] But what subtends electricity almost anywhere in Africa is the sense of its precariousness, a different perception of the flipping of the switch, a matter to which I'll return.

Douglas Kahn highlights the aspects of Cage's work that Cage himself might have repressed, what he explains in terms of his abdication of his own social situatedness: "When [Cage] speaks of silence, he also speaks of silencing."[39] *The World Will Listen* takes this discourse to a level much more obviously integrated within discussions of the state and its powerlessness in the postapartheid era of South Africa. That is, electricity is hardly invisible at all as a medium, and its absence/presence is keenly felt as content within everyday life. In *The World Will Listen*, the promise that basic services would be delivered after the 1994 elections has been undermined by the power companies' careful calculations about risk and profit. Common is the experience of rolling blackouts, where electricity is cut off randomly and sometimes without warning. Failing infrastructure in Africa and elsewhere is often spoken of in terms of puns that both naturalize the problem and serve to linguistically control an environment quite out of any one person's (or country's) control.[40]

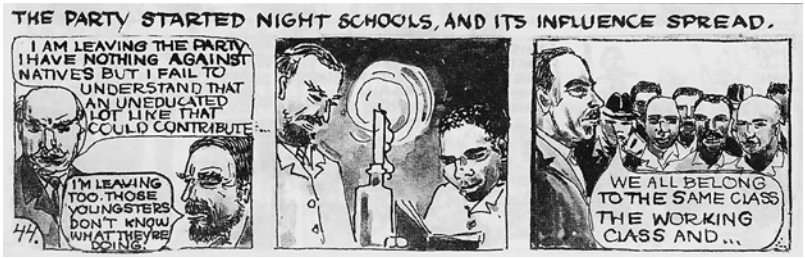
Candles and Bulbs as Power

In one illustration of the broken promises of infrastructure, Brett Murray installed a public artwork called *Power* (2008) (see plate 9); the promise of universal access to electricity is figured in a satirical reflection on a tag line of workers' rights: "Power to the People." What has resulted, however, is the continued reliance on obsolescent technology that Murray indicates with his installation of candlestick holders that constitute the cursive script. Murray included cursive script because it has "a personal immediacy to it."[41] Paired with the analog candles, the script is a bit of media primitivism, in that it displays both a desire for immediacy and the critique of its own simplicity, the "one-liner." What is being offered up is a retrograde solution that emphasizes darkness more than it does light: taken both allegorically and literally, combustion not yet transformed into power. In siting the question of infrastructure at exactly the site of the flame, Murray allows us to examine the "pun" as the slippage in meaning that corresponds to the slippage between what Daniel French calls "paradigms of physical relationships" and the changing meaning of things that accompanies technological epochs.[42] Far from a progress that does not look back on the prehistory of light or electricity, the candle does not allow the "technological pathway" to be obscured. Light is a byproduct of burning matter, a set of parameters of cause and effect that is much more localized than the electrical system, which, due to the state apparatus, works in fits and starts. Murray's piece, like South Africa itself, contains a multiplicity of technological epochs.

Murray's work brings out another common feature in the visual language of South Africa: the pairing of black South African bodies and candles. In the antiapartheid populist publication *Power to the People!* by the Swedish activist and graphic artist Peder Gouwenius, black (and white apologist) intellectuals and freedom fighters are often depicted as doing their work debating, writing, and assembling by candlelight. It metaphorizes clandestine political activity and also the "humble" technological means by which such work was done. The trope appears in another key publication on the plight of black labor and life in South Africa, Cole's *House of Bondage* (1967).[43] A photo from the book shows a child drawing a landscape by candlelight. The caption reads, "Moses Mogale does homework by candlelight. Township houses are not equipped with electricity."[44] Though a seemingly neutral statement, paired with what is happening in the photograph, it becomes a deep critique of the visual culture of South Africa. The ever-present landscape painting in South Africa, so by British art, is here copied by the boy, just as he is experiencing the



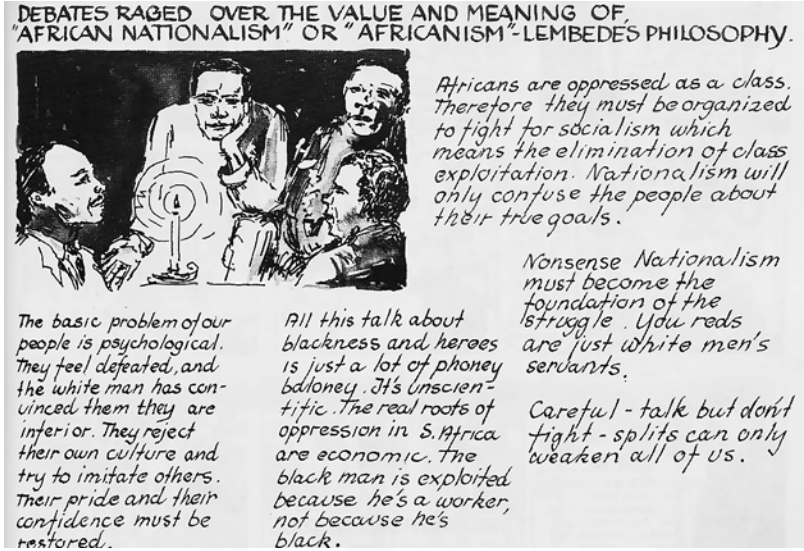
4.9 Brett Murray, *Power* (2008), detail. Courtesy of Brett Murray.



4.10 Extract from Gouwenius, *Power to the People!*, 44. Gouwenius, a Swedish activist, wrote about the relationship between economic status and race as it shaped access to power and infrastructure in South Africa.

dispossession of land. That he was assigned the work of producing a landscape is as unusual as the fact that the visual mode of surveillance that the landscape rests on is unavailable to the boy. Instead, he mimics the activity using the "primitive" light of the candle. Both genres, the landscape and the candle, are in 1967, the date of the publication, obsolescent: both are associated with this young black boy. Electricity, then, became one potent symbol used by activists to demand equal access to services in the face of a forced racialized relationship with technological obsolescence and also the site of antiapartheid acts of sabotage.

The set of instructions embedded in electrical language is the basis of the protocological language of data processing, the sets of commands by which machines run. If code and electricity must be programmed by both language and materials, and the relationship between the two, the transformation of material always has some element of power and control built into it.[45] Further, in the process of colonizing and transforming Africa, Europeans' control hinged on the ability to transform/deform not only the process of extraction but also the representation of the trauma of such micro and macro structural change, a representation that relied on trickery and smoke-and-mirror justifications. Colonialism wasn't a continuation of slavery, as the colonial administrators openly reasoned, but the civilizing effects of labor.[46] The causational shift reached a benchmark with the advent of the Victoria Falls and Transvaal Power Company (VFTPC). Developers belonging to Cecil Rhodes's British South Africa Company dreamed of an electro-utopia as great as the falls themselves, based on similar hydroelectric power generation at Niagara Falls. The plan was presented to Cecil Rhodes by Rider Haggard, the author whose novels romanticized British colonialism, the fiction being presented as



4.11 Extract from Gouwenius, *Power to the People!*, 77. Gouwenius's book clearly mapped out the territory between economy and race as it related to access to infrastructure in South Africa.

4.12 Image published in Ernest Cole's famous photographic book, *House of Bondage*, 94. The caption in the book reads, in part, "Moses Mogale does homework by candlelight. Township houses are not equipped with electricity."

4.13 Extract from a nonprofit community newsletter in Cape Town, *grassroots* 2, no. 1 (March 1981). A cartoon depicts the fight for electricity in the suburb of Bishop Lavis. The first frame of the cartoon depicts each area as a house; all are lit by light bulbs except Bishop Lavis, which burns a candle. The offices of *grassroots* were burned to the ground in 1985 after multiple clashes with apartheid police.

a civilizational truth. As Renfrew Christie later opined about the project, "speculation often requires lies and hocus-pocus."[47] In the end the nearly impossible plan was only partially realized. Electricity—that eminently visible form of power—was only part of Rhodes's designs on the continent; he personified the concept of monopoly.

The buildup of modern industrial South Africa had as a key feature the distinction drawn between the figure of the native and "new" technology via the reading of a reaction to a key innovation with wonder and awe. At the height of the antiapartheid struggle in the mid-1980s, African National Congress member Renfrew Christie wrote about such domination over the infrastructure of South Africa, as it became a focus for acts of sabotage in the antiapartheid struggle. Christie recounts a story that circulated in the diamond-mining town of Kimberley (James Webb's birthplace), when officials claimed that "raw natives flocked from far afield to see the magic of all the street lanterns

lighting up simultaneously, with no man near them. Groups gathered in the streets after sunset and acclaimed 'Tagati!'"[48] The natives' supposed reaction to the electrical light reassured the mining officials that natives and electricity are both unformed, mysterious, and amorphous—that is, waiting to be harnessed and brought out of the darkness.

By 1892, electricity and its communicative capacities were politicized widely. *Punch* magazine illustrated Cecil John Rhodes's portly figure standing astride the continent holding the first Cape-to-Cairo electric telegraph cable. His body, his persona, becomes the territorial armature of electricity and its translation into communication: Rhodes as Colossus outdoing the Seven Wonders of the World. Here, the transmutation of energy into information that spans the continent is summarized in the figure of a colonial tycoon/buffoon, with such an oversized ego that would be comical had it not wreaked such enormous destruction. Within this image, Rhodes's figure becomes a metonym for the scope of that violence and exploitation introduced to the continent, an Oedipal figure of the type Deleuze and Guattari describe as representing "the interior colony" of psychoanalysis, "colonization pursued by other means" than the physical; the earth is bored out to pull out a figure so absurdly immense that it can only be said to be psychologically compensatory.[49]

Oedipus, that is, was always a fiction that saw Africans as sharing the same "mechanisms or attitudes that constitute our Oedipus."[50] As Deleuze and Guattari remind us, the Oedipal figure is exported to the colonies and, despite the structure not fitting into the setting, paradoxically becomes the most intrusive aspect of colonialism: "Yes, the whites think too much."[51] Achille Mbembe adds the uncanny double of Rhodes as Colossus: "Each time we invoke the word 'Black,' we bring out into the light of day all the waste of the world, the excess whose absence within the tomb is as strange as it is terrifying. As the kolossos of the world, the Black Man is the fire that illuminates the things of the cave—the things of the empty tomb that is our world—as they really are."[52] That is, the term *black* is the deathly double that haunts the Oedipal figure of Rhodes in southern Africa, the allegorical figure that replaces its predecessor. If Rhodes believed that his figure should occupy the African landscape, it was based on an Africa that is negation: "This negation is the result of the work of race—the very negation of the idea of the common, or of common humanity."[53]

This fantasy of South Africa as both the source and the developer of the elements of gold then transforms to Afrikaner nationalism to the uranium that powered nuclear energy globally during the Cold War. South African

4.14 Edward Linley Sambourne, *The Rhodes Colossus Striding from Cape Town to Cairo*, *Punch*, December 10, 1892.

officials not only extolled the miracle of native uranium in the land but, more, the ability for the provincial nation to develop it in the face of the United States' constant testing and checking of their labor. This "metallurgical nationalism," as Gabrielle Hecht calls it, would finally prove the skill of white metallurgists, as gold was clearly the product of black labor and blacksmithing, one of the oldest and most mythologized forms of art and technology in Africa.[54] The 1979 report from the South African Atomic Energy Board states: "Beneath the dripping jungles and the searing desert sands, in the hills and the mountains and the far-reaching grassland and scrubland lie rich mineral deposits which are the envy of nations."[55] It goes on to argue that European South Africans exploited those resources properly, compared to the Zulus who might have mined coal but who did not develop it to its full extent. At the base of this metallurgical nationalism was a belief that modern industry was the proper way to transact mineral sources: from the primitive handling of precious resources to full-scale nuclear development. South Africa, in an attempt to prove to the United States their metallurgical acumen, would go on to develop nuclear energy and arms during the 1970s and 1980s.

Because of the existential threat that the end of mining represents for South Africa, labor disputes are thus characterized by a zero-sum maneuvering throughout mining history. The Bag Factory, where *The Audience Will Listen* was performed, is in Fordsburg, a district of Johannesburg that has a historical link to the electrification of South Africa. The introduction of large-scale electrification in South Africa was one of the precipitating factors for one of the biggest mining strikes in South African history, as the mechanization of drilling and earth removal would require fewer white semiskilled and supervisory jobs. Just a half a block from the Bag Factory, in March 1922, the government of General Smuts performed an aerial bombardment of Fordsburg Square that resulted in thousands of casualties and arrests. Contemporary notions of power and infrastructure swirled around the performance of *The World Will Listen*, as the enduring imbalances of capitalism filled the dead space of the four and a half minutes when the power was cut. Now, in addition to the haunting of early industrialization is its stubborn persistence in the contemporary state—the unevenness and exploitation that takes its form in corporations, the state, or energy conglomerates. Over the years, the South African power monopoly Eskom (Electricity Supply Commission) has become a symbol in its own right—today represented mainly according to its ostensibly poor managerial structure and lack of proper capacity. Despite electrification being a central concern of the new ANC government as it was for Eskom—

starting in 1987 in an ANC campaign called "Electricity for All"—the opposing forces of privatization and nationalization inevitably led to a frustration of the goals of postapartheid resource redistribution.[56]

Its dizzying array of actors, both government and private, has yet to settle into an entity that services the people. This labyrinthine structure of people, politics, wires, and generating plants is best understood in moments of disconnection. In these conditions, the insecurity of a total field of sound, shot through a kaleidoscope of actors and materials, has a much different effect on how one practices art than merely the search for new textual forms of representation. One book to come of this searching was *Load Shedding: Writing on and over the Edge of South Africa* (2009, edited by Liz McGregor and Sarah Nuttall). Borrowing the technical term for planned electricity outages, *Load Shedding*'s allegoricity is part of the overall orientation of these scholars to the psychic effects of "everyday life" on South Africans. Many residents who experienced the rash of load shedding during this time described a rapid succession of on and off switches, as if someone were flipping a light on and off. That is, the localized, mindless, automatic action of flipping a switch on and off—the "lamp" that subtends all of our ways of thinking according to Blom—could also be enacted by a massive system failure that signals the end of privileged life.

The Black and White of Representation

This supposed end to privilege has long been an existential fear in white South Africans and altogether unfounded but exists as white anxiety over the mining economy and its exploitation for profit. The irony in articulating the position of the imposter is dramatized in much contemporary South African art and was a feature of William Kentridge's early work. If there were to be an emblematic illustration of the absurd hubris of settler colonialism, it would surely be his drawing for projection *Johannesburg, Second Greatest City after Paris* (1989). The film features Soho Eckstein, a mining magnate and his alter ego, Felix Tietelbaum. Surrounded by ticker tape, early twentieth-century phones and a pinstripe suit, and tortured by anxiety and unfulfilled sexual desire, the monster Eckstein knows he is out of place. To compensate, he "buys half of Johannesburg." The combination of early modernist music and technology featured in Kentridge's early work evokes the history of colonization, but it is also a deliberate attempt to obsolesce

oneself, to mediate and thus make strange the temporality that made the European presence in Africa seem natural. Two iconic shots from *Johannesburg, Second Greatest City after Paris* are Soho (after Rabelais's Gargantua) sitting at his table overeating, intercut with the undistinguished masses filing through the landscape, indicated by marks of charcoal reminiscent of Claude Monet's one-man, one-brushstroke masses in *The Rue Montorgueil, Festival of 30th June 1878* (1878).

Many white South African artists have spoken of this problem in approaching art in South Africa, both in the weight of the signifier of blackness and in the habit of non–South African critics and historians of filtering their work through the enormous specter of apartheid. Apartheid in this sense has become a symbol/fetish and commodity. William Kentridge calls art that thematizes apartheid, simply, bad art. The rock that appears in many of his early drawings for projection indicates the two things the artist faces: the tyranny of a history of apartheid and the moral imperative arising from that. In 1990, he wrote of this problem that has been quoted extensively since but is worth repeating: "To escape this rock is the job of the artist. These two constitute the tyranny of our history. And escape is necessary, for as I stated, the rock is possessive, and inimical to good work. I am not saying that apartheid, or indeed, redemption, are not worthy of representation, description, or exploration, I am saying that the scale and weight with which this rock presents itself is inimical to the task."[57] This quote has been marshaled by several scholars to describe the impossibility of representing certain kinds of political trauma, but it has rarely been questioned. In one exceptional conversation between Kentridge and Kendell Geers, Geers explains that in just a short few years that separated their careers, the urgency to fight apartheid made it impossible for Geers to *not* represent "the rock" and to not put his body on the line by refusing both military conscription and an art studio.[58] In the years since the state of emergency about which Geers speaks, many white South African artists still operate under this question, to the extent that the aims of the antiapartheid movement have remained unfulfilled.[59]

Unlike Kentridge, who was more interested in citation as a matter of history, Webb cites figures that evoke the contours of what is not possible to represent. The visual representation of mining in South Africa has primarily been in the prolific amounts of photographic images of the compounds, mine shafts, and living quarters. Mining enterprises have been historically very strict about security and secrecy and limit the use of cameras to company officials. Two visual essays in particular were important in providing glimpses into the more

secret aspects of the human toll of mining: Lionel Rogosin's docudrama film *Come Back Africa* (1953) and Ernest Cole's *House of Bondage: A South African Black Man Exposes in His Own Pictures and Words the Bitter Life of His Homeland Today* (1967). In both cases, the authors had to obfuscate their camera or the purpose of the camera's function as evidentiary. Each artist occupied distinct subject positions, as Rogosin was a white American filmmaker visiting South Africa and Cole was a black South African man who smuggled his camera into the mines using a paper lunch bag; he famously took the pictures through a punctured hole in the bag, a "seeing eye" embedded inside of the crinkles and folds of a disposable package for the laborer's food.

The notion that a mine can be represented hinges on the very fact of the laboring body versus the representing body, which is an element of the debate about early modern black art in South Africa. John Koenakeefe Mohl (b. 1903), a painter who trained at the Windhoek School of Art in Namibia, worked the genre of township art and landscape painting characteristic of early black South African modern painting but regularly inserted the black male laboring body as a precondition of the landscape. A recurring theme throughout his landscapes is the varying sources of light from the moon, sun, and miners' lamps (see plate 10). The mix of artificial and natural light is indistinguishable and instead is instantiated by smears of yellow paint on the outer limits of forms: bodies, hilltops, shrubbery, and machinery. Mohl's emphasis of mining as largely a condition of light and dark plays on the racial dynamics of mining as it correlates to the notion of miners never experiencing the light of day because of the hours that they work in the dark underground. The landscape is structured by the hulking, haunting forms of mine shafts so often featured in the imagery of South Africa and also by bodies that stand under a canopy of power lines, thereby unifying the twin aspects of "power" in South Africa: infrastructure made sensible in terms of what is available to the senses after industrial electrification and the distribution of subject positions within mining infrastructure. Sense perception, for instance, would be radically shifted according to a life lived without the light of the sun: the forms and experiences that are available to a person with such a radical restriction of the visual field.[60] Perhaps unironically, Mohl started a group called Artists Under the Sun, whose members sold paintings in and around Joubert Park, outside of the lighting-controlled interior of the adjacent Johannesburg Art Gallery.

Steve McQueen's 2002 film *Western Deep* records a different but similarly inhuman deep mine, using the same sound of the elevator in jarring juxtapositions of sound and silence with light and dark, to elicit a bodily experience. It was

filmed in the Western Deep, or TauTona, mine outside of Johannesburg—the second deepest mine in the world after South Deep. On the gallery label, McQueen describes *Western Deep* and its companion piece *Caribe's Leap* as "allegories of oppression." *Western Deep* uses the sound of the elevator and does so in a clear attempt to elicit experience in the audience. By the end of the piece, when images of the bodies of the miners have been shown being violated and systematized, there is no doubt what should be taken away from the work. Though the film starts out as another of McQueen's meditations on the conditions of viewing and the camera, gradually the possibilities of the film's interpretation close. The black body is shown in a similar fashion to those in Cole's famous photograph of a line of nude miners depicted from behind at the moment before they are inspected for fitness and evidence of theft. *Western Deep* is indeed an allegory of race and labor oppression. T. J. Demos writes of the intensity of the sound when inside the darkened installation, extrapolating it into an allegory of modernism: "It's as if we have suddenly found ourselves blind within the grinding internal organs of some industrial machinery."[61] Demos and other critics made connections between the oppressive conditions of the mine and that of the claustrophobic theater where *Western Deep* was screened, walking through the possibilities of sensation in installation art and cinema being marshaled for an empathetic connection to the miners. Such total connection is, of course, impossible.

That Webb suggests depicting the miners is voyeuristic puts a kind of distance between himself and laborers but also displaces onto the audience a general experience of pressure of the subject/object dichotomy without recourse to the visual referent. The exhibition visitor is, according to Webb, Orpheus descending.[62] On its own, that doesn't tell me much, but instead, in his reference to Orpheus descending, I take Webb to mean that the artwork in its totality—the production and reception—is a fraught intermediary of a desire for significance, or at least the finality of "meaning." That is, Malevich's *Black Square* is grafted onto the ancient story of art's origins and limits and also what Maurice Blanchot calls art's "misguided violence."[63] If we are to gaze directly at the impossibility of representation regarding the particular specter of apartheid in present-day South Africa, it might be to reveal a desire to represent and therefore know the depths of its misery, to reveal the repressed. In his famous essay that links Orpheus to the plight of the writer, Blanchot reads this as, ultimately, the authentic "unreality of the void." He writes, "But if inspiration means that Orpheus fails and Eurydice is lost twice over, if it means the insignificance and void of the night, it also turns Orpheus towards that failure and

4.15 & 4.16 Film stills, *Western Deep*, directed by Steve McQueen (2002), showing the barely discernible face of a miner in a darkened elevator shaft as it descends into the Western Deep mine.

that insignificance and coerces him, by irresistible impulse, as though giving up failure were much more serious than giving up success, as though what we call the insignificant, the inessential, the mistaken, could reveal itself—to someone who accepted the risk and freely gave himself up to it—as the source of all authenticity."[64] Blanchot's essay tests the limits of what is possible in Western thought; it is the outermost edges of its most cherished technologies of representation: literature, art, images, and so on. Blanchot's essay posits that to centralize the void is to write from the outside. Blanchot's thought about the void comes, as Michel Foucault admiringly wrote about his work, from a long line of Western thinkers who sought to shatter the interiority of representation: Marquis de Sade, Nietzsche, Mallarmé, Artaud, Bataille, Pierre Klossowski.[65] And as we have come to expect, most of those writers Foucault names relied on ethnographic accounts of civilizational Others in order to conceive of an outside.

Similarly, sound art was often used as the escape route from language, the promise of pure sensation untouched by analysis. Modernist musique concrète and other iterations promised a purer and less mediated experience, unrepresentable. Webb's invocation of electricity as the material for his work in the labeling of *The World Will Listen* makes visible what has become naturalized (invisible) in media art. The kind of art that relies on the negation of mediation is, like the *Black Square*, cracked and showing its age and fragile materiality. *Black Square* stands in for a grand myth of abstraction, purity, and immediacy that relies on an ongoing repression of racializing and gendering mechanisms. It stands for the myth of the absence of myth. *The Black Passage* hints at the scale of extraction; the cycles move from operating "inside" of human history to larger cycles of geological history and movements of energy. The next chapter will begin to approach those issues in full.

FIVE "THE EARTH AND SUBSTRATUM ARE NOT ENOUGH"

> The things that she has concealed and hidden underground, those that do not quickly come to birth, are the things that destroy us and drive us to the depths below; so that suddenly the mind soars aloft into the void and ponders what finally will be the end of draining her dry in all the ages, what will be the point to which avarice will penetrate.
>
> —**PLINY THE ELDER**

> After gold came uranium.
>
> —**GABRIELLE HECHT**

In a more recent article that connects extraction economies to classic interest about the interpenetration of magic and capitalism, Fillip De Boeck quotes a twelve-year-old Congolese boy who is accused of being a witch.[1] The boy explains that he does his work at night, a constant calculation and hustle that takes place with the menacing presence of the soldiers that were left behind when President Mobutu died. De Boeck writes, "For centuries, within this Central African setting, the speculative character of capital has been connected with the spectacular nature of the world itself, a world that oscillates around the two sides of the speculum, the diurnal and nocturnal, the world of the living and of the dead, of reality and its double, the reverse and the obverse, the visible and the occulted, the material and the oneiric."[2] De Boeck

goes on to describe the relationship, written about extensively by John Thornton and Wyatt MacGaffey, between the Portuguese saint figures and mirrors that entered the continent in the early days of contact; they became attached to ritual practices of wealth attainment. Because they were strange, they were like the fetish object for the Europeans but associated with "white" objects and foods, such as potatoes, bread, plates and forks, and dollar signs. During centuries of slave trading, an elaborate model of credit and morality developed alongside witchcraft, with differing value systems coming to clash with one another as humans became not just commodities but also currency.[3] De Boeck insists that the ongoing and uncritically celebrated "revolution of modernity" in contemporary Congo is not a break with the past but altogether commensurate with old ways of interfacing with radically different ways of valuing goods, bodies, and kinship systems. Such terminology indicates the slippage between consuming and being consumed and has been found in West and West Central Africa since the advent of the slave trade.

One of the persistent misunderstandings of *nkisi* is how they are activated by spells and other practices loosely called "witchcraft," a term that shifts according to insider and outsider status. However, Patrice Yengo writes, "Witchcraft is not the blind spot of kinship, it is its focal point," related to social change and political violence.[4] In western Congo, the semantic slippage includes the Kikongo word *kindoki*, which means "selfish" and/or "hungry" and is related to sorcery. But kindoki also operates as a theory of knowledge and power; it mediates different ideas about consumption and the objects of desire.[5] In the mid-twentieth century, Tula Kia Mpansu Buakasa, a native speaker of Kikongo, characterized the relationship of the objects *minkisi* as having a hermeneutical device in the term *kindoki*.[6] Buakasa writes that it is difficult, if not impossible, to translate the Kikongo terms for these two without distorting their meaning, citing 1960s African philosophers' propositions about the possibility that "Africans perceive otherwise."[7] *Kindoki* and other terminology discussed in this chapter go from semantic drift to full linguistic substitution, a logic that corresponds to materials as they move into and out of Africa. Similarly, the relationship between kindoki and nkisi points to a process-based and performative notion of art, over and sometimes against representational art.

The Lubumbashi-based artist Jean Katambayi Mukendi has created a series of what can be thought of as antifetishes, or prototypes. The prototypes are assemblages that address and demonstrate flows of energy and its mathematical representation, but they openly describe a different type of intention through design that is responsive, didactic, and broadly ecological. His object/assemblages

might not necessarily work, but instead they demonstrate and test possible methods of function, something like a scientific method. Provisional in their status, Katambayi's prototypes more obviously mediate temporary relationships, particularly the way that electricity flows, attaches, and detaches, all according to the rules of design and physics, or nature. His prototypes are closer to *technē* or *ars* than art, converging as much DIY art does, both art and design. Similar to the "variantology of media" that Siegfried Zielinski proposes for considering media types, a prototype could be thought of in terms of how it is discussed in aesthetics, as being suspended in a space previous to typology. In fact, the prototype might be one way to understand global art, as an alternative to the frantic activity of all art or design produced around the world being fit into an expansive, single definition.

On the one hand, Katambayi's artwork is poised against a black box of technology that operates as if by magic, a technology that develops objects and concepts within the mysterious mechanisms of venture capitalism and the Dark Continent of Silicon Valley. The black box comes to be known in the age of personal technology devices as operations that are guaranteed to be successful (or your money back). The proprietary fetish goes beyond what Marx wrote about in terms of the alienated object of labor and now involves operational logic, seeking to contain any financial risk that is posed by the failures or divergences of media objects. The myth of the single digital device, for instance, is embodied by the mobile phone and car alike. These energy-based devices rely on a type of technological twin, the battery: both require massive amounts of precious earth, and both are central to this latest phase of digital/mineral capitalism. Their fetish status obscures the larger state-supported structures they need to keep their current. The so-called green revolution does not dispense of the need for energy or its transmission. Rather, energy is contained to the chemical processes that occur locally in the self-contained battery. Like other media epochs, Africa is the site of extraction for rare earth minerals for batteries, even despite the growing global criticism of how such practices lead to conflict and exploitation. The battery is an attempt to disassociate from a system, to localize energy transmission; it is the talismanic object of the so-called green revolution, the object central to the accusation of "greenwashing." As Gabrielle Hecht has written, the extraction of gold in Africa led to an economy of extraction as a hermeneutic or a way of being, with a shift only in material.[8] Katambayi's 2019 work with the collective On-Trade-Off concerns the status of the "green gold" of lithium: a low-reactive, conductive, soft, and slippery substance that calms disturbed minds

5.1 Jean Katambayi Mukendi, *Ecoson* (2010), side view.

and conducts electricity through micro- and macro-sized circuits everywhere in our algorithmic culture.

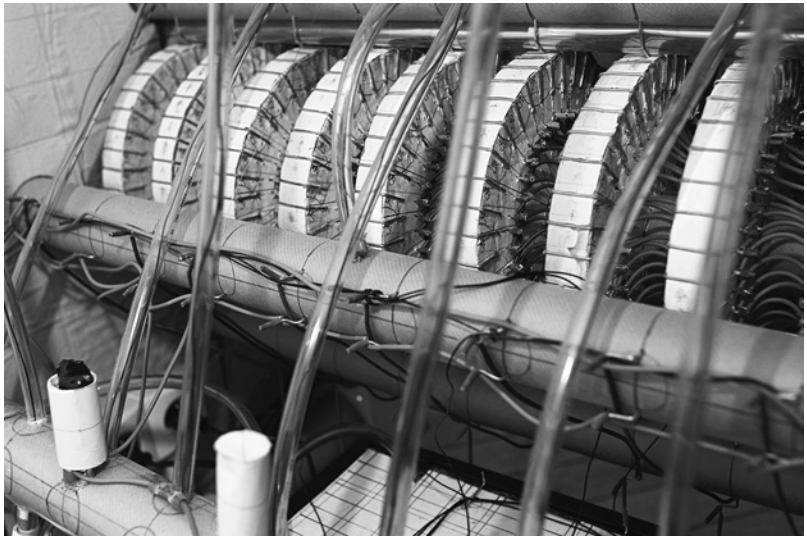
Katambayi's interest in lithium is not representational or allegorical but part of a long career of thinking materially. To explain what I mean by "thinking materially," consider *Ecoson* (2010), which is constructed of wire and cardboard, stands about four and a half feet tall and contains a number of cardboard disks that are laced with copper wire, each wire indicated by a corresponding number (see plate 11). At the top of the structure, twenty mason jars that contain various organic substances are connected by a network of rubber tubes and electrical wire taking the form of inputs and outputs. These sit above a panel pasted with a rearranged world map dotted with diode lights. The jars are flanked by six voltage monitors with fluctuating digital readouts. *Ecoson* looks like a type of modified loom, but the open sides and back reveal a network of tubes, wires, and cardboard disks—it is alive. Schematic diagrams are hung on the wall next to the work, along with examples of the cardboard disks with the marking of their algorithmic permutations. The organic materials are "ecoconductors," like fruit, water, and sweet potatoes. *Ecoson* operates on batteries.

Ecoson was shown at an exhibition called *Signals from the South* in 2011 in Helsinki, the fourth iteration of the exhibition staged by Pixelache, a Finnish art and design platform. Pixelache (which organizers mean to rhyme with

"headache") supports scalable, sustainable production models with emerging and alternative approaches to technology in the arts as its focus. Pixelache is typical of maker events, which usually benefit from a consortium of funding from the tech industry and government, as they fit a mix of "goals" that are social and technical simultaneously. Pixelache funds remote exhibitions, including Afropixel in Dakar, a collaboration with the maker organization there Kër Thiosanne. A series of tag lines on their website include "Circus of trash design and/or power," "Theatre of cellular research and volunteering," "Escalator of digital miscellany or noise," and "Tired of environmental activism and funding."[9] Katambayi has become known within this relatively small corner of the art world, the Maker Faire and tech art confluence, in the circuit of organizations that operate between Europe and Africa. For *Signals from the South*, Katambayi was in residence in Helsinki for two weeks, where he built *Ecoson*.

Katambayi's prototypes in the years around which he built *Ecoson* attempt to establish all of the possible permutations of a connection or a circuit. Against an inability to control vicissitude, Katambayi attempts rather to delineate it within works that he describes as both scientific experiments and also surrealist artworks. Many of his prototypes were meant to act as illustrations of electrical systems that could be used to teach people how to properly hack into the electric grid of Lubumbashi. He started in the 1980s when he learned his father's trade as an electrician and became obsessed with building cardboard models. He is a trained electrician and has completed postgraduate work in mathematics, his other self-described obsession. He describes a preoccupation since childhood with wiring, logic, and what he calls beauty in engineering. Katambayi has said about his work that "through electricity, [he] can show the functioning of any organism: how the energy flows and is received through a circuit."[10] *Ecoson* is exhibited with its schematics and plans, which display the various and seemingly exhaustive permutations of electrical circuits. In recent years, Katambayi has begun collaborating with the artist Sammy Baloji in Baloji's years-long exploration of mining and extraction economies in the Congo.

While Katambayi insists that these are workable models that teach people how to safely deliver electricity, he also insists that they are conceptually and technically beautiful. And when the term *art* is applied to them, Katambayi's prototypes are propositions for the organization of the flow of matter. *Ecoson* and the other models make visible how electricity becomes electronics, the substance to the circuit and how it functions like nature. His work opens the black box of technology or, rather, shows what has long been open to those who live with dysfunctional infrastructure. Technology's mysteries have to be



5.2 Jean Katambayi Mukendi, *Ecoson* (2010), view of pinwheel cardboard design that holds and orders wiring.

known for people to make things work daily. Katambayi's early aim with these models was to insist on new techniques to safely facilitate the substance and flow of electricity, according to the principles of holistically conceived living organisms. Katambayi was concerned about the psychological distress that residents of Lubumbashi experience by the everyday, unexpected breaks in the flow of electricity, which he ascribes to a careless administration of services in Congo: "Lubumbashi is a city threatened by the fear of living."[11] But with care, he says, anyone can control the substance of electricity and avoid the devastating fires and electrocutions that often happen in the crowded neighborhoods of the city. He insists that citizens must have a basic competency in what has become a chaotic and materially difficult urban organism. *Ecoson* in a sense refuses to dramatize this problem—especially for his international audience—but rather lays out the mathematical possibilities for connections with the three strands of copper wire required in conventional electrical engineering. The wiring is what he calls a "combinatorial analysis of permutations and arrangements" that he then realizes in the prototypes.[12] *Ecoson* contains around 240 different arrangements.

Ecoson, I think best of all Katambayi's prototypes, exposes the operational substance of electricity, its structural support and its reticence, and the con-

tingencies of its development and governance. *Ecoson* reflects on Lubumbashi as existing at the outermost boundaries of labor and resource extraction. The materials that fuel luxury and energy are contingent, and their representations are absurdist in their various conflicting meanings. Raised and working in Lubumbashi, Katambayi speaks often about the mental and physical conditioning of the residents of the city according to the labor demands of the many mining and manufacturing companies. The development of electricity in the Katanga region was tied to copper extraction, specifically by the Belgian company Mining Union of Upper Katanga (UHMK), established in 1906. But Katambayi is engaged in the pedagogical approach to power—whether electrical or political. Failure does not only mean literary negation, absence, or farce but the threat of physical death. In the moment of infrastructural breakdown, the reticence of the material is revealed and begins to possess an agency that surpasses that of the end user. And if the agency of electricity in the urban centers of the Congo has become characteristic of city living, electricity has at various times taken the traits of a character with intentionality. The stripping down of appearances, like metallurgy, begins to reveal what Deleuze and Guattari call "a life proper to matter, a vital state of matter as such, a material vitalism that doubtless exists everywhere but is ordinarily hidden or covered, rendered unrecognizable, dissociated by the hylomorphic model."[13] Metallurgy is the ultimate form of art for Deleuze and Guattari because of its relationship to the flow, or change in state, of metal, which is linked to other kinds of flows, such as the state, labor, economy, nomadism, and subject positions. Whereas the impulse with *Ecoson* is to discuss the failed postcolonial state, the state here is granular and material: a logical schematic that lays out the possibilities of governing the dangerous and stubborn behavior of electrons. Katambayi's work refuses the neoliberal-ruin pornography that characterizes most representations of Congo.

Katambayi insists that electricity courses through all living organisms, using water and food in *Ecoson* as conductors of the electricity that powers the clock at the top and the diodes on the map. He draws a connection between economy and ecology with a neologism made in relation to *Ecoson*, "econogie," which is part of his general interest in an economy and an ecology as one body that functions correctly. In his many interviews, he suggests that bodies, systems, and people themselves must be autonomous: "The teacher in my country (DRC) should stop preaching to his students that we are wealthy and that our riches are coveted, he should rather teach the student how to be autonomous. The world should take care to solve the situation of [each] other, but that's

5.3 Jean Katambayi Mukendi, *Ecoson* (2010), close-up view of jars of food and conductors.

an awkward request. I'd rather ask my contemporaries, 'What shall we share with mankind?' Because the earth and substratum are not enough."[14] Speaking and working from a city that has historically been the site of extraction, to a now widely publicized devastating effect, Katambayi is insistent on the ownership of these materials of extraction and in their correct use. After all, he notes in the same interview, the uranium used to bomb Hiroshima may have been Congolese, a matter of infrastructural globalization that Gabrielle Hecht investigates after reminding her readers that "uranium was not born nuclear."[15]

Ecoson fits within media theory and tech art movements with a cybernetics genealogy, as it puts forward basic problems of control and command. The industry and technology of electricity have been primarily engaged in creating systems of control to both harness power and manage safe interaction with it. Katambayi has wryly suggested that his are fictitious machines that will expose the state-controlled power company for its ineptitude. Reorienting the discussion to something more recognizable to cybernetics, Katambayi states that his prototypes show the functioning of an organism, much like "when the hunger strikes, the body responds to signals sent by a hollow stomach."[16] He understands the visible manifestation of electricity to be not simply a metaphor for organisms and systems but literal matter organized and pulsing with

energy in a feedback loop—matter signifying. *Ecoson* connects water, grasses, wood, and humans, all of which are populated by metals and minerals and conducting electricity. It is an ecological notion connected to systems thinking and cybernetics and also to various iterations of *animism* in Central Africa. Indeed, Katambayi's work is safe within both genealogies.

The prototypes are machines in a specific, temporary, cardboard form, assembled with a material designed to facilitate and govern the flow of electrons. The relationship to the body extends to the general social body for Katambayi, who has also used these machines to calculate things like the average life expectancy in Congo. He states that by a simple calculation and gauging the electrical outages and voltage fluctuations in the homes of the people around him, he can determine the level of the organization of the state and how it facilitates life. He matches them to the fluctuations of voltage and their average levels against electrical engineering standards. In the end, he calculated the life expectancy in Congo as forty-two years, which is not far off the official estimates of forty-five by international bodies using other data points. In the evaporation of a postcolonial state, Katambayi explains, Congolese must contrive situations and dodge around obstacles to find new ways of living. In a familiar refrain, which complements a philosophy that asserts that nature signifies, Katambayi says, "The right algorithms are natural."[17]

Lubumbashi as Organism and Assemblage

The relationship between the body of the citizen and the workings of infrastructure relate to the discourse of Michel Foucault's biopolitics and what Achille Mbembe later called necropolitics: the postcolonial state as a *thing* on the edge of dissolution. Mbembe writes that the latest iteration of the sovereign power over life and death has little organization in the form of a state, but "a patchwork of overlapping and incomplete rights to rule emerges, inextricably superimposed and tangled, in which different de facto juridical instances are geographically interwoven and plural allegiances, asymmetrical suzerainties, and enclaves abound."[18] Added to Giorgio Agamben's discourse of the *homo sacer*, or bare life, Mbembe writes that with the failure of the state—colonial and postcolonial—in Africa, war is the vehicle of death, a war that is directly fed by the sale of extracted products.[19] Nowhere is this more evident than in the Katanga region of Congo, where militias control territories clustered within the borders of the nation-state and which do business directly with transnational corporations.

5.4 Congo-Balolo missionaries boarding the (unfinished) Cape to Cairo Railway in Élisabethville, Belgian Congo, ca. 1900–1915. Photographs from the Centre for the Study of World Christianity, University of Edinburgh, United Kingdom, ca. 1900–ca. 1940s.

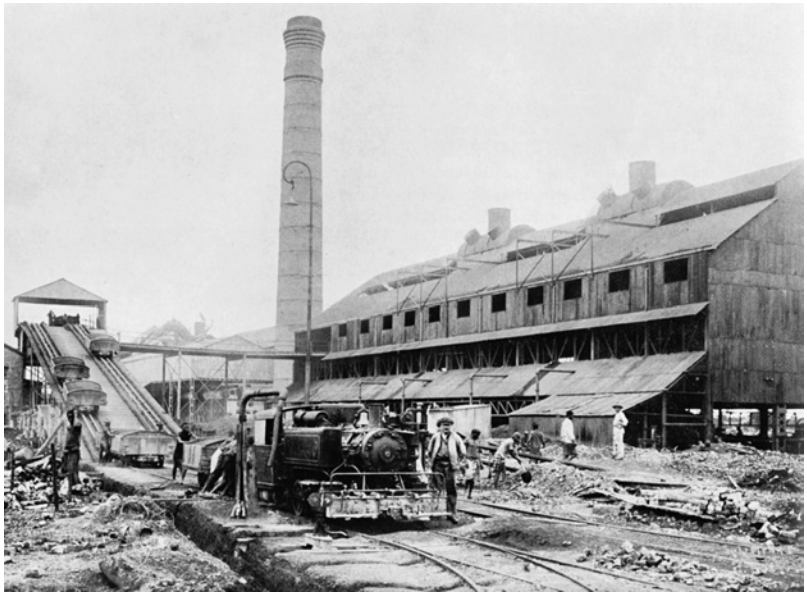
Central Africa, and especially Congo, has long been a limit case of extreme conditions of living and dying. Extraction companies calculate an amount and quality of life according to race, gender, and proximity to mineral resources. Even after several generations, relatively little is told of those Congolese who have withstood the waves of extractive invasion during the colonial period, the Mobutu years, and the collapse of the mining industry in 1990. Consider Lubumbashi as a living organism, which is the way many urban theorists conceive of cities. Formerly Élisabethville, Lubumbashi was the headquarters of the secessionist movement for the independent state of Katanga during the 1960–1963 civil war. The capital of the mineral-rich Katanga region, Lubumbashi has been in constant flux and subject to sporadic violent takeovers by militia groups. In 1910, Elisabethville was created as a "white town," an exceptional part of the Belgian plan to segregate the ruling white people from the laboring black people. Elisabethville was the end of the rail line built from the Cape of South Africa and, thus, the end of the failed dream of the Cape-to-Cairo line, the terminus of both the rail and infrastructural possibility of Cecil John Rhodes's enormous project.

Immediately after independence, Lubumbashi was in the center of the fight for control over Congo. The "Congo crisis" concerned who would control the mineral-rich area of Congo, with Belgian interests still operating, complicated by Cold War maneuvering by the Soviets and Americans. Patrice Lumumba

was assassinated as a result of these machinations, pitted as he was against the next president, Joseph Désiré Mobutu. Under Mobutu in 1966, the UMHK was converted to La Générale des Carrières et des Mines (Gécamines). Even the terms of that transition are disputed, with Mobutu arguing that UMHK and its foreign investors operated in bad faith and outsiders accusing Mobutu of the protectionist "nationalization" of the mine. The mines' nationalization was part of an overall push by Mobutu to Africanize Congo in renaming the country Zaire, in addition to renaming provinces and cities. The failure to Africanize industry was the focal point of student uprisings against Mobutu in January 1968, when Hubert Humphrey visited Kinshasa and laid a wreath on the monument of the assassinated president Patrice Lumumba, to the horror of anti-imperialist advisors and student activists.

Congo was a bellwether in leftist movements globally, much more than is currently narrated. Both in terms of its anticolonial struggle and the ensuing struggle after independence in 1960, Congo was a model for activists in the North Atlantic. Guy Debord and the Situationists International corresponded with one another about the ongoing crisis in Congo in the early 1960s. Debord wrote, "What has been happening in the Congo in the past twelve days will have to be studied for a long time and in all aspects, and it seems to me to be an essential experimentation of the revolutionary conditions of the third world."[20] Debord referred to Lumumba as a poet, because he was able to manipulate the language of the colonizer against itself, also claiming that the Congolese refusal of colonialism was a continuation of the Dada project.[21] There is an apocryphal quote attributed to Frantz Fanon, who supposedly exclaimed, "Africa has the shape of a gun and the Congo is its trigger." While Fanon was speaking of Congo's political crisis as a trigger point for global revolution, it is worth noting the trigger's concomitance with its location in the so-called torrid zone, or the geographical region of the earth with the most resources and abuses related to their exploitation.

The global concern during the mid-1960s focused on who would control the resources of Congo in the face of tremendous outside interest in a mine that contains the greatest deposit of cobalt, one of the largest deposits of copper, and other such materials as tin, gold, uranium, and zinc. Gécamines/UMHK has since the 1950s been one of the most sought-after jewels in the crown of Congo; whoever controlled it controlled power within the country and international leverage. This rise of UMHK was brought about by an aggressive business practice that mimicked some of the tactics used by the Belgians to extract rubber. The company was known among the international mining



5.5 UMHK ore processing in Élisabethville, 1916.

community for its segregationist techniques of control over the black population. Like the diamond mining megacorporations Diamang in Angola and DeBeers in South Africa, UMHK generated propaganda films and publications to support its argument that labor and discipline were civilizing forces.[22] Johannes Fabian wrote about the potent example of the pervasive power of the UMHK by examining the Swahili linguistic phrase "*bwana* Union Minière," or "Master Union Minière."[23] As a general practice of his scholarship, Fabian writes about the code switching that occurs between French and Swahili, "signaling the system of knowledge that was involved in appropriating the vast areas that were to become the Congo."[24] The word *bwana*, Fabian explains, is a mixed term that has been made famous by the Tarzan movies and is the stereotypical word for the white man. However, the term here is not just one of respect but assigns a singular power to a corporation, the "ultimate employer (the one that creates the need for other services, including the administration)."[25] That is, while *bwana* is an extensively and liberally used word, *bwana Union Minière* indicates that the corporation has been personified because of its singular presence and pervasive influence on everyday life in Congo.

Belgian colonizers referred to Elisabethville and the Katanga region as the "lung" of the empire because of its vast economic importance and distance from the administrative head city in Kinshasa—the lung being an apt metaphor for the life force taken in extraction economies. Simultaneously, black Congolese developed a nuanced and sophisticated story about the nature and character of white Europeans in urban enclaves.[26] In a now classic ethnography of rumor in colonial-era East and Central Africa, Luise White writes of the different types of cannibal and vampire stories that Africans told about the white occupiers, similar to the story that opens the chapter. Even though the two copper belts of Belgian and British rule were vastly different in their cultural impacts, the stories still transmitted across borders and had basic similarities even in the face of their major differences; a parallel was made between economies of extraction and the consumption of the black body. In colonial Katanga, she writes, it was believed that "Africans were hired by white men to capture other Africans and give them an injection that made them 'dumb.' Finally, victims became fat, white or pinkish, and hairy like pigs. . . . White men ate them on special occasions like Christmas and New Year."[27] In fact, she notes, the 1940s miner revolts were in part due to the spread of these rumors.

A radical shift occurred in the 1990s in Lubumbashi after the failure of Gécamines, generally said to be due to mismanagement along with the global downturn of copper prices. This pivotal moment, the cause-and-effect relationship between a failed state and outside actors, gave rise to neologisms like "Criseurs," a name self-assigned by the residents of Lubumbashi. It refers to the constant state of crisis that necessitates a secondary economy where "creativity" and "resourcefulness" are the necessary requirements of meeting basic needs of living. Georges Mulumbwa Mutambwa and Pierre Petit remind us that "highlighting the resourcefulness and creativity of the informal economy, nonetheless, should not overshadow the misery that is at once part of its origin and part of its consequences."[28]

Congolese Popular Art

Congolese popular art has long been a subject of fascination for art historians: "The history," Johannes Fabian once remarked, "rivals that of its subject."[29] There are many reasons for this, the first being popular painting's popularity with the Congolese working class, who made up the primary audience for the massive production of painting beginning in the 1940s in Katanga. Popular

painting refers, in this case, to the thousands of medium- to small-sized paintings made and sold daily that depicted stock images, such as Belgian soldiers whipping black Congolese, ancestral tropes, animals and hunting scenes, and the ever-prolific mermaid, or *mamba muntu*.[30] In 1946, an amateur French painter and former naval officer, Pierre Romain-Desfossés, instituted the art center Hangar in Lubumbashi to provide space and materials for whom he considered gifted African artists. His workshop is usually discussed in terms of a false choice that puzzled many European interlocutors who attempted this kind of workshop model: whether to instruct African artists or to allow them to remain unskilled and therefore untouched by foreign influence. Hangar was alternatively referred to as L'École de Lubumbashi and Elisabethville Indigenous Art Studio and had a similar approach to free learning and making as did other workshops, like Frank McEwan's Workshop School in Rhodesia and Pierre Lods's Poto Poto School of Painting in Brazzaville.

"Colonie Belge" art was used to illustrate the relationship of Congolese to the Zairian state in an important book by Crawford Young and Thomas Edwin Turner, who note, using art as historical evidence, that the Colonie Belge appears with the same frequency as mermaids, leopards, villages, and cities. While they ultimately argue that paintings do not show the phase of Congo when the state is in decline, "the latent possibility of deflation of its power and authority, of loss of its legitimacy, of decay of its institutional structure," their use of painting was meant to demystify extraordinarily complex exploitative global economic processes via the conception of the "popular."[31] Johannes Fabian confronted the problem of historiography/historiology with so-called popular art when he embarked on a years-long collaboration with the painter-historian Tshibumba Kanda Matulu. In what has become a classic book because of its ambiguous ethics and its challenge to disciplinary norms of history and anthropology, *Remembering the Present* is the delayed (1996) publication of an extensive commission and extended conversation between the two that started in 1973.[32] Tshibumba was part of the so-called Zaire School of Popular Painting that flourished after independence. A black middle class grew in 1970s Lubumbashi, which is when Fabian met Tshibumba. Tshibumba's images, then, are the conceptualization of a history that includes, as it happens, facts divergent from official historical records about certain events, such as the place where Patrice Lumumba was assassinated. Fabian sets up Tshibumba's history as a subtext of official history, suggesting that the popular is the real experience that sharpens dialogical anthropological methods. In other words, we can study deskilled history (myth) with/as deskilled figurative painting. He

5.6 Tshibumba Kanda Matulu, *Colonie Belge II* (mid-1970s), collected by Etienne Bol in the Republic of Zaire. The *Colonie Belge* painting is part of a type of Congolese popular painting and usually includes a small "outpost" structure opposite African grass-thatched structures, one or more white soldiers wielding whips, and black figures laboring in the earth.

writes, "Truth is a matter of emancipation from imposed ideology, unreflected opinion, and seductive images, not just the result of matching facts with transhistorical verification."[33] For Fabian, the preservation of history as an oral history bordering on myth was no problem for Tshibumba. But in the book, each painting appears with its title, a short narrative identification, a section of Fabian and Tshibumba's conversation that concerns the painting, and, finally, a "transhistorical verification" of the episode in the history: a narrative bibliography of written sources on the subject of each painting. The metadata, Fabian's translation, brackets out Tshibumba's story as "folk."

Earlier, the label *popular art* was used by a prolific scholar of Congolese art, Gaston-Denys Périer. He "[cumulated] the virtues of the enlightened amateur and the zealot," an unusual scholar who himself resisted categorization but championed "living" (contemporary) Congolese art, which was unusual in midcentury scholarship.[34] He wrote many books on Congolese art and argued a thesis in *Les arts populaires du Congo belge* (1948) that includes chapters on rhythm, musical instruments, weaving and textiles, ceramics, architecture, masks and "fetishes," painting, and the representation of Europeans within Congolese art. In the last chapter, Périer advocates for the protection of indigenous

art, concerned as he was that much of the art was leaving the continent. He writes openly of the brutality of taking objects out of their ritual context, even suggesting that the misreading of the term *fetish* arises from this "systematic" removal and destruction.[35] Further, Périer argues against the notion of the fetish and suggests a dual or alternative genealogy of the word to ancient Greece, Egypt, and Asia Minor. Périer replaces the root word for *fetish*, *feitiço*, with "Phtah, or Phétic, Phateiq . . . for those who think it more logical to see a rapprochement between the religion of the blacks and that of the Egyptians."[36] There is no indication that Périer was referencing the contemporaneous theorizing of the Egyptian origins of sub-Saharan Africans in *Présence Africaine*, but he might have read this through Herodotus and those who cited Phtah. Beyond just arguing that "there is no idolatry among blacks," Périer suggests that the word *fetish* has no traceable origin and should therefore only be compared to historical Greek or Egyptian art as having a history.[37]

Périer briefly repeats the by then consensus among Africanist scholars that Congolese's use of the fetish in the process of healing and medicine does not come from a belief in the object itself but rather in the relationship between the object and the healer, the medicine packet and its protective housing inside of the object. Périer is taking up the long history of the nkisi and its status as the ur-fetish, the emblematic object that interfaced with Europeans. Indeed, the nkisi is only tenuously popular art because it requires a professional status that few possess. Like academic art, nkisi is esoteric and legitimized by powerful members of society.[38] As a popular object, it has been, from the beginning, part of the complex entanglement of the various forms of capitalism as they have penetrated Central Africa throughout many generations and influenced many forms of art and spiritual practice beyond the nkisi class of objects. The mirror as an object of technological seeing and evocative of a being and its shadow was quickly incorporated into the logic of the interpenetration of imaginary and real that Périer describes.

Nkisi, then, is a problem of categorization due to its interfacing with forces well beyond the boundaries of its own objectness and appearance. In addition to what culturally specific magical function minkisi have, we could consider their aesthetic appropriateness to the suffering of people in Central Africa, a force that goes beyond visual appearances. Since the turn of the twenty-first century, electronic devices have spread alongside the visible and widespread knowledge about conflict minerals. James Ferguson writes of the change in mining practices from "company towns" to what he calls "socially thin" enterprises, in that minerals are visibly walled off from people and operate by

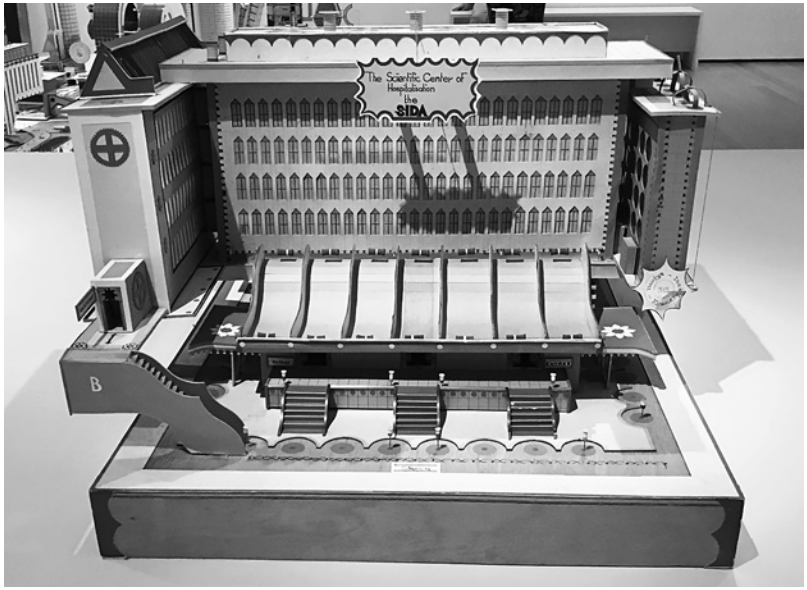
an ambiguous legal framework.[39] One might expect that the wide circulation of Ferguson's book, appearing along with other exposés (bringing in to the field of vision), would effectively end the exploitative practices. Instead, the opposite has occurred: the more the world sees images of exploitation directly attached to talismanic objects like computers, cell phones, and gaming consoles, the more they sell. The relationship between responsiveness and visual information is so illogical as to be defunct and also suggests that the depiction of the suffering black body is a mediation that is not aesthetically related to mutual recognition or empathy. Indeed, Katambayi speaks of his desire to illustrate the deep logic of a system to such a degree that it will spur a responsiveness that gives way to accountability.[40] If something is designed correctly (in addition to *depicted* correctly), the correct aesthetic chosen, then the relationship between energy and life and correct models becomes linked, a process that he describes in terms of "finding" natural algorithms.[41]

Sammy Baloji's work came onto the art scene just as the increase in images of mineral exploitation began to circulate globally. Baloji's remediation of the archival images of the UMHK successfully render the mining industry contingent, strange, and possessing its own demons. Circulated in the international art world, Baloji's best-known series, *Mémoire* (2006), quite forcefully depicts mining—the tectonics of the state and nonstate—as a historical constant in what is oftentimes depicted as the "inevitable" tragedy of Congo. *Mémoire* consists of old photographs sourced, scanned, and superimposed on his own digital photographs of the contemporary landscape of former mining sites. The works feature seams and sutures, both in terms of the site of superimposition and also the different formats that Baloji allows to be apparent on the surface of the image (see plate 12). In the international art world, they act as an allegory of colonial plunder as they visually connect technological ruin in present-day Congo with the history of plunder, beginning with the infamous Belgian ghoul, King Leopold II. The work is allegorical in the way that an image of the past is replaced by a new image: its conflation with an image of present ruin. By the time *Mémoire* was exhibited, as well as the successful exhibition and catalog *The Beautiful Time* at the Smithsonian Museum for African Art, widespread international attention had been turned to "conflict minerals," after films like Edward Zwick's *Blood Diamond* (2006).[42] By 2009, the United States was introducing the Congo Conflict Minerals Act to "facilitate and improve transparency," which eventually passed in a different bill in 2010.[43] Such films are a parallel genre to the journalistic exposé, the work of publishing that opens hermetic structures.[44]

Baloji's other work has been on the urban environments of Congo, a series of projects that he has worked on extensively with De Boeck. Together, they have documented the relationship between the tectonic and mnemonic, charting the relationship between a common Congolese concept, "the hole," which indicates a condition of the city where nothing works. In their joint video-installation-cum-research-project called *The Tower* (2015), De Boeck and Baloji document the owner of a tall building in the industrial sector of Kinshasa, Docteur. The doctor has a vision for his tower that includes power, surveillance, and even a stand-in air traffic tower in case the Kinshasa airport tower fails.[45] Baloji and De Boeck pursue the hole as a metaphor for groundlessness, the instability of capital, and the visceral knowledge that any development project is necessarily fraught and probably temporary. In economies of extraction, the temporal register is turned up to a high level according to supply and demand, the very real processes of sourcing in an economy of technology that is based on obsolescence and speed. The ghosts in Baloji's work, then, reverberate according to dichotomies of life and death in global economies. They speak of histories and their legacies in the built (or as yet unbuilt) environment.

The prototype, then, is not concerned with legacy but poised on this precipice of life and death, in a state undecided. Katambayi's models are often compared to the massive cardboard and recyclia urban maquettes of Bodys Isek Kingelez (1948–2015), a connection that Katambayi himself thinks is weak and only related to materials. But the comparison that I am interested in is the terminology: Kingelez's models versus Katambayi's prototypes. An indomitable artistic figure in the Congo, Kingelez's workshop became a cottage industry in Kinshasa. Like Katambayi after him, Kingelez was self-taught and was an "artist/citizen," wanting to use his education in industrial design to become a "university-trained technocrat" or the like.[46] His fantastical cities included everything he thought people needed to be happy and peaceful, including health centers, hospitals to cure AIDS, transportation hubs, international pavilions, stadia, and so on. A symbol of what could have been, the failed utopia of Congolese independence, Kingelez's models (or are they sculptures?) are unrealized, much like the utopian plans for development during the Mobutu era. Such models and their provisional status characterize much work on the built environment in Africa, from Ângela Ferreira's work on Jean Prouvé to Guy Tillim's photographs of abandoned modernist structures.

Kingelez's orientation to design is therefore poised on the impossibility of utopia, while remaining oriented to its workability. He argues about a model city he created: against all odds, "Kimbéville is a real town which, given time,



5.7 Bodys Isek Kingelez, *The Scientific Center of Hospitalisation of the SIDA* (1991).

will exist." He goes on, "It has created a real bridge between world civilizations of the past, the present and the future."[47] The design of a city that folds in such temporal shifts might seem fantastical in a way that undermines itself from the beginning, especially given the dogged conditions that stymie the implementation of design in Congo. Both Kingelez and Katambayi work in the space of finding and making; they ignore the division between the scientific and the aesthetic.

Against Representation

To understand the importance of what Katambayi is proposing in terms of art, it is useful to compare *Ecoson* to Renzo Martens's inflammatory film *Enjoy Poverty, Episode III*, a critically oriented, darkly ironic film about whiteness and/in Africa. The film depicts Martens himself traversing Congo with a camera mounted on his body, pointed variously outward and at his own face, which literally demonstrates self-reflexivity by rendering the camera a neutral critical-making apparatus. Of course, the camera does not remain trained on Martens,

but throughout the film he films his encouraging locals to consider poverty a resource and not a lack, since the rest of the world is making money on the images they peddle that constantly portray Congolese suffering bodies. In moments throughout, the film is nearly unbearable to watch, as the tone veers from sarcasm to pure black humor, as he pinches and lifts the arm of a starving child (who eventually dies), encouraging his Congolese colleagues to photograph the body up close so that they can make the proper amount of money from her image. The moment of contact in that scene is engineered to let the Congolese photographer's hand serve as a proxy for the viewer's, but because of the artifice, one is not allowed to fully submerge into the affective connection.

The film was described as ethically borderline by Hilde Van Gelder, who extends the term to connect it to concepts of the grotesque, caricature, and carnivalesque.[48] The film, indeed, is the darkly logical fulfillment of the history not only of mining but of the full collapse of the black body with the object-oriented obsession of mining and, in turn, the "immediations" of documentary that affirm dispossession.[49] Martens, sarcastically or not, attempts to empower the Congolese he meets by teaching them how to author depictions of themselves as poverty- and disaster-stricken. They are ultimately blocked from doing so, whether kept from obtaining press credentials or not being perceived by white NGO administrators as objective observers able to do documentary work. *Enjoy Poverty* starkly illustrates the exact, banal parameters of white/foreign domination in Congo. However, the deep irony in the film is not unlike the surreal, nonsensical historical practices of extraction. Because of that, the film approaches the limits of representation and, perhaps more importantly, its critique. Jacques Rancière writes of looking at such theater, "[Viewing] is the opposite of acting: the spectator remains immobile in her seat, passive. To be a spectator is to be separated from both the capacity to know and the power to act."[50] The urgent message that extraction equals starvation is preserved inside of the narrative that heaps a devastating amount of vitriolic blame on the colonial and neocolonial regimes (as such). The viewer is not only powerless to change the system but experiences an emotionally cool aesthetic that ambivalently mixes white shame and intense, sensuous empathy.

One suggestion that is obtained by the film is the idea that photographs only simplify and mischaracterize a whole network of exchange and power manipulations as a question of simply stopping the element of the system that is exploitative. In one striking scene, a soldier poses next to a dead body on the ground, while photographers even reposition him to fit the causational identity of Central African conflict. Martens allows the viewer to witness

international photographers stage tragedy, which, as Pooja Rangan writes, denaturalizes the "coded interpellations" that she calls "immediations."[51] The image of the soldier as a proxy of the state is one aspect of the Colonie Belge trope in Congolese popular painting. The difference in *Enjoy Poverty* is not just the banality of the existence of this soldier but the way in which the staging of the scene empties him of all of the threat that should accompany him as a proxy for the state. Beyond that, the image that Martens creates showing us this whole formula, in a sense, is too specific. It collapses along with the state; they have spent their ethical parameters. We have long known the stereotypes that are reproduced in photography of Africa by the international press, but Martens's film shows us the actual process where representational possibility is foreclosed, in a collection of moments that is most powerfully decided in the (banal) moment when the official with Médicins Sans Frontières will not dispatch a press badge to a Congolese person. Martens does not allow this scene to become remarkable, but the camera witnesses the men leave Martens without a word and walk back home.

When Katambayi talks about these larger structures of the state or of technology, he is careful to be specific and describe them as assemblages. The systems that he implicates are connected by wires and other materials, not just literary formulations like allegories or historiographical causation that remain so large as to be out of the control of the individual. He reasons, "If I put electricity and metal on cardboard, those who learnt these theories correctly are able to do better to balance the accounts of the cosmos."[52] He goes on, "My father was born in a small village in the centre of Congo where he lived until migrating to the mining south, where he became skilled in technology, electricity in particular. My family all enjoyed the same technological schooling, motivated by both my parents. I also grew up in a city next to a big plant, where everything was programmed from morning until night—from schooling, eating, leisure time—according to a schedule, timed by a siren."[53] When he speaks of the necropolitics of postcolonial Congo, he does so through concrete examples and not for dramatic effect. For instance, he made his own specific deadly substance, Lukutu, a type of moonshine (i.e., unregulated alcohol) that has become popular in Katanga. His work *Lukutu*, exhibited at the Dak'Art Biennial in 2014, contained some of the liquid, dangerous because of its unsanitary handling. Katambayi offers this as proof of a type of bad design born of a desperation to escape; it is not just an illustration or picture of Lukutu but the substance itself: naturally occurring, deadly. But *Lukutu* reflects on a long practice in labor exploitation in the African colonies, the introduction of

alcohol as an item to stoke discord and pacify large populations of hard laborers, dumped from the dregs of refined alcohol sold in Europe. What *Lukutu* does alongside Katambayi's other work is to examine alcohol as a substitution for other processes of pleasure and communalism in a system, that is, society. Such a substance is a compensatory energy that one injects into a system, the body, that is exhausted. Such systems of the body are not, as Gregory Bateson wrote in his classic cybernetic examination of alcoholism, contained to a fictional self with control, because "the network is not bounded by the skin."[54] Such systems thinking is characteristic of Katambayi's models.

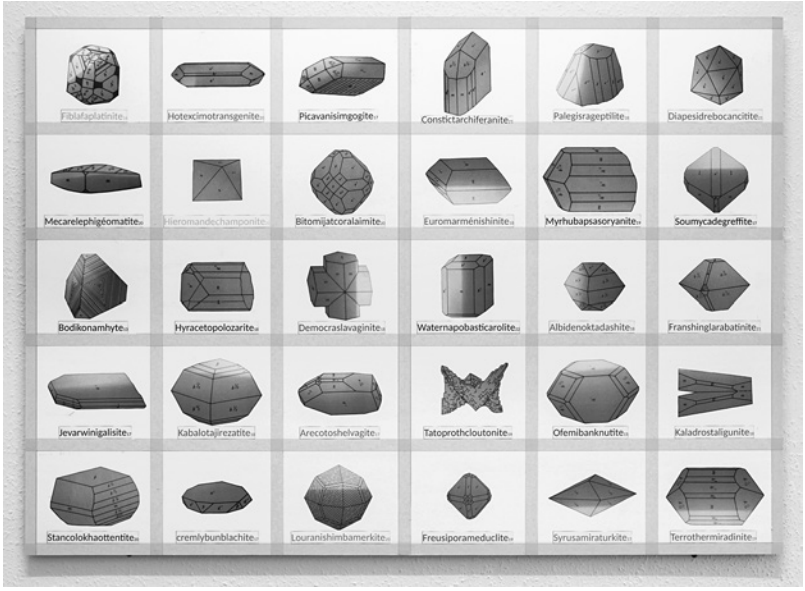
Katambayi and Baloji collaborated in On-Trade-Off, a project started by the Lubumbashi arts organization Picha (the Swahili word for "picture" and an arts organization started by Baloji) and including about a dozen artists from various countries. For the 2019 exhibition at artist Kader Attia's ~~La Colonie~~ gallery in Paris, Katambayi built a wire model of a Tesla Model X using recycled copper wires and a "special weaving technique." The exhibition is a general response to the increasing rush for "black gold," or lithium, in the so-called green economy. Katambayi is taking on Tesla as a symbol of what is commonly referred to as greenwashing, the effort on the part of corporations to brand the company as environmentally friendly. Batteries are part of a larger multinational strategy to remediate extraction through a logic of substitution, as in carbon taxes or, before those, the 1977 U.S. Surface Mining Control and Reclamation Act, which states that companies must convert the coal mine site to equal or better economic use after the mine is spent. The logic of substitution and exchange relies on metonymy but within the logic of a voodoo economics that obscures and shifts the definition of a community resource. It has been pointed out that Tesla and other electric car companies regularly associate their product with zero-emissions claims that are not only unprovable but also deceptive when taking into account the overall emissions and environmental impact of production.

Conversion and Assemblages, or How One Thing Becomes Another

As a whole, the extraction economy of Central Africa has reached a moment where, again, a component mineral like coltan (columbite-tantalite) rises to the level of a fetish, a political symbol: "For Congolese miners and middlemen, minerals carry a set of meanings that are very different from those who

are concerned with the question, as Turner (2011) proactively put it, 'does [my] cell phone cause rape.'"[55] The middlemen are on the front lines of a volatile mineral market, shaping and responding to meaning as it proliferates around substances. In her insistence on the real effects of language in the mineral trade, Gabrielle Hecht cites Anna Tsing's notion of friction as generalizing terminology travels, writing, "The production and dissolution of nuclear things in African places, I argue, occurred in the friction between transnational politics and (post)colonial power, between abstract prescriptions and embodied, instrumentalized practices."[56] And because "nuclearity has never been defined by purely technical parameters," she surmises, the entire enterprise must be seen as a process of making meaning out of matter drawn from the earth.[57] Katambayi's question/statement—"'What shall we share with mankind?' Because the earth and substratum are not enough"—speaks of this relationship that is verbal/conceptual and material.[58] One of the propositions of *Ecoson*, then, is to revisit the fantasy of a self-contained, local organism where minerals reside in the soil and are coterminous with all organisms in the face of constantly hampered infrastructure: ironic in a city that was built to facilitate the extraction of many tons of copper. The particular, what some call the "enclave" configuration of the industry in postcolonial Africa, this labyrinthine structure of people, politics, wires, and generating plants is really understood in moments of connection or disconnection—and as Katambayi puts it, when the lights suddenly shut off when he works late into the night. His prototypes are miniatures of the world: "The big phenomena are hidden in small mechanisms."[59] As he wrote, he would like to suspend the automatism between response and responsibility, or the ability for people to act in ways that are different than what have been given previously.[60] This is the closest terminology to what he considers "art," the mode of suspended action, and thus knowledge.

And what are we to make of Katambayi's claim that his work is also fantastical and surreal? In one early untitled work, he proposes to collect all of the excess noise of Lubumbashi into a bottle that will process the surplus into music. His earliest machine prototype using a combination of cardboard, switches, and algorithms, called *Analysis Moteur Générateur* (2007), was exhibited at the Institute Français in Lubumbashi and proposed an impossible algorithm to recycle the energy used in renewable energy, which, as Katambayi explains, is a nearly impossible proposition because of the principles of energy efficiency theory. It would be, as he says, "like a child who gives birth to her father" and "only possible in surrealism."[61] In a medium-density-fiberboard, tape, and



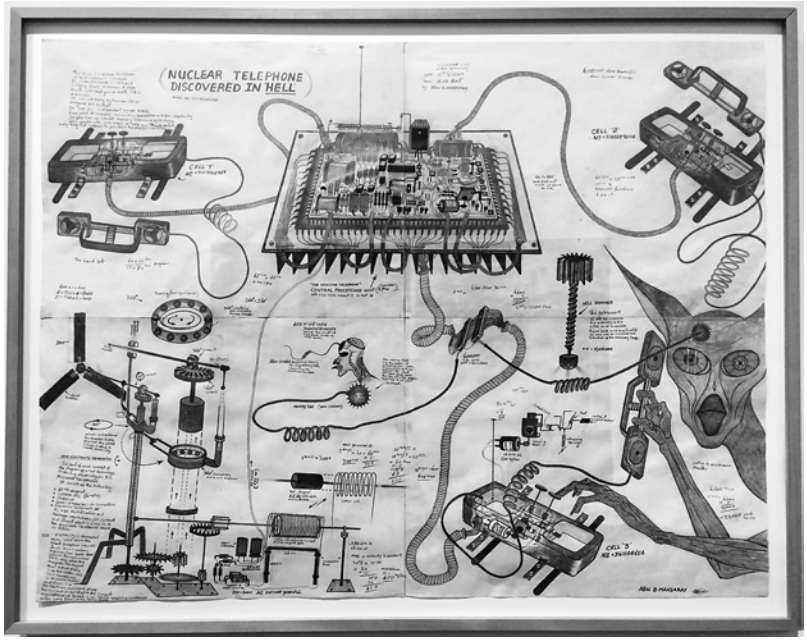
5.8 Jean Katambayi Mukendi, *Cristallite* (2016), collage (paper on found map), 70×85.5 cm. Courtesy of trampoline, Antwerp.

paper assemblage called *Cristallite* (2016), fictional minerals are displayed in a grid with their elemental geometric structure drawn out, mimicking a geological chart. Another mixed media work on paper, *Gateaumium* (2016), repurposes a found map of Belgium and marks out a network of masking-taped lines and dots; conceptual terms replace place names: *devoir*, *verité*, *realité*, *economie*, and so on (see plate 13). The maps have become *détourned*, much like the Situationist practice of turning the original meaning of an object against itself. As with Georges Bataille's fascination with systems as they give way to excess and disorder, *Cristallite* and *Gateaumium* falsify the representational systems that we have been given to understand and what a resource is. By taking on the particular geography of Belgium, *Gateaumium* invokes luxurious consumption, the enforced yet fictional zones of production and consumption that have constituted capitalism from its earliest times.

Abu Bakarr Mansaray, an artist from Sierra Leone, also crosses the practices of design and surrealist hallucination in a series of drawings he has produced over many years. His best-known work, *Nuclear Telephone Discovered in Hell* (2003), depicts an alien using a telephone that is hooked to a series of

other objects like an enlarged microchip and a battery. Mansaray's schematic drawings often include handwritten notes, and *Nuclear Telephone* tells us that the telephone here was not designed by humans or for humans. Throughout the image, he makes visual and textual links between copper coil and things like energy generation (storing wind energy), alien and human memory (what he calls a "memory tag"), and information. In the bottom right corner of the drawing, Mansaray provides a clear and succinct explanation of energy generation, including how the wind enters the battery and is converted from AC charge to the usual DC charge for use.

Katambayi's *Analysis Moteur Générateur* is a pseudomodel that tests the affordances and the given models that represent the natural universe, observing the always-already surreal conversion of one energy type into another. It is a provocation of the type that Georges Bataille wrote of excess energy, the leftovers and wastes that are inevitable and unaccountable in any transformation of one thing into another. It is a provocation that lives in the sentiment that Bataille reached for in his description of an economy that cannot just be measured by costs and benefits but human production in "a much larger framework."[62] What we can say about Katambayi's thinking—or rather, antithinking—is that it critiques what has been presented as logical and rational thought. It is not an exaggeration, therefore, to suggest that *Analysis Moteur Générateur* is what Alexander Galloway calls an anticomputer, in that it reveals the relationship between the digital and the analog to be a matter of energy.[63] Galloway takes interest in nineteenth-century ergodic machines "that run on heat and energy" and are tools to study the conversion of energy into products; they serve both the classical art function of contemplation and the scientific function of observation. Katambayi's prototypes are analog, using the medium of organic materials, but also combinatorial and mathematically representational (digital). The prototypes have a critical urgency found in the preface to *The Accursed Share*, where Bataille asserts that "considerations of energy economy . . . leave no room for poetic fantasy, but it requires thinking on a level with a play of forces that runs counter to ordinary calculations, a play of forces based on the laws that govern us."[64] What might be said of Katambayi's prototype was what Bataille wrote about the plight of this kind of thinking about energy and its political use: "To solve political problems becomes difficult for those who allow anxiety alone to pose them. It is necessary for anxiety to pose them. But their solution demands at a certain point the removal of this anxiety."[65] This kind of scientific thinking is caught in the art and design problem, the functional and nonfunctional. Bataille's

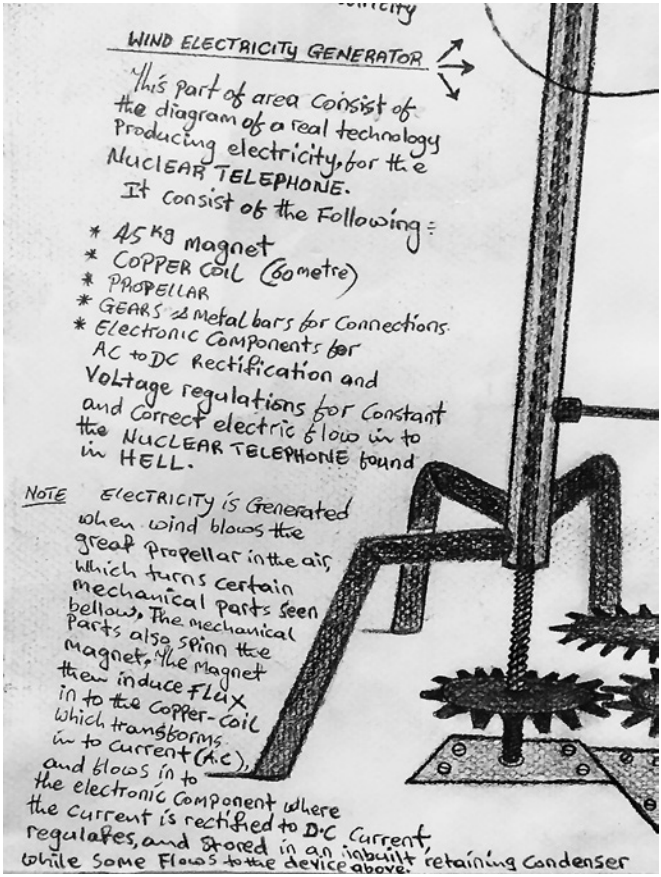


5.9 Abu Bakarr Mansaray, *Nuclear Telephone Discovered in Hell* (2003).

Accursed Share matches Katambayi's level of concern about energy that includes infrastructure and then philosophizes about what is humanly possible, wise, and ethical.

In recent decades, the confluence of disciplines concerned with ecology indicates a crisis of disciplinarity in the North Atlantic academic tradition. Vilém Flusser's key essay on design asks fundamental questions of whether design is a process of discovery or one of formula:

> If the so-called laws of nature are actually our invention, then why do the courses of the Euphrates and of rockets follow exactly these forms and formulas, and not others? Is whether the sun revolves around the earth or the earth around the sun just a design question? Is how a stone falls also a design question? In other words, if we no longer hold to the Platonic belief that the designer must theoretically discover the appearances in heaven, but rather that we, ourselves, design the appearances; why then do the appearances look the way they do instead of the way we want them to? Obviously, the discomfort described above can't be cleared up.[66]



5.10 Abu Bakarr Mansaray, *Nuclear Telephone Discovered in Hell* (2003) (detail of lower left corner).

Flusser, Bataille, and Katambayi share an orientation to design that questions the existence of material before its formulation in either art or science, a surrealism that admits that models fail. Flusser calls design, especially as it anticipates matter *becoming* form, "artificial images," or "immaterial," because they "display material-free, empty forms."[67] He describes a sort of frenzy with computerized modeling where we now fill the world with materially realized forms (think 3D printer), abandoning the plight of finding form in already existent material. The alternative that Katambayi presents is not precisely to undermine the "disastrous" division of art and design, as Flusser calls it, but a process of thinking that starts from material and not abstract models. If I

call this "nature," it is only shorthand for already-existing materials, such as the sweet potato, cardboard, electromagnetic current, or coltan. From there, propositions are made about the existence of the material in the present as well as the future. The material in *Ecoson*'s jars goes in and out of form as it changes energy states and intersects with one another, the measure of which we only glimpse with the voltage meters attached. The cardboard that houses *Ecoson* has likewise shifted states: from tree, to commodity form, to trash, to an object/concept—all operating by kinds and classes of energy.

The prototypes are meant to demonstrate quite forcefully, in my mind, the limitation of reality that has been represented in the "impossible situation" of the extraction economy in Congo, including art like Martens's *Enjoy Poverty*. The industries of mining and representation act as if the situation operates by eternal design: matter (sites of extraction) seeks form (sites of production and consumption). The historically destructive fallacy of the model is presented, in most instances, as inevitable or at best modifiable by applying the correct ethics. The novelty of Katambayi's work simply asks (a growing and more receptive audience) whether the edifice of art and science can continue, as Flusser notes, "this crystal palace composed of algorithms and theorems that we call Western culture."[68] Katambayi's propositions, then, run the gamut of all possible permutations of tested and known formulae and also the "fantastical" sorts of propositions seen in Kingelez's or Mansaray's work. It is not utopian. It is rather more like the seriousness with which a scholar like Bataille took surrealism, because it surpassed what was considered normal and natural in the known psychical and physical worlds, those things that caused unsolvable problems. For Katambayi, wrong techniques and design are built into what we refer to as the impenetrable black box of the governance of global trade and communications.

Maker Culture

Katambayi's involvement with global maker movements gives him a platform from which to discuss the ecological matters that affect the Congolese every day. The interest has grown exponentially in recent years, and several organizations support African artists who obviate the materials that constitute algorithmic culture. The maker movement was coined by the 2005 founding of *Make* magazine and the first Maker Faire in 2006 in the California Bay Area. Similarly, Digital Earth supports Asian and African artists, as they come from

the sites that bear a disproportionate burden of production and end-of-cycle waste related to proprietary technology. According to its statement: "Algorithmic regimes regulate the movement of goods and people around the world in relatively smooth fluxes enabled by increasingly sophisticated surveillance systems. These algorithmic regimes generate, track and accumulate such a mass of data that is already referred to as the 'digital twin' of Earth. The existence of a physical planet and its 'datafied' counterpart generate a discrepancy between the reality on the ground and what is recorded and broadcasted—often leading to violent socio-political, economic, ecological and cultural frictions."[69] This discrepancy is presented as a continuation of colonial-era economic imbalances. Maker culture exhibitions seek artworks and points of view that are located outside of the center of proprietary tech, and Katambayi's career has thrived in these types of residencies. He has participated in the Pixelache festival in Helsinki and Afropixel in Dakar with the collective Kër Thiosanne. Katambayi took a collaborative residency at École supériere d'Art Aix en Provence as part of an interdisciplinary conference on twenty-first-century art in November 2010. His residency was also supported by the Blachère Foundation and involved a workshop called the Mobile Experimentation Platform. Another organization that supports artists from his cohort is Agence Future, a project-based interdisciplinary and cross-media organization started by the photographer Bram Grouts and the so-called futurist Maya van Leemput. They started the organization in 1999 and have expanded their reach through partnerships with arts organizations around the world. One of their partnerships is with Picha, the art center in Lubumbashi started by Sammy Baloji, and another with a recumbent bicycle company. This type of collaborative tech art connects back to partnerships in the 1960s, like the Experiments in Art and Technology group, which, along with the *Software* and *Information* exhibitions in New York in 1970, attempted to repair the growing split in the art world between technophiles and "geeks" and critical and/or conceptual artists, a split that persists.

These partnerships, usually temporary and sponsored by corporate tech money, might be what is indicated by the term "tech futures." It is, to state the obvious, connected to the futures of investment, the formula of unformed "experimental" practice becoming "formed" via implementation. In the shadow of some of the largest and most complex technological multinational corporations, a DIY ethos is, of course, daring, but the process of experimentation to implementation via venture capital has been the modus operandi of the tech world for several decades. This model is gaining traction in Africa, where temporary partnerships and maker-oriented work fit what many have called

the African renaissance, a term that points to the innovative, adaptive, and "solution-oriented" work that can at once be called art and design. The success of the Design Indaba biennial conference in Cape Town is one example, with the tag line "a better world through creativity." The model, it is worth noting, cannot be disputed because it is yet unrealized, a proleptic statement whose promise resides in the amount of faith we invest in the concept of design over the material wreckage of history. Again, Flusser: "That is the design that underlies all of our culture—to trick nature thanks to technique, to overcome the natural through the artificial; and to build machines, with ourselves as gods in the machine. In short, design lies behind all culture that craftily makes naturally conditioned mammals into free artists."[70] To design by proposing corrections to a species of conditioned mammals, which becomes art by its proximity to cycles of energy and decay, is a further proposal given in the next chapter.

SIX THE SEED AND THE FIELD

The seed is mine. The ploughshares are mine.
The span of oxen is mine. Everything is mine.
Only the land is theirs.
— **KAS MAINE**

The outside is dead.
— *Pumzi*, dir. **WANURI KAHIU**

Kas Maine was a South African sharecropper whom the historian Charles van Onselen extensively interviewed starting in 1979, toward the end of Maine's nearly one-hundred-year life. Born in 1894, Maine lived through the introduction of large-scale land reforms—the infamous 1913 Land Act—and later measures introduced under apartheid laws. Kas Maine's story is remarkable in the field of African history, because of the depth of narration that it took for van Onselen to write the history of a black South African: Kas "worked for no man—black or white."[1] Kas Maine was neither citizen nor subject and practiced a self-directed fugitivity. Land was at the center of the long history of the British colonization of Africa, the symbol of possession and the expression of cultural identity. To implant landscape painting into South Africa was to supplant local histories and meanings of the land. By the end of apartheid, the end of this kind of history painting, the meaning of land around the world was upended again by a move to control the information of seeds. The engineered seed is now supplanting biodiversity, as it operates without a history or a land.

6.1 Film still, *Pumzi*, directed by Wanuri Kahiu (2009), showing the film's protagonist, Asha, in the "virtual natural science museum."

To disarticulate the seed from the field assumes that the thinking part, or the animating energy of the metabolism of organisms, operates independently, an orientation to nature that Jean Katambayi Mukendi's *Ecoson* argues against. To abstract electricity is to abstract such energy systems from environment, which is, in cybernetic theory, a logical error with destructive consequences for the species. Just after Maine died, the extractive commodity shifted to the seed from the field: the potentiality and perpetuation of the life cycle via its DNA manipulation. This final chapter takes up this ultimate dichotomy of *life* and technology that is the apogee of proprietary art and tech that I describe in the introduction to *Media Primitivism*. In Wanuri Kahiu's digital short film *Pumzi* (2009), I read an orientation to art and technology that is black and feminist, which is to say that it works against the private ownership of life and the fetishizing of the seed.

A fossil of a "virtual natural history museum" is depicted in *Pumzi*. Amid a futurist dystopia set in Africa thirty-five years after the so-called water war inside of a small pod community called Maitu, the heroine Asha, curator of the virtual natural history museum, mysteriously receives a seed that is viable despite its fossilized appearance, which makes her question Maitu's official messaging that the outside is dead. She escapes her enclosed pod community, where water is scarce and electric power is generated by rowing machines and treadmills. She opens the escape hatch of her enclosed pod world to begin her exodus into the surrounding desert. As she walks away from the futurist structure, she steps out onto an "ancient" mound of rubbish. Asha plucks a *kanga* (an East African machine-stamped cloth wrap) from the mound of

6.2 Film still, *Pumzi*, directed by Wanuri Kahiu (2009). Asha opens an old compass as she makes her way in the desert to plant the seed.

6.3 Film still, *Pumzi*, directed by Wanuri Kahiu (2009). The word *PUMZI* zooming out and showing the desert on the right and the ambiguously existing rainforest on the left.

6.4 Film still, *Pumzi*, directed by Wanuri Kahiu (2009). Close-up shot of seed, held in Asha's hands and fed by water from the discarded bottle.

trash, which is faded from an extended amount of time in the harsh sun (see plate 14). She wraps it around her head to protect her as she trudges into the barren East African landscape to plant the seed, which will restore Africa to a fertile rainforest. She uses a simple maritime compass to guide her through the landscape and, at a certain point, abandons it as she loses her way and, eventually, her life. In the closing shot, Asha has collapsed onto the seed, which then blooms as the camera zooms out; to the left of the screen, a CGI forest rapidly grows, seen among rainclouds within the outline of the block letters *PUMZI* in the final shot.

A medium of the growth of the species, the seed is the emblematic object of *origins*—of nature—as a last frontier. The seed is a fetish, a container of mechanisms and manipulations of DNA mysterious to most of us. It has been for the last several decades reified as a commodity: it stands for sex and reproductivity, and it is disarticulated from the field or environment (the outside). The code of the protoplant, its DNA, is extracted from the seed and then replicated, shifted, and replanted into the system. It is not a new process; plant modification is the basis of agriculture. What is different is the precision with which this type and scale of manipulation could cause the actual death of the plant to non–patent holders. Thus, the kanga mediates two potent symbols in *Pumzi*, the trash mound and Asha, which are analogous to the environment and the seed. It makes physical contact between the two, which connects and detaches Asha's body from the mound, and it becomes a narrative device to indicate a cyclical rather than linear narrative in the reuse of a discarded mass-produced object.

A standard ecological parable, *Pumzi* allows us to glimpse our present time as history, and future Africa is built on the wreckage upon wreckage of trash. Walter Benjamin's apocalyptic image of history was reprised in the 1980s, toward the end of apartheid, by the South African artist Penny Siopis in her allegorical painting *Patience on a Monument* (1988), which features a black woman sitting atop a trash pile of representational devices (see plate 15). The woman is thereby the "angel of history" from Benjamin's "Theses on the Philosophy of History."[2] Her image supplants those of the past heroes of colonialism that comprise the trash heap underneath her. But in the decades after Siopis painted this series, the image of the heap would become one of collectivity and excess that grafted onto early accounts of Africans by explorers and ethnographers describing disarticulated masses and excessive signification. A classical avant-garde problem of representing masses, the trash mound has the added burden of representing the relationship of excessive objects and abject

bodies as landscape, what Amanda Boetzkes argues is the new aesthetic of the sublime.[3] This collapse of the inside and outside in the object of the seed is the end of one civilization and the beginning of another, where human presence is unaddressed. The one brief shot of Asha standing on the mound of trash and plucking the kanga out is key to the film's third-worldist critique of different landscape tropes, an updated attempt to refigure this history of images with her own allegorical work. By the 1990s, the European landscape medium (not genre, per W. J. T. Mitchell)[4] morphed into images of vast rubbish piles, the signifier of the Third World after the end of the Cold War. In the United States, waste piles were also a concern of feminist artists like Agnes Denes, Nancy Holt, and Mierle Laderman Ukeles. Mel Chin's and Ukeles's work attempted to change waste into another form, to catalyze chemical changes in the "renewal" of waste sites. Work by these artists was featured in the Queens Museum's 1992 exhibition *Fragile Ecologies*.[5]

In *Pumzi*, Asha's lab in the virtual museum of natural history is filled with obsolescent items that have been repurposed. An old film projector is now a holographic projector; a flatbed scanner onto which she places her hand scans Asha's thoughts and the biological makeup of the soil she tests. Though the technological powers have changed, bringing increased vision, the materials and morph have not much; nor has the basic drive of extending the sense organs of eyes and touch. This is the distinction *Pumzi* makes between the bricoleur's "making due" and refined technique. As a whole, *Pumzi* dramatizes the postapocalypse, where the rubbish pile becomes spectacular waste—the pile as the contested site of the figure/ground relationship. In economic terms, the pile's visibility troubles the dyad that obtains from what Jacques Derrida calls *partage*, or what is held in common and what is discarded.[6] A return of the repressed now compulsively shown, the trash pile is the fear that masses of discarded waste bring forth: filth, excess, and even poison, and mass extinction of the earth's resources. Increasingly trash is not a world away; it is, if anything is, universal: it floats as islands in international waters, appears as landfills throughout the world, and, in moments of political upheaval, is near our bodies on our streets. The visual trope of the mound is the psychological and real condition of paralysis from faulty techniques of ecology/technology. The kanga, then, is not only the tool best suited to Asha's task but is also waiting to be used with the correct method, a gift that is facilitated by its obsolescent status. That is, nature is a technique as well as a technology; it decenters the type of humanism structured by hierarchies, dominating over a separate nature concept.

Like *Yeelen* in chapter 1, *Pumzi* concludes with an image of futurity—an image of Africa—figured through filmic light. In *Yeelen* it is a young boy who goes forth from his mother, and in *Pumzi* it is a tree that springs forth from underneath Asha. From the classical cinematic form of *Yeelen*, *Pumzi* is part of a radically proliferated media ecology where film and digital streaming have merged, where directors traverse feature film and television, and each work can be transmitted through fiber-optic networks to a global audience. This global audience means that the "image of Africa" tends to become a play of surfaces and shine, within a mediascape full of the frenetic energy of constant signification and transmission. Nollywood leads the way in democratizing the moving image; the wretched of the film entangles "film and world."[7] Nevertheless, film is still light filtered and focused through glass, a potentiality realized through a medium, as Sean Cubitt writes: "The proximity of cinema and fibre optic telecommunications reminds us that the control of light is a constant goal of the emergent visual technologies of the twentieth and twenty-first centuries. In both, the varying qualities of different types of glass are crucial, as are the use of 'doping' to create specific optical qualities, the integration of gaseous states of matter between solids, and the critical development of pulsed lasers which matches the interrupted motion of cine-projection, giving both a common control over the temporal as well as spatial dimensions of beams of light."[8] Cubitt writes of the tremendous amount of engineering involved in continuing to control photons throughout the history of projected light. He likens this control to the spectacle engineered by Albert Speer at the Nazi Nuremberg rallies with the use of spotlights pointed straight into the air, "the purity of light without image."[9] This control is not always specifically fascist, but "the organization of light in projection has found in the twenty-first century an even more precise conformation of light to the requisites of an instinct towards order that has become totalitarian."[10] Digital light is seductive to the point of having the feeling of being unintentional. What kind of art can be made in such a media ecology, one where such control, focus, and engineering is required not only for film but also photography, painting, and anything we see or hear digitally? As in other times, one tells a parable and constructs a space of translation.

The challenge of *Pumzi*, as with any digital narrative film, is to attend to these medium-based questions of light and energy—following especially the discussion in the previous chapter—as well as the content of the narrative. The parable form of *Pumzi* allows me to be conscious of the artifice of the story much like I am in Souleymane Cissé's *Yeelen*, specifically the point that I make

about *Yeelen*, that the meta-analysis of the medium is built into the narrative via structural metaphors. On first glance, *Pumzi* mimics how capitalism has gendered the figure/ground representations of reproduction: female is fecund (the field for the seed) and sacrifices her body for the future. But another way is to think of Asha not as a mother or womb archetype but as practicing a kinship that crosses species boundaries and therefore technological and medium boundaries. Asha, after all, sacrifices her human form for a tree, and it is unclear whether this is for the ultimate purpose of saving the human race. Of such existential threats to survival, Hortense Spillers writes, "Could we say, then, that the *feeling* of kinship is *not* inevitable? That it describes a relationship that appears 'natural,' but must be 'cultivated' under actual material conditions?"[11] Reproductive futurity is undermined by the narrative; Maitu (which means "seed" in Swahili) is a postpatriarchal space, with the authority appearing to be a collective of women. The value of their collectivity and gender is neutral to negative, as they also act to block Asha's curiosity and drive. Additionally, Asha's heroism is undermined by the film's ambivalent conclusion: as the camera pans out from her single blooming tree, the image includes an entire rainforest to the left of the screen. *Pumzi* is unclear about whether it existed all along or if it was a time-lapse image of one tree becoming many. One seed has been germinated by a single woman, aided by a once-discarded kanga: the gift economy of the kanga parallels the gift of the seed under the shadow of doubt.

In *Pumzi*, "narrative realization and derealization overlap, where the energies of vitalization ceaselessly turn against themselves; the 'side' outside all political sides, committed as they are, on every side, to futurism's unquestioned good."[12] If we compare the reproductive futurity of *Pumzi* against that of *Yeelen*, some interesting conclusions might be drawn about the trajectory of African film and its treatment of the griot as a (heterosexed male) voice of postcolonial ethics. In fact, Kahiu's feature film *Rafiki* (2018) was banned in Kenya because of its depiction of a lesbian relationship that did not end in its demise, something unseen in African film. *Rafiki* disrupted the Africanized, "indigenized" version of heteronormative nationalism.[13] The film presents the seed fetish as a seemingly obsolescent fossil that can only be reenergized by a technique, the medium, of a young black African woman who carries the seed into natural light and the field. The black woman, what has been called the antitype of Western representation, here structures the narrative: in the Maitu scenes that make up the first half of the film, all of nature is dead, but abstract electricity still exists in contradistinction to the bright sun in the second half of the film.

In that revolutionary black feminism that takes as its purview none other than preventing ecological collapse, *Pumzi*'s Asha could be Wangari Maathai, who was the subject of an early documentary film Kahiu made for the South African M-NET cable network. Maathai is best known for her Green Belt Project, which planted tree seedlings across Kenya and then expanded to include fifteen other African nations. Maathai argued against the patenting of life, writing that "life is obviously not an invention."[14] Like Jean Katambayi Mukendi in his organic "machines," Maathai's invocation of the seed argues that life is beyond ownership because it is external, a priori, to human design. Maathai then uses this a priori to challenge a new wave of exploitation that is different in both scope and penetration to mining and modern agriculture. If companies are allowed to patent life by renaming the discovery process of science, as she puts it, then anything from basmati rice to umbilical cord blood cells can become private monopolies.[15] Maathai campaigned against what she called the "suicidal seed," or the "terminator technology," which is a genetic modification of seeds that makes plants produce sterile seeds so that farmers are forced to always buy their seed. These seeds, as Maathai pointed out, are actually antilife as they lack the ability to regenerate. Technology in this instance, as in others, is brazenly destructive of life. Maathai notes: "If we thought that slavery and colonialism were gross violations of human rights, we have to wake up to what is awaiting us down the secretive road of biopiracy, patenting of life arid genetic engineering. Genocide from hunger, such as we have not yet seen, becomes a haunting possibility."[16]

The so-called terminator, or suicide, seed is the nickname for genetic use restriction technology (GURT), which was patented in 1998 and targeted specifically to the "Second and Third World" seed markets.[17] The announcement of the patent alarmed many scientists, especially in the targeted regions, with one in India declaring, "A global moratorium should be called on such technologies which are not aimed at the development of mankind but to terminate its progress."[18] Another scientist in Nigeria argued that the technology's ethical problems included "a violation of natural organisms' intrinsic values, tampering with nature by mixing genes among species and domination of food production by a few companies."[19] Women's activist groups, in particular, have saved seeds and protested the dwindling biodiversity in the world's crops, pressuring governments to resist the power of agribusinesses using GURT. At the close of the twentieth century, then, shortly after the fall of the final colonial regime in South Africa, the meaning of "land" dramatically shifted as technology and what were understood as "natural organisms" effectively

merged. A new type of biopower and necropolitics emerged, the designing of a seed that self-destructs before it can express its genetic code, thereby transferring the seed's reproducibility, its "life," to the patent holding company.

Ethnic Nationalism, an Obsolescent Medium

Maathai was rare to the extent that she was able to foster a movement detached from nongovernmental, non-Kenyan organizations and relied "on local capacity, knowledge, wisdom, and expertise where appropriate."[20] Maathai traces this movement back to the 1920s and a similar initiative called Men of the Trees.[21] Conservation is a complex issue in Kenya, as on the rest of the continent. As a British colony, Kenya, like South Africa, set apart large parks for the preservation of wildlife, and so began the safari. The conservation of wildlife began at the same time that the British began constructing a railway line from Mombasa to Uganda, in 1896. Wildlife conservation was part of the opening up of the interior for investment, the rendering of the terra incognita. Wildlife and landscape both fell prey to large-scale agriculture on the "White Highlands" while natives were relegated to reserve lands. As in the times of Kas Maine, then, the land was the medium; conservation was simply partage, a parsing out of what was useful and what was not, who was included and who was not. Similarly, the settlers occupied the land with forests, and conservation was required precisely because the trees were being razed for agriculture and other uses. The Ukamba Woods and Forest Regulation of 1897 was the first regulation of forestry in the country.

In the mid-twentieth century, the forest became newly contested as the site of the so-called Mau Mau Rebellion. Kahiu herself has taken interest in the history of what is now more accurately called a conflict between British settlers and the colonial government and the Kenya Land and Freedom Party. The conflict over terminology was an aspect of the battle that was fought over the land. In a poem, "Mau Mau," published in 1955 in *Présence Africaine*, the celebrated Cuban poet Nicolas Guillén writes of the subtext of the official statements about the Kikuyu and their attacks on British settlers.[22] Two parenthetical lines of the poem begin, "a secret:" and then go on to explain what the British did first to instigate the conflict, which serves to redirect the causality to the initial aggression of possessing the land and characterizing the Kikuyu as "a savage river" that destroyed the landscape and resources. At the time of this writing, in fact, the Kenyan government was carrying out the

forced evictions of thousands of Mau forest residents in the name of ecological preservation.[23]

Kikuyu identity has been in large part shaped by conflict over the forest, and because of this, Maathai faced an ambivalent state response as she challenged the then-president Daniel arap Moi. Her avoidance of the terms of ethnic specificity demonstrates the level to which native terminology indicated ownership over the land over and against other ethnicities. Kahiu has spoken of similar attempts to outwit the ethnic labeling rife in Kenya, claiming that she answers the question of her ethnicity by answering that she is Kenyan.[24] Her films use Swahili words as a tactic: *Pumzi* means "breath" in Swahili and refers to what is often said about forests in the ecology, that they are the earth's lungs and therefore belong to all of humanity because they purify the air and produce oxygen. Asha, the name of the heroine, is Swahili for "life." Her use of Swahili terms in her films not only stealthily avoids ethnic specificity, as Swahili is a composite, coastal language born of the mixing that occurs along the edges of a continent. Swahili was the choice of Jomo Kenyatta to become the national language of Kenya; it avoided the many, at times conflicting, languages and language groups. By the 1970s, all indications were that English was becoming the lingua franca. Swahili was "African," a "viable bridge language."[25]

Maathai's speeches and texts employed a rhetorical strategy to compel a response to ecological crisis. Her award of the Nobel Peace Prize in 2004 was accompanied by criticism that called her a "tree campaigner" and downplayed the significance of ecological activism. Many scholars since have noted that the resistance to Maathai's Nobel award included her advocating a "positive peace," instead of peace defined by the absence of fighting. Her "emplaced rhetoric" was constituted of regular references to concrete, everyday experiences of environmental changes that she asked Kenyans to recall.[26] This kind of roots discourse, an appeal to empathic connection to place that weakens the critical stance, made many of Maathai's critics uncomfortable. In this, Kundai Chirindo points out, Maathai's language points to a postcritical stance that can be described by Jean Comaroff and John Comaroff's "theory of the south," where the way forward is an embrace of a particular "angle of vision" available from its ex-centricity that is better attuned to the future.[27] It is important to note the irony in the future offered by Comaroff and Comaroff, that the South has conceptually relied on the dichotomy with the North; the collapse of this north-south binary also effectively means a global erosion of ecology and human rights and increased corruption and ethnic conflict. They sketch this future with some amount of wryness, noting the long history of Africa as outside.

Critical Distance, an Obsolescent Notion

The collapse of the critical stance in ecocriticism is a debate that is familiar within and about postcolonial studies. Vivek Chibber writes, "Postcolonial studies has thus positioned itself not only as a positive theory but also a radical critique. In so doing, it has stepped quite consciously into the vacuum left by the decline of Marxism in both the industrialized West and its satellites."[28] Chibber goes on to claim that postcolonial studies is a field without a methodology, that embraces the "post" as a type of abdication of method. In the term *decolonization*, then, he writes that the critical stance is instrumentalized for political change; it becomes advocacy. One article might serve as an example of this conflicted criticality. Rasheed Araeen wrote an article of praise for Maathai in an issue of the journal of postcolonial studies and art *Third Text* that thematized futurism. The issue was published in 2009, a year before *Pumzi* was released. Araeen compared Maathai's work to Joseph Beuys's *7000 Oaks* (1982), arguing that Beuys's work was trapped in allegory, while Maathai's project resulted in millions of trees planted since 1976: her work "enters life and becomes part of its collective dynamics."[29] In other words, Maathai's work was not representational but intervening directly into the flows and energies of the earth's media objects. His article praising Maathai as an artist and activist accompanies his manifesto elsewhere in the issue that claimed that the avant-garde had altogether failed in its revolutionary claims and that "art now performs no critical function."[30] Writing against what he calls art as mass media entertainment that inflates the "nar-ego" (narcissistic ego) of the artist, Araeen advocates going beyond object making and engaging with the "earth itself."[31] There is an element of recuperation that Araeen argues for in the manifesto (beginning with the manifesto form itself), where he reserves some amount of respect for midcentury earth and land art as having been noteworthy before they were reduced to "pictures." Another of Araeen's proposals is for desalination plants as art. He writes, "The idea of desalination plants as an artistic idea is based on the potential of art to transform things, and comprises a complex cycle of continuous transformation from the sun's energy to the growing of plants."[32] He argues that this is a conceptual work that can be "materially realized" and emerging from "collective energy."[33] Though it is unclear how a conceptual work that is materially realized is different than most art production through time, Araeen pushes artists to think more in terms of transformation as enhancement, betterment: all in order to destabilize the human ego and be in service of the "technology" of nature.

Again, energy and electricity are identified as the animating forces of art, but only as it exists in already-existent matter: nonhuman objects reestablished as energy's context.

Making Kin

In addition to the release of *Pumzi*, 2009 also saw the publication of an article that became influential in the humanities and with scholars associated with *Critical Inquiry*, Dipesh Chakrabarty's "The Climate of History: Four Theses," which quotes Naomi Oreskes: "This was a basic tenet of geological science: that human chronologies were insignificant compared with the vastness of geological time; that human activities were insignificant compared with the force of geological processes. And once they were. But no more. There are now so many of us cutting down so many trees and burning so many billions of tons of fossil fuels that we have indeed become geological agents."[34] In part, therefore, Chakrabarty is attempting to go from postcolonial studies as a critique of Western civilization to facing the possibility of the full collapse of Western civilization, the title of Oreskes and Erik M. Conway's book.[35] As a strategy, Oreskes and Conway write, as it were, from the future, informing their fictional readers that, "indeed, the most startling aspect of this story is just how much these people knew, and how unable they were to act upon what they knew. Knowledge did not translate into power."[36] For humans to rise to the level of geological agents, they must be shown to alter the existence of the earth itself, where the human timeline, a conceptual technology invented in 1765, now must be shown to extend back into deep geological time.

An object that recurs throughout *Pumzi* is the plastic water bottle. I recognized Asha's bottle as a Gatorade bottle without the label, as each company has its proprietary bottle shape that becomes intimately known through the experience of touch, taste, and sustainment. In Maitu, the bottle is Asha's greatest possession and constantly with her, like a wallet for the currency of water. The tension between Asha's bottle as a single-use plastic object and its constant reuse reformulates the bottle not just as a fetish but as a technofossil.[37] The term *technofossil* indicates the temporal endurance of plastic, a fossil-derived (petroleum-based) substance that does not break down in landfills. Like a work of art, the bottle belongs to a moment in history but exists in perpetuity, well outside of human history—something not promised to art. It is an uncanny fossil that is not revered, for it was never "alive," but as a commodity

6.5 Film still, *Pumzi*, directed by Wanuri Kahiu (2009). Close-up shot of water bottle, possibly Gatorade brand, used as currency in Maitu. Asha's arm bears a bar code associated with her share of water.

fetish was loved for an instant. Asha's water bottle is now cared for in perpetuity, one of trillions of objects of culture that now exist on the scale of geological time. In another moment of heightened anxiety about ecological collapse in 1965, the art historian George Kubler wrote, "We are all reef builders, laying down an immense detritus like our relatives, the warm-water polyps of the oceans. But unlike the polyps, humans can chart and measure the debris of culture."[38] Indeed, the analogical site that Kubler staged is now on the brink of disappearance, as the chemical makeup of the oceans has already killed off much of the reef culture. The water bottle, floating in massive islands of plastic objects at sea, is becoming the ocean's culture. Kahiu has stated that her hatred for bottled water—the commodification of a natural resource—is what initially inspired *Pumzi*.[39]

The preponderance of cultural statements about ecology and its relationship to art history is a feature of so-called global art history, which comes to shape itself as an allegory that supplants world art history. Indeed, the writing of a history of "global warming" that accompanies the full-scale rewriting of world art history is the presentism that has replaced the primitivism of origins discourse and ancient cultures in early world art history. The current proliferation of terminology that suggests epochs or eras that are panhuman includes indigeneity in a global art history that apes all features of historical art in the name of survival. This claim resembles what Craig Owens wrote about postmodernism in 1980, citing Paul de Man, that "allegorical meaning supplants an antecedent one; it is a supplement."[40] There is a particular obverse move in

the post-1989 art world when the indigenous history is (finally) spoken in real time with a perpetually obsolescent Western modernism that Owens read as a postmodernist emphasis on reading as a corrective and acknowledgment of the presence of allegory in art.[41] This supplement sees world art history as leaving out the real victims of climate collapse, who must be gathered, in the present, as kin—indeed as the emblematic kin. For instance, Donna Haraway discusses this in her justification for a neologism, "Chthulucene," claiming, "We need a name for the dynamic ongoing sym-chthonic forces and powers of which people are a part, within which ongoingness is at stake. . . . I am calling all this the Chthulucene—past, present, and to come."[42] In this article, she cites James Clifford's book *Becoming Indigenous in the Twenty-First Century* (2013), in which he similarly proposes a model of "history" firmly based in a complex "now" that has open edges and relies on notions of survival given to us by the many, present, indigenous ways of life that immanent extinction modernism assumed. For both Clifford and Haraway, a critical question for scholars is the correct and ethical methods of inclusion. Haraway writes that this is a process of making kin, "an assembling sort of word."[43]

And yet all of these returns to indigenous existence, including the demotion of the visual apparatus in exchange for a multisensual ecological art, can only be compensatory. That is, we cannot unsee what is described in the term "anthropocene." Posthumanism and ecocriticism are debated in African and African American studies, particularly the fact that black people were not included in the Enlightenment concept of a human subject and therefore occupy an ambivalent position within its critique. Alexander Weheliye critiques/quotes Foucault: "Man will only be abolished 'like a face drawn in sand at the edge of the sea' if we disarticulate the modern human (Man) from its twin: racializing assemblages."[44] Proposing that we understand the human as a "heuristic model and not an ontological fait accompli," Weheliye stresses the overhaul needed in the humanities not to reform humanism but to see it for what it has always been, a mechanism of ordering bodies along a hierarchy based on race. That is, even critiques of colonialism or enslavement can uphold the fiction that race is natural. Chakrabarty suggests that if we are to fully consider the predicament of climate change and humans as geological actors, we cannot limit our considerations to either capitalism or to humans as a species. Instead, climate change makes thinking about the human species possible. Writing from the discipline of postcolonial studies, a field shaped by Foucault's critique of the human as a mechanism of power, Chakrabarty argues that since "the wall between human and natural history has been

breached," the human- and capitalistcentric notions of history are no longer adequate as models. He writes:

> The story of capital, the contingent history of our falling into the Anthropocene, cannot be denied by recourse to the idea of species, for the Anthropocene would not have been possible, even as a theory, without the history of industrialization. How do we hold the two together as we think the history of the world since the Enlightenment? How do we relate to a universal history of life—to universal thought, that is—while retaining what is of obvious value in our postcolonial suspicion of the universal? The crisis of climate change calls for thinking simultaneously on both registers, to mix together the immiscible chronologies of capital and species history. This combination, however, stretches, in quite fundamental ways, the very idea of historical understanding.[45]

A universal "we" might begin to form based on a "shared sense of catastrophe."[46] This is precisely the "us" that Maathai invoked in her many speeches and that *Pumzi* echoes, with Africa acting as the particular on which any universal relies.

The Universalizing Mechanism of Trash

The issue of survival and "ongoingness," as opposed to historical thinking, finds a new ground within discussions of the life cycle of technology, since both the beginning and the end of much digital technology occurs in Africa, from coltan and lithium to discarded computers and phones. Many theorists of the trash in trash art address the issue of time, the cycles of products indicating both the flows of global capitalism and the primitivism of those areas that receive trash. Many early essays and exhibition texts on the Nigerian artist El Anatsui described his work variously as trash, recyclia (a material studies/folk art term for art made from discarded materials), transformation, and the pan-Africanist word *sankofa*, meaning "go back and pick." Anatsui himself has described this as a process of going back both in time and in memory and reformulating objects to be aesthetic and in that sense redemptive. But the term *trash* is given from the outside. Kenneth Harrow gives a list of theorists who use the term to critique Enlightenment thinking in his book *Trash: African Cinema from Below*.[47] Indeed, as W. J. T. Mitchell argues, there is a Romanticism about transforming the piece of trash into the status of a fossil, as

fossilism and totemism come together, "a dialectical figure of animation and petrification, a ruinous trace of catastrophe, and a 'vital sign.'"[48] For example, Zwelethu Mthethwa's series *Contemporary Gladiators* (2008) was emblematic of a shift in contemporary African art—as defined outside of Africa or by non-Africans—toward the trash heap as signifier, nearing the status of a totem due to its extrapolation as a terrifying result of hypercapitalist production.[49] (I write this while remembering the name of Nokuphila Kumalo, who arguably died from the rampant femicide that occurs in racialized mechanisms.) In a way that left the status of the portrait fraught, the *Contemporary Gladiators* series did little to articulate the figure from the ground, not just formally but also in the lighting, filter, and sincerity of the sitters. Indeed, Mthethwa's depiction of children in this series borrows from a well-established visual trope of cyclical poverty, and his work was wildly popular globally, described in a 2009 exhibition at the Shainman Gallery as "stunning portraits [that] show black Africans as dignified and defiant, even under the duress of social and economic hardship."[50] In an often repeated sentiment, the gallery connects the piles of trash and the character of the generic African.

One of the effects of global art history's presentism is to overlook the historicism and specificity of the materials and objects of African art in favor of the spectacular and universalizing trash of global commodity cycles. Olu Oguibe once noted about El Anatsui's work in clay that "the mere appropriation . . . was not sufficient: we had to see what the artist brought to bear on his material."[51] That is, the nominal principle was not enough for El Anatsui, but his work was instead connected to Igbo philosophies of art and the material (read earthly) realm. This was one of the orientations to material, then, that transferred from his work was not easily recognized as trash. Instead, he invoked the idea of renewal by firing clay that broke into shards, the "broken pot as a metaphor in his sculpture."[52] That is, beyond clay as a material closer to the earth, Oguibe suggests that its historicity is important for Anatsui: "To handle clay was to reenact history."[53] Oguibe's article was written on the eve of Anatsui's move into his most famous body of work, metal sheet sculptures made from used beer bottle caps. Indeed, Anatsui's move to a bottle cap—emblematic of the made—tests the theory of historicity even more, especially as it relates to African metaphysics in art.

El Anatsui's metal sheets were foundational to what constituted a global art world: they were allegorically postminimal, of a large scale, and from the postcolony. They were recognizable within the history of both minimalist sculpture and kente cloth and also operated as an implicit critique of rapid

commodity cycles. The metal sheets reflected trends in early biennial culture, where the merits of "local versus global" were openly debated by artists living in the postcolonies. Anatsui's work shifted attention from the body of the African artist conflated with the object of the bottle caps to the implied body of minimalist sculpture, the viewer. With his work, the historical momentum to collapse the racialized body with the discarded bottle caps is slowed by the massive and spectacular sheets. The sheets appropriate the gesture of minimalism that makes the cognizing viewer a thing. This formula for his work continued even after Anatsui had to purchase bottle caps for the sheets and they were no longer discarded objects. The sheets mediated what Fred Moten calls "the dual relation between nonintention and letting oneself be overtaken and lent to signification."[54] Moten's intentional refusal to signify (a blackness that is "fugitive"), what others call "Afropessimism," is the productive doubt and untranslatability of objects as obscuring the intention of a work of art as either historicist or allegorical.

To combat stereotypes of African artists necessarily using trash, Susan Vogel writes about El Anatsui's work that "traditional West African sculpture virtually never incorporated worthless detritus, except to intimidate or for comic effect."[55] Additionally, Joanna Grabski's discussion of *récupération* in Senegalese art of the 1990s argues that the streets "are potent sites from which to consider urban visual experience as generative of artistic imagination," classifying this as "thinking with and about objects," which inverts the normal reading of either ready-made art that undermines the notion of an expressive or intentional artist or, on the other hand, of racialized connections to waste.[56] Grabski carefully narrates the orientation to materials from the artists themselves, who roundly rejected what they saw as a "ghettoizing" of their work during the time. Jean-Marie Bruce, for instance, explains that it is "not the act of salvaging materials that is most significant, it is knowing what to do with them."[57] Bruce shifts the emphasis to the artistic gesture and refined technique as the aspect of newness, against the newness of a tube of paint, a store-bought plank of wood, or a political ideology. The conceptual pivot, therefore, between the readymade and trash is in a field of vision that has been conditioned by primitivism, much as Mitchell writes of the distinctions among fetish, fossil, and totem. Duchamp said of the ready-made tube of oil paint, "Since tubes of paint used by the artist are manufactured and ready made products we must conclude that all the paintings in the world are 'readymades aided' and also works of assemblage."[58] The virginity of the material is its purposiveness. With a simple gesture, Duchamp

makes newness—productive futurity—strange, along with the demotion of painting from the intentional "composition" to the practical "assemblage"; the particular production of the objects of art and thus the readymade is an integral aspect of the market fiction of the autonomy and purposiveness of art. Similar to the collapse of the Ecole de Dakar and Dakar's association with recyclia after the postindependence intentionality of nationalist art had expired, Cuban art's "special period" saw the collapse of ideologically "stable" art corresponding to the turn to other objects at hand.[59]

Landscape as Figure

In *Pumzi* the trash heap signifier is a bracketed moment within Asha's encountering the outside, or the real landscape. Like the trope of the tropical in historical depictions of Africa, the littered landscape is one of oversignification and the fear of extinction and slow death. However, the cyclical structure of *Pumzi* suggests, as Boetzkes argues of artwork using trash, that "the landscape of waste articulates the point at which human supremacy over the earth ends and a new contact with it might begin."[60] The key moment of the film is when Asha emerges from the inside of Maitu, glances around, and is nearly hit by a bag of trash that is blown out of a pipe coming from the inside, suggesting that Maitu's pollution is ongoing and therefore its claims of 100 percent renewability are fiction. Asha plucks the kanga cloth from the mound and gives it a quick shake before sweeping it up onto her head. This subtle gesture indicates a break with its stasis, a "re-partage" that reverses the act of refusal, and it enters back into circulation as a usable thing. The kanga cloth is emblematic of temporality in several ways. The kanga has been used for generations in East Africa as a portable and mutable covering. In the 1990s several women scholars wrote about kangas via feminist theory as methods of signification for women who may appear to Western viewers to be oppressed. Laura Fair connected the history of former Swahili enslaved women from the East African coast to the contemporary use of kanga cloths. She wrote that after abolition, newly freed women asserted themselves by adopting forms of dress from upper-class Muslim women.[61] She explained, "During the early years of this century the makers and sellers of kanga were making a fortune from women in Zanzibar who were said by many to be busily transforming their identities from those of slaves into 'slaves of fashion.'"[62] With this shift to fashion, kanga cloths entered into a highly commodified status

in the first decades of the twentieth century. Quickly bought and consumed, women became voracious users of kanga, which, according to Fair, indicated the women's personal and financial autonomy.[63] Into the 1930s, kanga became associated with modernity itself, "sporting central motifs of electric lights, trains, clocks, automobiles and steamships."[64] For a kanga to be reused goes against its normal orientation. Kangas signify newness, both in the concepts that they portray and the time element of fashion; it is the ultimate quickly used and quickly discarded commodity, native to East Africa. In *Pumzi*, it is a feminist gesture. As Asha leaves that closed world, she goes back to previous fashion, technologies that women employ to survive. Her shaved head likewise switches codes: from the future world where everyone, including white people, have shaved heads to a matrix of other methods and functions of the shaved head in East Africa. Together with the hair as style, the kanga indicates a once-new fashion that pulls against the futurity of Asha's and Maitu's world.

Pumzi presents alternative methods and techniques of reproduction that preserve the original notion of a seed as the program of perpetuation, distributing energy along a continuum that includes previous separate notions of field or environment. It notes the shifting emphasis from the landscape as medium to the internal program of the seed, something functioning as the container for DNA at the forefront of reproductive technologies, like the code of a networked (and human-paired) computer. A group on the forefront of this connection, Critical Art Ensemble (CAE), has depicted biotech and tactical media as coterminous with contests over intellectual property. For a 2003 exhibition, *Free Range Grain*, CAE staged a live "interventionist performance" that allowed people to use a portable public lab to test their food for common genetic modifications. They write, "Biotechnology and the science behind it are some of the most misunderstood areas of production in the cultural landscape. Myths, fantasy, misleading speculation, and disinformation abound in the public sphere. Part of the reason for this is that the scientific process never makes a public appearance, only the miraculous products. We want to bring the routinized processes of science to the public—let them be seen and touched."[65] CAE has made the basic tenets of science open to the public, using DIY kits and the internet to create what ensemble member Claire Pentecost calls the "public amateur," a play on the term *public intellectual*. *documenta 13* (2012) featured a section of eco art in the form of landscaped areas, gardens, and Song Dong's *Doing Nothing Garden*, a six-meter-high hill that was essentially an overgrown landfill pile, an illustration of the trash mound returning to nature. Pentecost's work in *documenta 13*, *Soil-erg*, concerned the seed as a

6.6 Claire Pentecost, *Soil-erg*, 2012. Photo of installation at *documenta 13*, 2012. Courtesy of Claire Pentecost.

"compact, portable package, it is easily commodifiable."[66] With the fetishization of the seed, Pentecost explains, the soil is often overlooked as the necessary environmental medium for seed growth. She cites Gregory Bateson's writing on both: "The unit of survival is organism plus environment."[67] In this section of *Steps to an Ecology of the Mind*, Bateson writes of the epistemological fallacies of occidental civilization, which have led to a similar misinterpretation of objects of technology like the computer. Stating that "the lines between man, computer, and environment are purely artificial," Bateson proposes instead that "man plus environment" is what, together, thinks. Societies, he writes, are "closed loops of causation."[68]

Environment must be considered, then, as constituting the formats and objects of technological reproduction. In a protracted discussion of the relationship between actual trash (discarded objects) and low-quality films, Harrow connects his notion of trash to the *set setal* movement in the 1990s in Dakar, a parallel conversation to récupération.[69] He argues via Jacques Rancière that, via the artists, actions, "the regime of the sensible had changed—the artists' ways of doing and making, the audience's ways of perceiving and making sense had changed."[70] Harrow holds up African video film as a reversal of representational mechanisms (Hollywood to Nollywood), but the larger fields of cinema

and African studies debate about whether video's deskilling of film and cinema is revolutionary or merely lacking in seriousness. Brian Larkin's important book on northern Nigerian video film frames the question in the aesthetics of video film as a matter of the medium and its cultural texture instead of being one of relative quality. He and Jonathan Hayes have both written about the perceived lack of criticality in video films and therefore the contempt that many classically trained filmmakers have for video film in Africa. Compared to early independence-era African cinema, *Yeelen* being emblematic, Nollywood can seem as though it gave up the dream of avant-gardism and moved to a model of easy profit and cheap workmanship. Once again, the relative worth of art is in competing definitions of popular and radical.

Abiodun Olayiwola writes that Nigerian cinema "died a premature death" in the 1990s because of the International Monetary Fund (IMF) structural readjustments and the collapse of the market for theater-screened film.[71] He goes on to decry the "mediocrity and amateurism" in Nigerian film, due at least in part to the fact that most of the filmmakers in Nigeria have no formal training.[72] Larkin puts this in perspective with the populism of the films, presenting a type of third way of reading video under the contemporary conditions of Nigeria (the state, infrastructure, and the IMF). Larkin argues extensively that the piracy that is rampant in Nigerian film has been naturalized to the point of being an identifiable aesthetic. "In this way," he writes, "piracy creates an aesthetic, a set of formal qualities that generate a particular sensorial experience of media marked by poor transmission, interference, and noise."[73] He compares this to what Frankfurt school scholars wrote about in terms of a sensorium that has been trained to respond to certain configurations of modernism.

Pumzi has a high production value and thus sits ambivalently with the genre. The shots are measured; the lighting and the shots are steady; multiple cameras are used. *Pumzi* utilizes classical techniques of cinema, including the types and variety of camera shots and angles and narrative techniques. In particular, *Pumzi* uses close-up shots especially when it invokes Asha's dream world, her interiority; it also provides many atmospheric shots to establish a different world. The film has none of the aesthetics of "mediocrity and amateurism"; nor does it have the quality of having been dubbed or the file compressed. Kenya's video film industry is called Riverwood, named after Riverwood Road, where the creative class reside in Nairobi. Riverwood has a sizable output but lags behind South Africa, Egypt, and Nigeria in terms of volume and sophistication. But Kahiu's work became much more visible

through the South African Electronic Media Network (M-NET), first the Maathai biopic *For Our Land* (2009) and then *Pumzi*. The South African media industry attempted to dominate the African mediaspace beginning in the twenty-first century. Major producers included Simon Hansen, who promoted Neill Blomkamp, director of another postapocalyptic film set in Africa, *District 9* (2009). M-NET, the first terrestrial pay-television channel, launched the video-on-demand African Film Library in 2012, which was to become the dominant distributor not just of video film but also classic African cinema. While it ultimately did not succeed in that form, M-NET continues to host its Africa Magic website, a competitor to the Nigerian-based IROKOTV ("the Netflix of Nollywood"). *Pumzi* was made with the backing of Focus Features and continentally dominant South African media networks, right at the moment that the latter would launch *District 9*, the global hit science fiction film set in Johannesburg. Unlike *District 9*, *Pumzi* cost only $35,000. Kahiu was trained at the University of California, Los Angeles, one of the elite film programs in the United States. It is distinct in Riverwood productions being the first science fiction film and hovers really between a video film and an art film made for the film festival circuit.[74]

Whatever trash exists in *Pumzi* is obviated by the refined imaging of digital film, which is key to the film's significance and also its crossover appeal. That is, trash is framed and not the frame, one controlled by a visible and active black woman filmmaker whose presence inevitably becomes allegorical of political representation. In the same way that Spillers writes of the legacy of slavery on gender relations and formations of families, the continuing crisis of black femicide and reproductive control, *Pumzi*'s aesthetics align exactly with the plight, the figure, of the raced and gendered filmmaker. Again, Siopis's *History Painting* series from the mid-1980s is an important reference, as it emerged within the dismantling of the last colonial regime left on the African continent, using the figure of the black woman as an allegory of allegorical substitution itself. *Wreckage upon Wreckage* illustrates a trash heap that, upon closer inspection, includes tchotchkes of European imperialism: Greek sculpture, velvet ropes, gilded frames on paintings, vases, a magnifying glass, a pocket watch, decorative candelabra, and silk flowers. The other paintings in the series, *Melancholia* (1986) and *Patience on a Monument* (1988) (see plate 15), both feature oversignifying piles of objects as a still life. *Patience on a Monument* completes the circle of associations between imperial conquest and luxury, memorializing an art history where epochs corresponded to

genres and isms. They conflate the genres of landscape, portraiture, and history with this signifier of presentism, the trash pile. A black woman sits atop the pile of detritus, peeling a citrus as she waits.

Siopis's strategy of using a black woman to personify the angel of history set in the detritus of the age of exploration is rife with political jeopardy; its success relies on her subjective investment in the overall aesthetic integrity of the work.[75] The figure's externality, her representationality, is reserved as the saving form of Africa: an ethical future based on her absence in historical art. As Owens argued, allegorical art is not a recovery of a past way of looking ("allegory is not hermeneutics"), and Siopis's history painting series had precisely the aim of substitution and replacement in the early days of postcolonial discourse in art.[76] Owens continues, "Here, the works of men are reabsorbed back into the landscape; ruins thus stand for history as an irreversible process of dissolution and decay, a progressive distancing from origin."[77] In the 1980s, Siopis entered this discourse with a fervor, digging through an archive of images that included Freud's patient Dora and Saartjie Baartman and perhaps overidentified with the figures.[78] As a series, the *History Paintings* depict fragments of art history that are brought to the present with the intention of supplanting the African art that had been trapped in a European-derived allegory of origins and ahistoricity. Ruin is traded for ruin.

In the aftermath of postmodernism and its critique as being deeply racially ambivalent, *Pumzi* features obsolescent technologies of representation, which more directly address representations as being assemblages and technologies. One shot in *Pumzi* links obsolescence with new techniques, refusing to link trash with dysfunction: a three-second-long close-up shot of the profile of a midcentury Noris slide projector (see plate 16). We cut to the shot just as Asha has entered the virtual natural history museum and flipped on the electricity breaker. The projector quickly responds, makes a high-pitched "digital" sound, and auto lifts, beaming a holographic interactive screen on which Asha runs her computer programs and communications. In addition, the circa 2000s digital scanner on her desk is able to image her thoughts by scanning her hand. But *Pumzi* doesn't traffic in nostalgia for these objects; nor is it a matter of Kahiu making due with what was around her when the film was made. Instead, the Noris slide projector is enveloped in Asha's virtual natural history museum and is thus enfolded within scientific practice institutionalized during the age of European maritime exploration: that logic and technique that are on the brink of extinction. From there, one can extrapolate

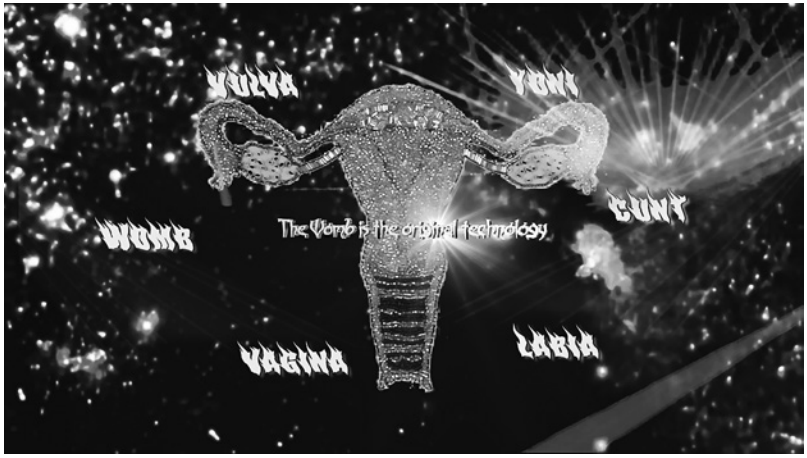
a host of associations between the technology of optics and that of maritime exploration. The slide is a technology of art and science, projected for mass consumption or for enlarged vision on a microscope slide. A virtual natural history museum is, naturally, the end game of the project of natural history: the capture, codification, and full digitization of what is "out there." The virtuality that we are being shown in Maitu is naturalized as a matter of accepted fact that everything has shifted to keeping one species alive, the human. The pairing of advanced optics and communication with an old Noris projector undoes the naturalized connection between form and format, and it remains unclear if in the Maitu community this occurs within a model of scarcity or excess. With both, it is possible to avoid the mistake of starting with "essences, those of subjects *or* those of objects. That starting point renders impossible our measurement of the mediating role of techniques."[79]

Kahiu has spoken about this kind of refitting of technology, DIY and hacker ethos: she states that this type of tinkering is Afrofuturist, technology that "makes sense to us."[80] She was influenced, she goes on, by Sun Ra's statement that he came from a different planet, which seemed commensurate with her mother's folktales, and later that transformed into her reading authors like Ben Okri and Nedi Okarafur, the Nigerian poet and author. For her, Okri was able to normalize the spirit world: "We use it in an everyday sort of way."[81] Breaking open the so-called black box of technology to literally and metaphorically rewire media objects like mixers, recorders, record presses, and so on is a tactic long employed by artists who, *post facto*, are identified with Afrofuturism. Afrofuturism is related to but distinct from Afrotopia, in that both discourses account for the relationship between utopia and dystopia but use different metrics of subjectivity and disciplinary language. Senegalese philosopher Felwine Sarr's *Afrotopia* warns of the temptation to give in to either catastrophism or its inverse double, "blissful optimism."[82] His profound doubt about any bright future for Africa is that it is market based and bears little resemblance to a chaotic present.[83]

In the diaspora discourse that gave rise to Afrofuturism, John Akomfrah's film *Last Angel of History* (1996) established a genealogy of black artists and musicians who differently oriented themselves to mainstream technology. Produced in conjunction with the Black Audio Film Collective, *Last Angel of History* interviews the techno musicians Derek May and Juan Adkins, the science fiction author Samuel Delaney, the media theorist Kodwo Eshun, and George Clinton. They cite Jamaican dub music, a technique developed by various manipulations to recording and mixing equipment. Dub is em-

blematic of what Erik Davis calls "the Black Electronic" or those practices like King Tubby that broke the machine open to evoke an interior, other space, the space of the black Atlantic. Breaking open "straight" tech, turning to the processes that they house, gives the power of mediation back to the artist/musician. Davis writes, "With dub we do not find ourselves in the incorporeal deep space of sci-fi soundtracks and acid rock, but in a kind of 'out' inner space, a liminal womb."[84] The inner/outer space invocation is a type of hallucination characteristic of surrealist art and other trance practices and often described by diasporic black artists as the birth of new art, new worlds, and newly born people who survived the transatlantic trauma.

This rendition of the image of a womb as a space of hallucination takes *Pumzi* beyond what might seem like a reproductive futurity within the story to a global feminist digital art. Tabita Rezaire's *Sugar Wall Teardom* (2016), a lo-fi digital video short, contains statements that women are originally and finally a technology for reproduction: "The womb is the original technology." Rezaire characterizes art as a "decolonial" healing and (metaphorical) rewiring of the digital space.[85] She has been affiliated with the South African digital and internet art collective NTU (Nolan Dennis, Bogosi Sekhukhuni, and Rezaire), a self-proclaimed decolonial project to save lost technologies, think holistically about progress, and refuse the (Western) distinction between nature and technology. Using more than just digital space, NTU takes full advantage of the gallery space in installations that include medicinal herbs, water, soil, and architectural models. While the gallery-based mode of installation art nearly guarantees that this decolonial gesture will remain metaphorical, NTU's philosophy is that demonstrating the link between ancient African and contemporary technologies will "restore energetic imbalances."[86] NTU's installation art closely resembles another South African artist's work, Dineo Seshe Bopape, who also stages low-quality videos and exposed wires with organic materials in the gallery. This type of lo-fi work strains credulity, aesthetically embracing kitsch, punk, unicorns, and rainbows. But as Hito Steyerl argued several years ago about the low-quality image, "Poor images are the contemporary Wretched of the Screen, the debris of audiovisual production, the trash that washes up on the digital economies' shores. They testify to the violent dislocation, transferrals, and displacement of images—their acceleration and circulation within the vicious cycles of audiovisual capitalism."[87] Poor images, she writes, are of the genealogy of third cinema, "committed without becoming bureaucratic."[88] They form visual bonds according to Dziga Vertov's early theory of revolutionary film. In sum, then, the turn to the kitsch in



6.7 Screen grab from Tabita Rezaire, *Sugar Wall Teardom* (2016), digital video hosted on Vimeo.

digital practice resists the finish of capital exploitation, where the pleasure of the screen creates a shimmering filmic shell over the more sinister function of digital images in an age of surveillance capitalism.

A parallel trend toward representation strategies that enact a type of ecofeminism that alter the surface qualities of representational media can be found in Wangechi Mutu's *The End of Eating Everything* (2010), an eight-minute film about anticonsumption made in collaboration with the American musician Santigold. Santigold's head sits atop a blob-shaped body, reminiscent of Mutu's *One Hundred Lavish Months of Bushwhack* (2004), a collage of magazine ads, pornography, and pooled watercolor paint on Mylar. Both of these works make a connection between the surface effects of media and how they become fetishized to the point of aesthetic repulsion. Along with her other collages that link the feminized body to strange, dislocated symbols of nature, *One Hundred Lavish Months of Bushwhack* suggests an end, a refusal in the traditions of environmentalism, feminism, and avant-garde art. Ecology, as an idea, is difficult to articulate without bringing about a whole host of associations with facile appropriations of native ecological thought, a type of ecological primitivism. Along with the ambiguity of the status of the forest, the status of humankind is unanswered in the closing shot of *Pumzi*. Allison Mackey calls Asha's final act "interspecies sacrifice," which resonates with Matthew Omelsky's description of Asha's sacrifice as cyborgian and Kahiu's

own statement that "we have to mother mother nature."[89] Storytelling is a key feature of Afrofuturism and found equally in the story that opens this chapter, Kas Maine's; they operate as "metalogues." As Gregory Bateson wrote about his famous set of metalogues in the opening section of *Steps to an Ecology of the Mind* (1972), "Notably, the history of evolutionary theory is inevitably a metalogue between man and nature, in which the creation and interaction of ideas must necessarily exemplify evolutionary process."[90] Staged through a fictional conversation with his daughter, Bateson uses language to create a feedback loop more potent than linguistic representation: language is potent in its ability to shift ecology, to have potency. The gendered relationship of "daddy" and child calls to question how education works and the broader transmission of knowledge among what we can call kin.

In one of Bateson's metalogues called "Why a Swan?" Father and Daughter discuss *Swan Lake* and *Petrushka*. The conversation pivots around Daughter's use of the oft-used phrase "sort of" as she describes the dancers in their costumes. Father quotes Macbeth, who explains that divisions between and among species are always fraught with social hierarchies. The quote from Macbeth in Bateson: "Ay—in the catalogue ye go for men / as hounds and greyhounds, mongrels, spaniels, curs, shoughs, water-rugs, and demi-wolves are clept / all by the name of dogs."[91] Then follows a conversation on the status of the sacrament and whether it is metaphorical or sacramental, that is, whether it remains inert or spurs material processes, whether it is real. Father says: "It is not one of these statements but their combination which constitutes a sacrament. The 'pretend' and the 'pretend-not' and the 'really' somehow get fused together into a single meaning. Daughter: But we ought to keep them separate. Father: Yes. That is what the logicians and the scientists try to do. But they do not create ballets that way—nor sacraments."[92] This kind of ecological thinking of Bateson, with the possibility of delegitimizing patriarchal hierarchies of knowledge, is part of the genealogy discussed in the introduction to this book. It is an early moment when tech and environmentalism came together under the flexible term *cybernetics*, which posits a system where field and seed are intertwined, which is both representational and real. If this kind of cybernetic ecological longing still exists, it seeks an outside that does not exist, because this type of worlding, where Africa is outside, is dead.

That is to say, *Pumzi* traffics in the high gloss of digital cinema, where light emanates from behind the screen and not from the projectors of classical cinema. *Pumzi* risks being associated with a history of light as spectacle, a condition of visuality now replicated across trillions of screens worldwide. *Pumzi*

does not avoid the stakes of shine as a technique of picturing blackness but instead uses it to reify the disparate trends and strategies of black diasporic aesthetics, with the possibility of "transforming the political meaning of visibility," as Krista Thompson has written.[93] This type of aesthetic practice that shimmers and reflects with collective energy is the kind that is evoked by the figure of Asha, who experiences flashes of light in her private visions and dies in the light of a productive and universal but harshly omnipotent sunshine—or, to say it in Bambara, yeelen.

AFTERWORD

In her magnificent book *Njinga of Angola: Africa's Warrior Queen*, Linda Heywood writes of an episode: In 1660, three years before her death, Queen Njinga Mabande, who also signed her name as "Queen Dona Ana" to Europeans, held a public meeting to defend her decision to destroy a reliquary that held the remains of her brother, her predecessor ruler.[1] The *misete* was an important symbol that until then had signaled her continued Mbundu/Imbangala ancestral beliefs, a most cherished object that represented her legitimacy with the Mbundu people. The Roman church demanded she give up the object, because it was preventing her from demonstrating her full conversion to Christianity. The misete is illustrated in the famous watercolors of the Capuchin missionary Giovanni Antonio Cavazzi da Montecuccolo, who tells the story of the queen's transformation, a small box that bears the design patterns of Central Africa, including the *sona* drawing and logic practice. In two images, the box appears alongside implements of metalworking: an anvil, bellows, and blades, which all demonstrate the queen's power over both form and the elements. After local leaders hotly debated the proposed action of the queen, Njinga carried the misete to the newly constructed church, knelt in front of the crucifix, and surrendered it to the presiding priest. It was melted down and made into a lamp for the new church that she and her recruits built. The misete was old media; the lamp was new media. Both were present in the same time and made from the same mutable/recyclable material but embodied different epochs.

Media Primitivism has argued for an expansive understanding of medium and mediation in art, one that allows for multiple genealogies and epochs to

exist simultaneously in and around works of art. As a conclusion, I am sure that I am faced with the implications of what this treatment of African art means and whether it could be used in the analysis of all art; this has been the persistent question of global art history. I hope the book engages some of the accidental challenges of writing about the aesthetic, artistic, and/or representational practices with care to the notion of context and field, which, in this case, includes a constellation of genealogies and theories of art. I also hope that the conclusions I reached pertaining to the racializing mechanism at work in the theories and practices of medium/media/mediation should be recognized as operating in all of art history, not just in African art or art by or about people of color. African art history, as I argued in the introduction, includes concepts of fields and peoples, obscure aesthetic theories, embodied knowledges, recalcitrant esotericism; but it also includes the worlds that each work of art might create. Surely these worlds are not limited to the contours of Africa, but like all worlds created by art, they may remain obscured according to embodied subjectivities and habits of theory. Additionally, attention is often so fleeting and fragile that we miss entire lines of flight that we could have taken because our head was turned just this much. Attending to one thing over another in an economy of unlimited visual evidence is risky: evidence becomes a question, not a given.

The chapters of *Media Primitivism* are set in the twentieth century, but the intellectual history reaches back to the Enlightenment, the moment when fetish and fetishism become allegorical of difference. If we are once again revisiting the project of the Enlightenment, it is because of resurging and rampant racism, ecological collapse and the suppression of its reporting, femicide, the predatory and abusive use of digital and networked technology, and expectations of rapid and profitable conclusions to research, just to name several. Naturalized methods of distanciation paradoxically license access to resource exploitation, and that basic architecture of thought and action has yet to be fundamentally revised. Distanciation is behind the idea of a separate technology that is neutral and has nothing to do with our bodies or our communities; the same myth of neutrality that veils the demand on us humans to produce a tremendous amount of images and affects; the particular kind of technological witchcraft that drives people to resort to the most odious, inhuman methods of creating visual and verbal shock to produce just a spark of energy across networks.

It is tempting to render one's research allegorical of those problems, but it is equally tempting to leave them aside. The threat of global collapse that hangs over me as I write this book makes it extraordinarily difficult to continue to

imagine not just biodiversity but also cultural diversity, the existence of incommensurable and untranslatable cultures. I am completing the final edits to this book confined to my home along with the rest of the world, whom I watch on my screens, as we attempt to slow a viral pandemic that has halted most of the world's systems. In addition to thrusting upon us tremendous uncertainty and disconnectedness, the outbreak proves that there are no borders, neither national nor epidermal, that confine us from the human species—I understand "us" much differently than I did just weeks ago. And as we become more reliant on our devices to make those disembodied connections, I expect that attention extraction, as any biological extraction, will be recognized as needing to be collectively protected as a limited resource. It will be recognized as a problem of consciousness, as it threatens our individual and collective ability to be withdrawn. The artworks that I've immersed myself within in writing this book have modeled a different orientation to technology and to art, particularly the complementarity of the two and their combined techniques of knowledge.

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PLATE 1 Film still, *Yeelen*, directed by Souleymane Cissé (1987). A curved tracking shot depicting Nianankoro weeping as he faces his father in the final duel.

PLATE 2 Film still, *Finye*, directed by Souleymane Cissé (1982). Intro sequence showing the Bambara ideogram and script for "wind," the title of the film.

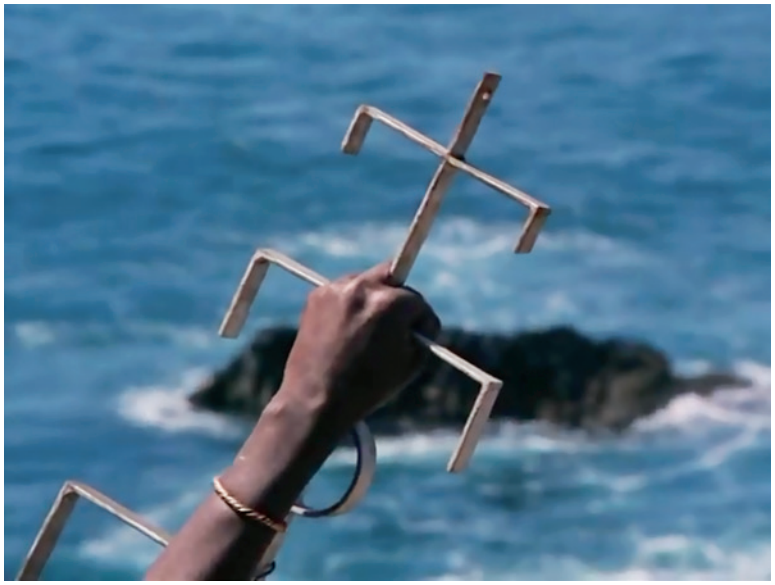

PLATE 3 Film still, *Touki Bouki*, directed Djibril Diop Mambéty (1973). Hand of the woman protagonist reaches up from out of the frame and grasps the Dogon cross mounted on the motorcycle as the couple makes love.

PLATE 4 Film still, *Yeelen*, directed by Souleymane Cissé (1987). The blade of an ax as it is hammered onto an anvil to form a sharp edge, part of the inventory of images of light, heat, and the force of the blacksmith.

PLATE 5 Film still, *Yeelen*, directed by Souleymane Cissé (1987). Depicts a man with albinism walking backward as a result of a reverse-motion film technique to depict "supernatural" powers.

PLATE 6 Abdel Hadi Al-Gazzar, *The Green Man* (1951), oil on canvas, private collection. Photograph courtesy of Alex Dika Seggerman, artwork reproduced courtesy of Laila Effat.

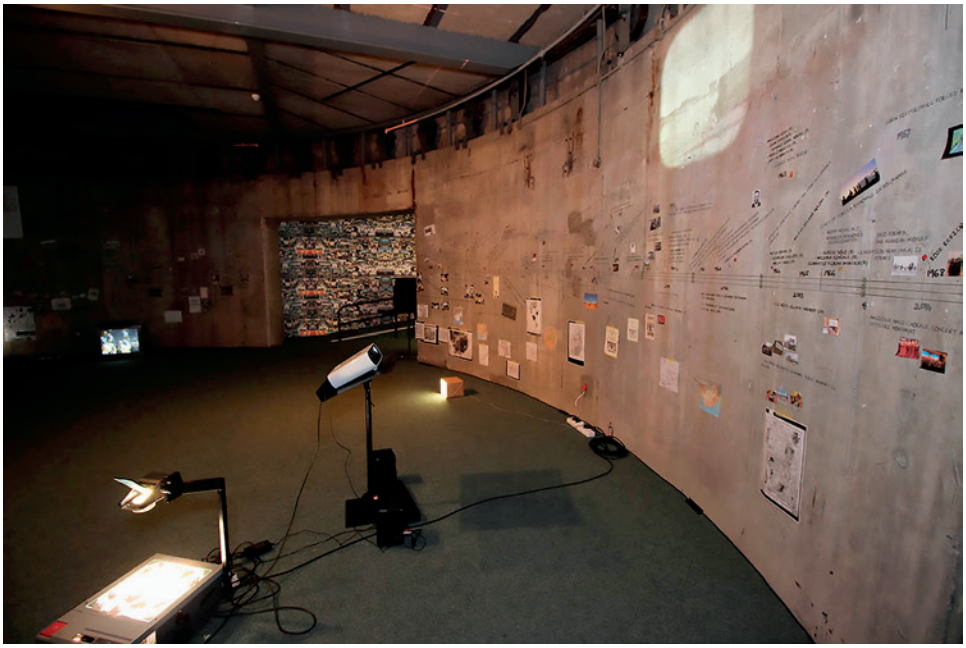

PLATE 7 Dineo Seshe Bopape, installation view of *Sa koša ke lerole* (2017) at the National Arts Festival, in the basement gallery of the 1820 Settlers National Monument. Images courtesy the artist and the Grahamstown National Arts Festival.

PLATE 8 Kazimir Malevich, *Black Square* (1915). Courtesy of the State Tretyakov Gallery, Moscow.

PLATE 9 Brett Murray, *Power* (2008). Courtesy of Brett Murray.

PLATE 10 John Koenakeefe Mohl, *Miners "Loading the Barrel at Night" at Crown Mines Jo-burg (SA)* (ca. 1960s and 1970s).

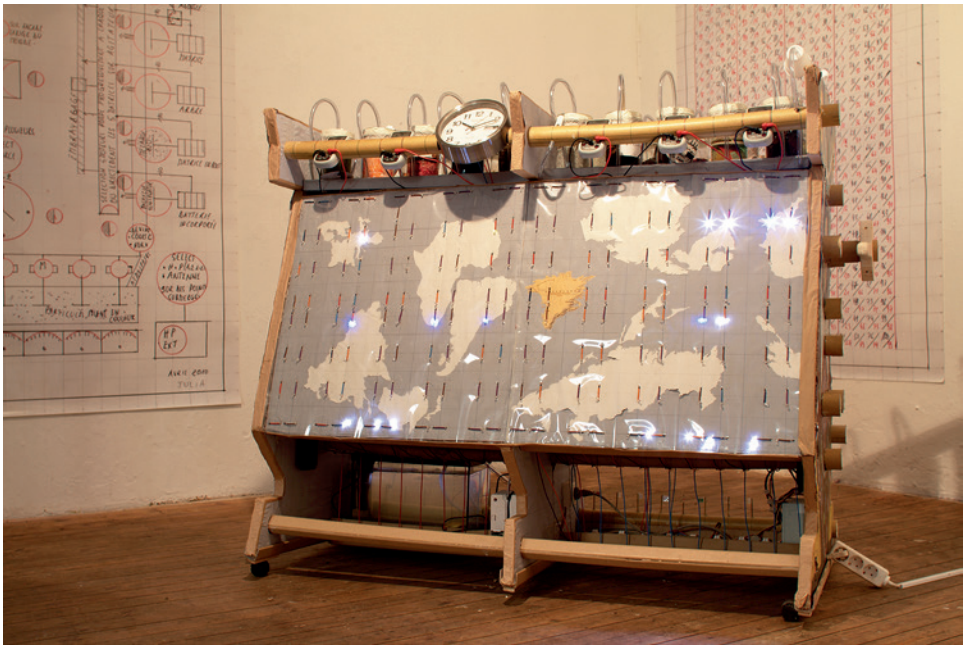

PLATE 11 Jean Katambayi Mukendi, *Ecoson* (2010), front view.

PLATE 12 Sammy Baloji, *Untitled 12* (2006), from Mémoire series. The archival photographs in this montage were probably taken in the early twentieth century and sourced from UMHK. Archival digital print on satin matte paper, 60 × 181 cm, Edition 10 + 1 AP. Courtesy of the artist and Axis Gallery, New York and New Jersey.

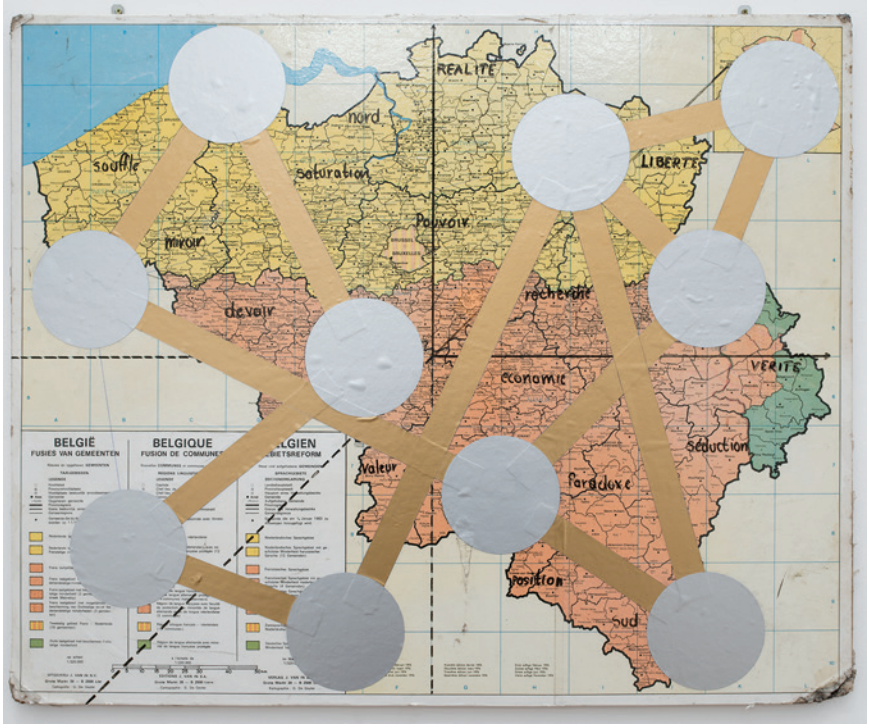

PLATE 13 Jean Katambayi Mukendi, *Gateaumium* (2016), prints and masking tape on medium-density fiberboard, 84×118 cm. Courtesy of Trampoline Gallery, Antwerp.

PLATE 14 Film still, *Pumzi*, directed by Wanuri Kahiu (2009). Asha plucks from the mound of trash a kanga (an East African machine-stamped cloth wrap), which is faded from an extended amount of time in the harsh sun.

PLATE 15 Penny Siopis, *Patience on a Monument: A History of Painting* (1988), 200 x180 cm.

PLATE 16 Film still, *Pumzi*, directed by Wanuri Kahiu (2009). Close-up of a midcentury Noris slide projector.

NOTES

Introduction

Epigraph: Mande proverb quoted in Wise, "*Nyama* and *Heka*," 19–38.

1 Zielinski, *Deep Time*, 7. On the topic of natural substances as featured in technological media, see also Kahn, *Earth Sound, Earth Signal*; and Peters, *Marvelous Clouds*.
2 Siskin and Warner, *This Is Enlightenment*, 1.
3 Wise, "*Nyama* and *Heka*," 20. Wise enters a protracted argument about the use of *nyama* and Egyptian philosophy as precursors to poststructuralist thought via Jacques Derrida's reading of Plato's *The Timaeus*. All are concerned with the origin of the word and its relationship to potency, that is, action.
4 Sarr, *Afrotopia*, 13.
5 Clifford, "On Ethnographic Allegory," 99.
6 See Cubitt, Palmer, and Tkcacz, *Digital Light*; and Elcott, *Artificial Darkness*.
7 Friedrich Kittler writes, "When films, music, phone calls, and texts are able to reach the individual household via optical fiber cables, the previously separate media of television, radio, telephone, and mail will become a single medium, standardized according to transmission frequency and bit format." Kittler, "Gramophone, Film, Typewriter," 101.
8 Taussig, *Mimesis and Alterity*, xviii.
9 An important exception to this was Frank Popper's exhibition *Electra* at the Musée d'Art Moderne de la Ville de Paris in 1983–1984. See his introduction to the exhibition catalog, in Musée d'Art Moderne de la Ville de Paris, *Electra*, 17–78. Popper notes this exhibition's predecessors in kinetic and light art, but his focus was much more explicitly on electricity and its affordances, and particularly to "celebrate the hundredth anniversary of the foundation of the Society of Electrical and Electronic Engineers not only in a technical, but also in an artistic way" (20).

10 McNaughton, *Mande Blacksmiths*, 16.
11 Jones, *Global Work of Art*, 165.
12 Jones, 152.
13 See Batchen, "Electricity Made Visible," 27–44. For a more comprehensive history of perceptual shifts in the nineteenth century as registered through art, see Crary, *Suspensions of Perception*.
14 Kahn, *Earth Sound, Earth Signal*, 130.
15 Cubitt and Thomas, *Relive: Media Art Histories*, 39.
16 Shanken takes particular aim at what he argues is now the canonical text of modern art history: Foster, Krauss, Bois, and Buchloh's *Art Since 1900: Modernism, Antimodernism, Postmodernism* (London: Thames and Hudson, 2005). See Grau, "Historicizing Art and Technology," 43–70.
17 Pietz, "Problem of the Fetish, I," 12.
18 Pietz, 14.
19 Pietz, "Problem of the Fetish, II," 41–42.
20 From McLuhan's "The Medium Is the Message," in *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964): "We are no more prepared to encounter radio and TV in our literate milieu than the native of Ghana is able to cope with the literacy that takes him out of his collective tribal world and beaches him in individual isolation. We are as numb in our new electric world as the native involved in our literate and mechanical culture" (113).
21 Eno, "Gossip Is Philosophy"; and Wolfe, "Digital, the Analog," 85–93.
22 See Fairfax, "Jean-Luc Godard in Mozambique."
23 Matory, *Fetish Revisited*, xix.
24 Matory, xix–xx.
25 Hortense Spillers writes,

> Typically, there is in this grammar of description the perspective of "declension," not of simultaneity, and its point of initiation is solipsistic—it begins with a narrative self, in an apparent unity of feeling, and unlike Equiano, who also saw "ugly" when he looked out, this collective self uncovers the means by which to subjugate the "foreign code of conscience," whose most easily remarkable and irremediable difference is perceived in skin color. By the time of De Azurara's mid-fifteenth century narrative and a century and a half before Shakespeare's "old black ram" of an Othello "tups" that "white ewe" of a Desdemona, the magic of skin color is already installed as a decisive factor in human dealings.

Spillers, "Mama's Baby, Papa's Maybe," 70.
See also Thornton, *Africa and Africans*.
26 Rosalind C. Morris, " 'Fetishism (Supposing That It Existed)': A Preface," in Morris and Leonard, *Returns of Fetishism*, viii.
27 Doris, *Vigilant Things*, 16.

28 Doris, 16.

29 "Willhelm Johann Müller's Description of the Fetu Country, 1662–9," in Jones, *German Sources*, 158, 159.

30 Fromont, *Art of Conversion*, 15. See also Northwestern University, Block Museum of Art, *Caravans of Gold: Fragments in Time: Art, Culture, and Exchange across Medieval Saharan Africa*, and its accompanying publication, Berzock, *Caravans of Gold*.

31 Pietz quotes Hegel extensively in "Problem of the Fetish, I," note 10, including Hegel's commentary on the "African character" as lacking the idea of Universality. That is, for Hegel, Africans seem to be too literal and worship anything at hand.

32 Pietz, "Problem of the Fetish, I," 7.

33 Quoted in Pietz, "Problem of the Fetish, I," 8.

34 Latour, "Fetish-factish," 44.

35 Latour, 45.

36 Latour, "What Is Iconoclash?," 25.

37 Pietz, "Problem of the Fetish, I," 10–11.

38 Charles de Brosses, "On the Worship of Fetish Gods; or, A Parallel of the Ancient Religion of Egypt with the Present Religion of Nigritia," translated and reprinted in Morris and Leonard, *Returns of Fetishism*, 46.

39 Morris and Leonard, *Returns of Fetishism*, 44.

40 See a discussion of Bacon's idea of mediation via these three mechanical advances in Siskin and Warner, *This Is Enlightenment*, 6.

41 João Rodrigues Roxo writing in a letter about his trade prospects in Elmina, quoted in Green, *Fistful of Shells*, 119–120.

42 Lessing, *Laocoon*.

43 Guillory, "Genesis," 323 (emphasis in original).

44 Somaini, "Walter Benjamin's Media Theory," 8.

45 Guillory, "Genesis," 321–322.

46 Matory writes, "Indeed, the lofty, abstract and theoretical language of eighteenth-century European Enlightenment discourse about 'freedom' might be read a symptom of its advocates' cognitive dissonance, perhaps also explaining why many latter-day analysts of eighteenth- and early nineteenth-century European political 'theory' overlook copious evidence that sixteenth- to eighteenth-century Europeans and Euro-Americans knew a great deal about the enslavement of Africans in their day and that the source of their metaphorical references to slavery was literal, contemporaneous slavery, rather than to biblical, Greco-Roman, or imaginative models of slavery." Matory, *Fetish Revisited*, 52.

47 Lessing, *Laocoon*, 50.

48 Greenberg, "Modernist Painting," 17.

49 Guillory, "Genesis," 357.

50 An important essay on distanciation in early discourses of African art, othering the civilization with the object, and especially the similarities between the two labels *fetish* and *magic* is Blier, "Truth and Seeing," 139–166.

51 Morris and Leonard, *Returns of Fetishism*, 7.

52 Chakrabarty, "Climate of History," 197–222.

53 Morris and Leonard, *Returns of Fetishism*, 325n19.

54 Morris and Leonard, 8.

55 Clifford, "On Ethnographic Surrealism," 541.

56 Carrier, *Rosalind Krauss*, 8.

57 Grace Glueck's *New York Times* review of *Software*, for instance, compared work made by a machine with work by the artist David Antin. She concludes, simply, "Mr. Antin's intention is art; the machine's is not." Glueck, "Jewish Museum's 'Software,'" 17. This dismissal of African art by the *Artforum* and *October* groups of scholars occurred despite an influx of exhibitions in the 1960s and 1970s on modern and contemporary African art in New York, Berlin, Los Angeles, Paris, and elsewhere.

58 On Yoruba aesthetic discourse, Barr writes, "This discourse should not be confused, however, with the formation of a cumulative, reflective, and self-referential body of critical writing such as exists in the West." Rubin, *Primitivism in 20th Century Art*, 21, 21n71.

59 Glissant, "For Opacity," 190.

60 See Cowcher, "Soviet Supersystems," 146–166.

61 Cowcher, 146–166. Cowcher cites Filatova, "Anti-Colonialism," 203–234.

62 As Monni Adams argued in 1989, the field of African art history remained perpetually "in between" fields and did not hold itself responsible to any one methodology or theory. She quotes Svetlana Alpers's lament that "it is characteristic of art history that we teach our graduate students the methods, the 'how to do it' of the discipline (how to date, attribute, track down a commission, analyze style and iconography) rather than the nature of our thinking." Adams, "African Visual Art," 62. Likewise, Sidney Kasfir suggested that African art history had managed to combine the worst parts of anthropology and art history. Kasfir, "One Tribe, One Style?," 163–193.

63 Drewal, "Object and Intellect," 71.

64 See also the presidential lecture by Jean Allman, "#HerskovitzMustFall?," where she calls out her American-based institution for not revisiting its beginnings as gate keepers for knowledge about Africa, effectively taking that power from historically black colleges and universities. Various maneuvers that Allman details had the effect of stymying the cross-pollination of African diasporic studies with African studies. And although the organization was not solely responsible for undermining knowledge production within Africa, she states, "At precisely the same moment that Africa-centered projects were being undermined in Africa, a massive influx of Cold War–related funding to Africa-area studies in the U.S. would lead to the emergence and fortification of what Martin and West have called 'that Africanist enterprise.'" She refers here to Martin and West, *Out of One*. Her talk,

which was recorded and posted on YouTube, has been published as an article of the same title in *African Studies Review* 62, no. 3 (September 2019): 6–39. It should be noted that part of this decolonizing of the discipline should entail an ongoing self-consciousness and transparency about how I, a white U.S.-based writer on African art, have been shaped by this discipline. The extent of all of our imbrication within structures of power is often hard to detect in the moment but becomes more fully visible within the next generation.

65 Drewal, "Object and Intellect," 72.

66 See especially Appadurai, *Social Life of Things*.

67 Silverman and Davis, "Reviewed Work(s)," 25. Elsewhere Davis notes that the quality of the essays varies, and there are uses of Panofsky that are more nuanced than others in the special issue.

68 Silverman and Davis, "Reviewed Work(s)," 28.

69 Soppelsa, "Western Art-Historical Methodology," 149.

70 Soppelsa, 28.

71 Chernova cited in Cowcher, "Soviet Supersystems," 153. See also Howard, Bužinska, and Strother, *Vladimir Markov*.

72 Strother, in Howard, Bužinska, and Strother, *Vladimir Markov*, 88.

73 Photography would later become understood as a tool of visibility and part of a renewed push to carve out a place for African art in a global avant-garde; this reiteration of an avant-garde has characterized scholarship on contemporary African art since the late 1990s. At the end of the Cold War and apartheid rule in South Africa, and with the prominence of biennial exhibitions, the avant-garde art is largely defined as that which establishes the subjectivity and artistic and politico-conceptual skill of the African artist; it is a heritage project connected to the independence decade of the 1960s. Beginning with Olu Oguibe and Okwui Enwezor in *Reading the Contemporary: African Art from Theory to Marketplace* (1999), the redefinition of African art from indigenous/aboriginal market identity to a folk/peasant political identity facilitated a shift in African art to an anticolonialism that corresponds to hallmark avant-garde moments like 1917 and 1968. But really, their most important work was to relink contemporary African art to global black art movements, showing that the earliest serious African art history has been done under the auspices of various pan-African movements. In a more recent iteration with Chika Okeke-Agulu, *Contemporary African Art since 1980* (2009) periodizes contemporary African art based on a World Bank restructuring of African economies; Enwezor argues that while deskilling used to be read as a loss of authenticity in African art, it should rather be considered a radical break from the colonialist affection for other people's tradition. These publications and Enwezor's many exhibitions have presented African art as a key antagonist of Western imperialism. That is, in Enwezor's interpretative model (and most current literature on contemporary African art is a similar or adjacent version), art is judged by its effectiveness in both referring to

and even bringing about the political condition of a postcolonial politics of representation. Enwezor's rereading of the contextual evidence in the history of African art is a political (read intentional) act.

74 Howlett, "L'Art Nègre?," 86 (translation is mine).

75 Kahnweiler, "L'Art Nègre et le Cubisme," 367–377.

76 Kahnweiler, 369.

77 Zeidler, "Sculpture Ungrounded," 63.

78 See Leonard, "Introduction: Fetishism, Figurism, and Myths of Enlightenment," in Morris and Leonard, *Returns of Fetishism*, 1–39.

79 Zeidler, "Introduction," 5–6.

80 Zeidler, *Form as Revolt*, 67. On the amulets' and nkisi's late inclusion in art collections, see Rarey, "Assemblage, Occlusion," 20–33.

81 Zeidler, *Form as Revolt*, 65.

82 Strother, "Looking for Africa," 19.

83 Strother, 15.

84 Strother, 16.

85 Matory, *Fetish Revisited*, xix.

86 Zeidler, *Form as Revolt*, 63.

87 Zeidler, 67.

88 See especially Grossman, *Man Ray*. For a general discussion of the shifts in perception that occur with inventions like electricity and photography, see Crary, *Suspensions of Perception*.

89 Somaini, "Walter Benjamin's Media Theory," 18.

90 Strother, "Looking for Africa," 9, 11.

91 Malreaux, *Museum without Walls*, 30.

92 One of the more famous examples of this, which I discuss in the first chapter, is a 1961 study read and cited by Marshall McLuhan in *Gutenberg Galaxy* called "Film Illiteracy in Africa." John Wilson claimed Africans looked at film differently than "us" because they were not accustomed to still images and had totally different ways of "scanning" images that appeared to work rather like "television scanners" instead of gestalt pictures. Wilson, "Film Illiteracy in Africa."

93 Taussig, *Mimesis and Alterity*, 16.

94 Agawu, "Representing African Music," 248. It is interesting to note that nearly the same word, *disagreeable*, was used by Frantz Fanon to describe how native Algerians heard the "aggressive and hostile radio voices" in the French-language radio broadcasts in his groundbreaking essay, Fanon, "Voice of Algeria."

95 Agawu, "Representing African Music," 249.

96 Agawu, 251.

97 Abiodun, *Yoruba Art and Language*.

98 Abiodun, 5.

99 Okediji, *Western Frontiers*. For a more elaborate discussion of what I see as the drawbacks and benefits of Okediji's book, see my review in *African Studies Review* 57, no. 3 (December 2014): 242–244.

100 Quoted in MacGaffey, "Fetishism Revisited," 173.

101 W. J. T. Mitchell fascinatingly connects the "hollowness" of minimalist art in the 1960s and the distrust of the personification of art, coming from this history of the discourse of idolatry and its ambivalent relationship to anthropomorphism. See Mitchell, "Empire and Objecthood," in *What Do Pictures Want?*, 149.

102 Rarey, "Assemblage, Occlusion," 21.

103 Latour, "On Technical Mediation," 36–37.

104 Chun, "On 'Sourcery,'" 304.

105 Chun, 309.

106 Latour and Stark, "Factures/Fractures," 26.

107 MacGaffey, "African Objects," 128.

108 Latour, "On Technical Mediation," 45.

109 Hecht and Edwards, "History," 619–639.

110 Herbert, *Red Gold of Africa*, 33.

111 McNaughton, *Mande Blacksmiths*, 3.

112 Cubitt, Palmer, and Tkcacz, "Introduction," in *Digital Light*, 16.

113 In particular, the late nineteenth and early twentieth centuries saw many people who were deeply embedded in empire purposefully identifying across "species" boundaries and pushing for an inclusive globalism. They generated early discussions of homosexuality, vegetarianism, and antiracism, as well as psychotropic drug experimentation and spiritualism. These histories give us our sights for an antibinary thinking, while binary thinking still characterizes much postcolonial discourse. For this history, see in particular Gandhi, *Affective Communities*.

114 Parikka, *Geology of Media*, viii.

115 Clark, *Farewell*.

116 Heidegger, "Question Concerning Technology," 39.

117 There are many conflicting and conflicted books and articles published on the topic of Heidegger's Nazism, but on the topic of how this relates to his philosophy of technology, I am convinced by Fuchs, "Martin Heidegger's Anti-Semitism," 55–78. This essay is not peer reviewed, and though this poses particular problems, it might also give him license to explore the *Black Notebooks*, a highly debated set of writings that Heidegger wanted published but which allude to a "World-Jewery" that was responsible for the deleterious aspects of capitalism, that is, its soulless mechanization.

118 See Bryan-Wilson, Cornell, and Kholeif, *Trevor Paglen*.

119 See Marks, *Hanan al-Cinema* and *Enfoldment and Infinity*.

120 Wise, "*Nyama* and *Heka*," 22.

Chapter One

1 On the presentism of African philosophy, see Mudimbe, "African Philosophy," 133–154.
2 Mudimbe, "African Philosophy," 144.
3 Wise, "*Nyama* and *Heka*," 22.
4 Wise, 20.
5 See especially Diawara, "Popular Culture," 6–14; Tomaselli, Shepperson, and Eke, "Towards a Theory," 45–71; and Ukadike, *Black African Cinema*.
6 Papaioannou, "From Orality to Visuality," 144.
7 Ong, *Orality and Literacy*, 2.
8 McLuhan, *Gutenberg Galaxy*, 36–39.
9 Rudi Meyer quoted in Burns, "Watching Africans Watch Films," 197.
10 Wilson quoted in McLuhan, *Gutenberg Galaxy*, 38.
11 Dieterlen and Cissé, *Les fondements*, 142.
12 Cissé, "People's Film-Maker," 973.
13 Woll, "Russian Connection," 235.
14 MacRae, *Yeelen*, 57.
15 Lelièvre, *La lumière de Souleymane Cissé*, 29.
16 Lelièvre, 29.
17 Gabala, "Abderrahmane Sissako," 44.
18 Vieyra, "Le Cinéma," 92–103.
19 Edouard de Laurot, quoted in Brenez, "Edouard de Laurot," 64.
20 Lelièvre, *La lumière de Souleymane Cissé*, 15.
21 Diawara, "Light on Africa," 14.
22 Daney, "Cissé très bien."
23 Dovey, "Afri-Cannes?, African Film and Filmmakers," in *Curating Africa*, 54.
24 Kittler, *Gramophone, Film, Typewriter*, 118.
25 Kahn, *Earth Sound, Earth Signal*, 108.
26 Kahn, 109.
27 Jespers, "Mask and Utterance," 39.
28 Jespers, 14.
29 Griaule and Dieterlen, *Pale Fox*, 57.
30 Griaule and Dieterlen, 58.
31 van Beek, "Dogon Restudied," 139–167.
32 van Beek, 142.
33 van Beek, 148.
34 Mary Douglas, response to van Beek in van Beek, "Dogon Restudied," 162.
35 Wise, "*Nyama* and *Heka*," 19.
36 Rouch quoted in Lim, "Of Mimicry," 45–46.
37 Rouch, "Camera and Man," 63.
38 Rouch, 63.

39 See Foster, *Compulsive Beauty*, 21.
40 Taussig, *Mimesis and Alterity*, 243.
41 See "Jean Rouch jugé par six cinéastes d'Afrique Noire" and "Jean Rouch—Sembéne Ousmane: 'Comme des insectes,'" *CinémAction* 17 (1982): 77–78, quoted in Diawara, *African Cinema*, 174n24.
42 Clifford, "On Ethnographic Surrealism," 550.
43 Dieterlen and Cissé, *Les fondements*, 134.
44 Taussig, *Mimesis and Alterity*, xviii.
45 Eisenstein, "Cinematographic Principle," 30.
46 Eisenstein, 37.
47 Hobson, "Digital Whiteness, Primitive Blackness," 117.
48 Fisher, "Music, Magic, and the Myth," 9, 10.

Chapter Two

Epigraph: Behrend and Zillinger, "Introduction," n.p.

1 Dhomont, "Québec Sound," 24.
2 See Brian Kane's discussion of early sound theorists in the introduction to his book, Kane, *Sound Unseen*, 1–14.
3 For an exhaustive analysis of this technological history, see Ernst, *Digital Memory*, 161.
4 Young, "Once upon a Time," 24–27.
5 Kotz, "Proliferating Scores," in *Words to Be Looked At*.
6 El-Dabh told the interviewer Tommy McCutchon that John Cage, Henry Cowell, and El-Dabh used to hang out and play foreign instruments at Cowell's apartment on 110th Street near Columbia University every week. McCutchon, "Unlimited Americana."
7 Seachrist, *Musical World*, 61.
8 See Bardaouil, *Surrealism in Egypt*.
9 See Lenssen, Rogers, and Shabout, eds., *Modern Art in the Arab World: Primary Documents*, 87.
10 Bardaouil, *Surrealism in Egypt*, 38–42.
11 Again, El-Dabh was unclear about the details of the *Ta'abir Al-Zaar* exhibition at the YMCA, other than to note that it occurred in an art space there. See especially Bradley, "Halim El Dabh."
12 Hutchison, "General Files."
13 Hutchison, "General Files."
14 Seachrist, *Musical World*, 227n1.
15 Bardaouil, *Surrealism in Egypt*, 22.
16 Bardaouil, 197.
17 Bardaouil, 197 (near fig. 6.6).

18 Wahba, "African Arts," 9.
19 Seggerman, *Modernism on the Nile*, 142.
20 Bradley, "Halim El Dabh."
21 Clark and Nielsen, "Crossed Wires," 3.
22 Clark and Nielsen, 4.
23 It is important to note that Halim El-Dabh had relatively recently been extensively queried on his electronic music compositions, particularly *Ta'abir Al-Zaar*, before his death. As a result, and because of the time that has passed, El-Dabh's accounts of this work have a consistent formula that is repeated in interviews, including that which I conducted.
24 My thanks to the historian David Morton, who walked me through the complicated history of the wire recorder in the 1940s and reasoned with me about the date of *Ta'abir Al-Zaar*. Email correspondence, January 22, 2015. See his book, Morton, *Sound Recording*.
25 Beyer and Sayles, *Ghost Army*, 47.
26 Kahn, *Earth Sound, Earth Signal*, 270n4.
27 Find the YouTube clip embedded in a useful article on sonic deception: Downey, "In the Free Field."
28 Beyer and Sayles, *Ghost Army*, 48. This anechoic chamber was built many times afterward to test sound of many kinds.
29 Boder, *I Did Not Interview*.
30 Boder, xiii.
31 Dahlstrom, "Book Review," 283.
32 Keilbach, "Microphone, Videotape, Database," 211.
33 Castelo-Branco, "Radio and Musical Life," 1229–1239.
34 Castelo-Branco, 1231.
35 Fanon, "This Is the Voice."
36 Wahba, "African Arts," 7.
37 Schaeffer, *Concrete Music*, 14.
38 Kane, *Sound Unseen*.
39 Holmes, *Electronic and Experimental Music*, 153.
40 Gluck, "'. . . Like a Sculptor.'"
41 Gluck.
42 Seachrist, *Musical World*, 62.
43 Kahn, *Earth Sound, Earth Signal*, 3.
44 El-Dabh, "State of the Arts," 15.
45 El-Dabh, 15.
46 Holmes, *Electronic and Experimental Music*, 154.
47 Halim El-Dabh, email exchange with the author, January 2015.
48 Halim El-Dabh, email exchange with the author, January 2015.
49 Gluck, "'. . . Like a Sculptor.'"

50 Seachrist, *Musical World*, 61.
51 Gluck, "'. . . Like a Sculptor.'"
52 Tommy McCutchon, "Unlimited Americana."
53 Racy, "Arabian Music," 50.
54 Racy, "Record Industry," 25.
55 Castelo-Branco, "Radio and Musical Life," 1232.
56 Dickenson, "Introduction," 7.
57 Racy, *Making Music*, 3.
58 Kane, *Sound Unseen*, 129.
59 Kane, 99.
60 Schopenhauer quoted in Kane, 99.
61 Senghor and Pierre Schaeffer were in contact in 1970, as noted in the inventory of Schaeffer's archive, during the time when Senghor wrote extensively about African aesthetics. He was also aware of the great influence of Schaeffer on African musical broadcasting, as Schaeffer was the director of SORAFOM—Société de Radiodiffusion de la France d'Outre-Mer—from 1954 to 1962. See Landeau-Welinski, "Le passé de l'Afrique à la radio." Bebey writes, "It was no doubt this extremely concrete aspect of African music that prompted Leopold Sédar Senghor to remark that recent Western experiments in 'musique concrète' are but a belated attempt to catch up with a musical form that has been practiced in Africa for many hundreds of years." Bebey, *African Music*, 8. An important essay describing the "concreteness" of African art by Léopold Sédar Senghor is found in the first issue of the journal of record for institutional African art in the United States, *African Arts*: Senghor, "Standards Critiques," 6–9.
62 Latour, "What Is Iconoclash?," 7.
63 Fakhouri, "Zar Cult," 49.
64 Boddy, "Spirits and Selves," 12.
65 *Zaar* here is spelled in its alternative way, *zar*. For an extensive discussion of the relationship between music and spirit possession, see Rouget, *Music and Trance*.
66 Garzouzi, "Zaar of Egypt," 188–189.
67 Seggerman, *Modernism on the Nile*, 104.
68 Boddy, *Wombs and Alien Spirits*, 6.
69 Kramer, *Red Fez*, 200.
70 Kramer, 200.
71 Boddy, *Wombs and Alien Spirits*, 10, 12.
72 Mitchell, *Rule of Experts*, 21.
73 Mitchell, 21.
74 El-Dabh quoted in Koury, "Look at Lightning," 177.
75 Kittler, "Gramophone, Film, Typewriter," 14.
76 Halim El-Dabh, email exchange with the author, January 2015.
77 Shalem, "Exceeding Realism," 578.
78 Behrend and Zillinger, "Introduction," n.p. See also Taussig, *Mimesis and Alterity*.

79 Shalem, "Exceeding Realism," 580–581. See this article for a reproduction of *Un Djinn Amoreaux* (1953).
80 Seggerman, *Modernism on the Nile*, 148, 149.
81 Seggerman, 150.
82 Seachrist, *Musical World*, 16.
83 Seggerman, *Modernism on the Nile*, 151.
84 Marks, *Hanan al-Cinema*, 239.
85 Omar Kholeif writes that Basiony's friend, the media scholar and artist Shady El Noshokaty, found the plans on his computer after his death. Kholeif, "Case for Egyptian Media," 74–79.
86 Gaston Gordillo quoted in Gye, "Media Arts, Space."

Chapter Three

1 Ernst, *Digital Memory*, 161.
2 Ernst, 164.
3 Chun, "On 'Sourcery,'" 299–324.
4 Chun, "On Software," 27.
5 Chun, "On 'Sourcery,'" 304.
6 Chun, "On Software," 27.
7 Hayles, "Trauma and Code," 136.
8 Malan, "In the Jungle," in *The Lion Sleeps Tonight*, n.p.
9 Cary Wolfe, "Digital, the Analog," 85, 86.
10 Jonker, "My Life."
11 Erlmann, "Migration and Performance," 202.
12 Erlmann, 203.
13 Erlmann, *Nightsong*, 51.
14 Erlmann, 48.
15 Erlmann, "'Feeling of Prejudice,'" 331–350.
16 Gitelman, "Reading Music, Reading Records," 270.
17 Gitelman, 276.
18 Erlmann, "'Feeling of Prejudice,'" 349.
19 Erlmann, *Nightsong*, 66–67.
20 Meintjes, "Paul Simon's *Graceland*," 276.
21 Meintjes, 276n3.
22 Meintjes, 93.
23 Hamm, "'Constant Companion of Man,'" 148.
24 Hamm, 148–149.
25 Meintjes, "Paul Simon's *Graceland*," 277n3.
26 On the relationship between ethnography and apartheid, see especially Leroy Vail's classic edited volume, *Creation of Tribalism*.

27 See, for instance, Mosia, Riddle, and Zaffiro, "Revolutionary to Regime Radio," 1–24. For a general discussion and history of radio in Africa, see Moyo, Ligaga, and Gunner, *Radio in Africa*.
28 Mosia, Riddle, and Zaffiro, "Revolutionary to Regime Radio," 6, 7.
29 Moorman, *Powerful Frequencies*, 52.
30 Tracey, Editorial, 5.
31 See Seeger's interview in Verster, *A Lion's Trail*.
32 Byrne, "Crossing Music's Borders."
33 Nickson, *NPR Curious Listener's Guide*, 1–2.
34 Théberge, "Network Studio," 772.
35 Buskin, "Classic Tracks." Halee continued:

> "The amount of editing that went into that album was unbelievable," Halee asserts. "We recorded everything analogue, so it sounded really good, but without the facility to edit digital I don't think we could have done that project. The first thing I did was take the material to New York and put it on the Sony machine. Then we edited, edited, edited like crazy, put it back on analogue, took it to LA to overdub Linda Ronstadt or whoever, brought it back to New York, put it back on digital and edited some more. We must have done that at least 20 times, and if not for digital we could have ended up with just as many generations of recordings."

Buskin, "Classic Tracks"
36 Liebman, "Baikithi Kumalo."
37 Meintjes, "Paul Simon's *Graceland*," 44.
38 Meintjes, 47–48.
39 See Wald, *Dylan Goes Electric!*
40 Harris, "Whiteness as Property," 1707–1791.
41 Jaji, "Pirate's Choice," 195.
42 See Bopape's documentation on her blog, Bopape, "Sa koša ke lerole."
43 Mapaya, "African Musicology," 625.
44 Grahamstown Foundation, "Our Venues."
45 Weheliye, *Phonographies*, 20.
46 Weheliye, 37.
47 Kittler, "Gramophone, Film, Typewriter," 24.
48 For a historical analysis of phonocentrism in Africa, see Pietz, "Phonograph in Africa."
49 Kay, "Computer Software," 59.
50 Kay, 59.
51 For this history, see Udell, "Toward Intelligent Musical Instruments," 31–32.
52 Coetzee, "Samuel Beckett's 'Lessness,'" 198.
53 Eglash, *African Fractals*; and Marks, *Enfoldment and Infinity*. In a separate article, Marks notes: "Geomancy was considered an occult art in the Renaissance, so it

is not surprising that its origins were effaced. Nevertheless, Llull's binary mathematics returned to legitimacy (and got whitewashed of any Arabic, let alone African, sources) in their influence on Leibniz's binary logic in the Dissertation de arte combinatorial." Marks, "Monad, Database, Remix," 128.

54 Marks, 118.
55 Marks, 129.
56 See Sterne, *MP3*, 3.
57 Miller and Iyer, "Improvising Digital Culture," 3.
58 Liang, "Beyond Representation," 363.
59 Kahn, *Noise, Water, Meat*, 214.
60 See Machiri and Biwa, "Playback."
61 Jaji, "Pirate's Choice," 231.
62 Jonker, "'Song of Solomon.'"
63 See Jonker, "In Defense."
64 *Knowledge@Wharton*, "What Can Jay-Z."

Chapter Four

Epigraphs: Rodney, *How Europe Underdeveloped Africa*, 209; from a Chopi song, quoted in Callinicos, *People's History*, 53.

1 Adams, "The Dynamo and the Virgin," in *Education of Henry Adams*, 379–390.
2 Adams, 381.
3 Mbembe, *Critique of Black Reason*.
4 Matthew Fuller writes, "Electricity scratches the vitalist itch precisely because it involves the operation of matter on itself." *Media Ecologies*, 19.
5 French, *When They Hid*, 5.
6 Adams, *Education of Henry Adams*, 380.
7 Webb, "The Black Passage."
8 For an excellent treatment of the aftereffects of mining, including laborers' dismissals from company care and accountability historically, see Meyburgh and Pakleppa, *Dying for Gold*.
9 Elcott, *Artificial Darkness*.
10 Carroll and Gusejnova, "Malevich's Black Square under X-Ray," n.p.
11 Black, "Fractal Freedoms," 4–9.
12 Elcott, 1.
13 Kim-Cohen, *Blink of an Ear*, xx.
14 Webb, "The Black Passage."
15 O'Toole, "Black Landscape."
16 https://theotherjameswebb.tumblr.com/post/120964079694/scream.
17 López, "Sonic Mmabolela."

18 Adorno, "Form of the Phonograph," 56.
19 Larkin, "Politics and Poetics," 330.
20 James Webb, interview with author, June 6, 2013.
21 Elcott, *Artificial Darkness*, 8.
22 Elcott, 6–7.
23 Dyson, *Sounding New Media*, 3–4.
24 See Thierry Duve's discussion of Frank Stella's work as it responded to Greenbergian readings of the "arbitrary object" as opposed to a "picture" in Duve, "Monochrome," 244–310. It is useful to compare such texts with English, *How to See*.
25 See Engelbrecht, *Sound Art in Johannesburg*. Engelbrecht extensively cites Mbembe and Nuttall, *Johannesburg*.
26 Neustetter, "Analogue and Digital Anecdotes," 329.
27 See Bräuninger, "Introduction."
28 Herbst, "Music Technology."
29 A sample of the messages is hosted on the artist's website, https://belinda.co.za/8345223-2/.
30 Breitz, "First Johannesburg Biennale," 89.
31 Breitz, 91.
32 Bannister, "'Loaded,'" 88. Bannister takes up the complicated question about Morrissey's thoughts about race at the time, especially in the period following the race riots in the United Kingdom and the way the debates occurred within the pop industry and the lyrics of pop music.
33 See also Andrew Warnes's argument (in response to Bannister) that "The Smiths' strategic use of gay iconography not only shrouds Morrissey's sexual preferences in mystery, but does so to form a smokescreen, or 'beard,' that discourages us from noticing that certain Black Atlantic influences—influences key to the band's aesthetic—have been banished from our sight." Warnes, "Black, White and Blue," 137.
34 Deleuze and Guattari, *Anti-Oedipus*, 241.
35 Deleuze and Guattari, *Thousand Plateaus*, 351–423.
36 Kotz, *Words to Be Looked At*, 14.
37 Blom, *On the Style Site*, 59.
38 Blom, 72.
39 Kahn, "John Cage," 557.
40 David Doris writes about the Nigerian Electrical Power Authority, which he says was often jokingly referred to as "Never Expect Power Anytime." Doris, *Vigilant Things*, 9n3.
41 Murray, interviewed by Sue Williamson.
42 French, *When They Hid*, 66.
43 Cole, *House of Bondage*.
44 Cole, 94.
45 For an exhaustive discussion of the power differentials in computer code and its ties to politics, see Galloway, *Protocol*.

46 The relationship of abolition and the advent of colonialism is a matter of debate. Joseph C. Miller writes,

> Before the later nineteenth century, Africa remained outside this "modern world system," and therefore tragically became the source of enslaved workers transported across the Atlantic to bring the Americas within the semi-periphery of plantations and mines. Enslavement accomplished the initial violent phase of integrating semi-peripheries, structurally dependent on accessible labor pools beyond the pale. Nineteenth-century imperialism extended the semi-periphery to the farthest ends of the earth, thus ending slaving on structurally significant scales—that is, significantly contributing to the ongoing consolidation of the European core.

Miller, "Slaving and Colonialism"

47 Christie, *Electricity, Industry, and Class*, 28.
48 Christie, 5.
49 Deleuze and Guattari, *Anti-Oedipus*, 170.
50 Deleuze and Guattari, 170.
51 Deleuze and Guattari, 170.
52 Mbembe, *Critique of Black Reason*, 53.
53 Mbembe, 54.
54 Edwards and Hecht, "History and the Technopolitics," 619–639.
55 Quoted in Edwards and Hecht, 621.
56 See Greenberg, "Market Liberalization," 73–108.
57 Kentridge, "Dear Diary," 75.
58 Geers, Kentridge, and Enwezor, "Aesthetic and Political Language," 94–107.
59 This is, of course, the difference between de facto and de jure apartheid.
60 See Rancière, *Politics of Aesthetics*.
61 Demos, "Art of Darkness," 61.
62 James Webb, email correspondence with the author, August 26, 2012.
63 Blanchot, "Gaze of Orpheus," 102.
64 Blanchot, 102.
65 Foucault, "Maurice Blanchot," 18.

Chapter Five

1 De Boeck, "Dreams, Magic, and Mirrors," 40–51.
2 De Boeck, 41.
3 On the ways in which these differing value systems were managed through power objects, religion, and "art" in Kongo/Congo, see MacGaffey, *Religion and Society*; De Heusch, *Le Roi de Kong*; Thornton, "Cannibals, Witches," 273–294; and Fromont, *Art of Conversion*. For a recently published elaborate analysis of the relationship

between the slave trade and modes of currency and credit in West Africa generally, see Green, *Fistful of Shells*.

4 Yengo, "Le Monde à l'envers," 306.

5 Yengo, 303.

6 Tulu Kia Mpansu Buakasa, *L'Impensé du discours*.

7 Tulu Kia Mpansu Buakasa, 7.

8 Hecht, *Being Nuclear*.

9 Pixelache, "Signals from the South."

10 Mukendi, "Artist Statement." See also Okafor, "Jean Katambayi Mukendi."

11 *Art Africa*, "In Conversation."

12 Mukendi, "Artist Statement."

13 Deleuze and Guattari, *Thousand Plateaus*, 411.

14 *Art Africa*, "In Conversation."

15 Hecht, *Being Nuclear*, 319.

16 Mukendi, "Artist Statement."

17 Mukendi, email exchange with the author, November 5, 2018.

18 Mbembe, "Necropolitics," 31.

19 Mbembe, 33.

20 Debord quoted in Monaville, "Decolonizing the University," 221–222. The issue of what precipitated what is called the "global" uprisings of 1968 is under debate, currently, after more than fifty years. The growing consensus, buttressed by new archival research, is that Congo and Senegal were important and overlooked sites of struggle. See also Monaville, "How Third World Students."

21 Monaville, "Decolonizing the University," 222.

22 See Cleveland, *Stones of Contention*. See also a useful documentary on historical mine propaganda films in Meyburgh and Pakleppa, *Dying for Gold*.

23 Fabian, *Language and Colonial Power*, 8.

24 Fabian, *History from Below*, 131.

25 Fabian, 133.

26 Petit and Mutambwa, "'La Crise,'" 469.

27 White, "Class Struggle and Cannibalism," in *Speaking with Vampires*, n.p.

28 Petit and Mutambwa, "'La Crise,'" 468.

29 Fabian, "Léon Verbeek," 225–227. See also Enwezor, Museum Villa Stuck, and Achebe, *Short Century*.

30 For a comprehensive overview, bibliography, and database of notes and reproductions of Lubumbashi-based popular painting, see Verbeek, *Les arts plastiques* and the accompanying database and website hosted by Musée Royale de L'Afrique Centrale, http://lubumarts.africamuseum.be/index_html.

31 Young and Turner, *Rise and Decline*, 6.

32 Fabian, *Remembering the Present*.

33 Fabian, 316.

34 Halen, "Les douze travaux," 139.

35 Périer, *Les Arts populaires*, 70.
36 Périer, 51.
37 Périer, 51.
38 For a comparison between the legitimizing structures of European and Central African art, see MacGaffey, "Magic," 217–235.
39 Ferguson, *Global Shadows*, 36–37.
40 Katambayi, email exchange with the author, November 8, 2018.
41 Katambayi, email exchange with the author, November 8, 2018.
42 See Jewsiewicki, *Beautiful Time*.
43 Congo Conflict Minerals Act of 2009, S. 891, 111th Congress (2009).
44 Gabrielle Hecht's masterful book *Being Nuclear* describes throughout how the mining industry teeters back and forth from secrecy to public secrecy. She begins her introduction with the story of UN inspectors' attempts to uncover the nuclear weapons program that the United States alleged was started by Iraq president Saddam Hussein in 2002, evidenced by some Iraqis allegedly seeking uranium from Africa. Hecht, *Being Nuclear*, 1.
45 See Baloji and De Boeck, "Tower."
46 Kingelez quoted in Suzuki, *Bodys Isek Kingelez*, 13.
47 Bodys Isek Kingelez, "Writings," reproduced in Suzuki, 50–51.
48 Demos and Van Gelder, *In and Out*, 6.
49 Rangan, *Immediations*.
50 Rancière, *Emancipated Spectator*, 2.
51 Rangan, *Immediations*, 9.
52 *Art Africa*, "In Conversation."
53 *Art Africa*.
54 Bateson, *Steps to an Ecology*, 325.
55 Mantz, "From Digital Divides," 530.
56 Hecht, *Being Nuclear*, 46.
57 Hecht, 45.
58 *Art Africa*, "In Conversation."
59 Katambayi, email exchange with the author, November 8, 2018.
60 Katambayi, email exchange with the author, November 8, 2018.
61 Mukendi, email exchange with the author, November 5, 2018.
62 Bataille, *Accursed Share*, 20.
63 See Galloway, "Anti-Computer."
64 Bataille, *Accursed Share*, 12.
65 Bataille, 14.
66 Flusser, "Designer's Glance," 54.
67 Flusser, *Shape of Things*, 27.
68 Flusser, 25.
69 Digital Earth, "Team."
70 Flusser, "Designer's Glance," 52.

1 van Onselen, *Seed Is Mine*, 3.
2 Benjamin, "Theses on the Philosophy of History."
3 Boetzkes, "Waste and the Sublime."
4 Mitchell, "Imperial Landscape" in *Landscape and Power*, 5. In his first of nine theses on landscape, Mitchell writes, "Landscape is not a genre of art, but a medium."
5 See Engler, *Designing America's Waste Landscapes*, 97–98.
6 Jacques Derrida gives a broad definition of "economy" as predicated on values of law and of home. Law (*nomos*) includes the law of distribution and partition, participation. Here we can extend his scheme to a global economy, where the status of gifts and property intersect. The figure of "circulation" has the potential of return and repatriation. Ultimately Derrida discusses the gift as that which interrupts the economy, particularly exchange. Derrida, *Given Time*, 6.
7 Brown, "Non-Cinema," 125.
8 Sean Cubitt, "Coherent Light from Projectors to Fibre Optics," in Cubitt, Palmer, and Tkacz, *Digital Light*, 54–55.
9 Cubitt, 51.
10 Cubitt, 58.
11 Spillers, "Mama's Baby, Papa's Maybe," 76.
12 Edelman, *No Future*, 7.
13 On this topic, see in particular Berlant and Warner, "Sex in Public," 547–566; and Lima, "Screw the Nation!," 46–57. Samantha Mugatsia, the lead actor in *Rafiki*, won best actress at French of the Pan-African Film and Television Festival of Ouagadougou (Fespaco), a significant achievement for a queer-themed film in Africa, where most countries uphold colonial-era laws that outlaw homosexuality. The first black African-made film that features the vicissitudes of homosexual love is *Dakan* (1997), directed by Mohamed Camara. See also Nelson, "Karmen Geï," 74–81.
14 Maathai, "Link between Patenting," 526–527.
15 Maathai, 527.
16 Maathai, 527.
17 Rakshit, "Terminator Technology," 748.
18 Rakshit, 749.
19 Yusuf, "Ethical Issues," 8903.
20 Maathai, *Green Belt Movement*, 6.
21 Maathai, 8.
22 Guillén, "Mau-Mau," 109–110.
23 See Human Rights Watch, "Kenya."
24 Wanuri Kahiu, "No More Labels: Wanuri Kahiu at TEDxEuston," https://www.youtube.com/watch?v=4—BIlZE_78.
25 Harries, "Nationalization of Swahili," 155.
26 Gorsevski, "Wangari Maathai's Emplaced Rhetoric," 1–18.

27 Chirindo, "Bantu Sociolinguistics," 442–459; and Comaroff and Comaroff, *Theory from the South*.
28 Chibber, *Postcolonial Theory*, 2.
29 Araeen, "Wangari Maathai," 675.
30 Araeen, "Ecoaesthetics," 680.
31 Araeen, 682.
32 Araeen, 683.
33 Araeen, 683.
34 Chakrabarty, "Climate of History," 206.
35 Orestes and Conway, *Collapse of Western Civilization*.
36 Orestes and Conway, 2.
37 Westermann, "Technofossil of the Anthropocene." See also W. J. T. Mitchell's triad of totemism, fetishism, and the fossil, in Mitchell, *What Do Pictures Want?*, chap. 9, 188–200.
38 Kubler, "What Can Historians Do," 301–302.
39 Kahiu, "No More Labels."
40 Owens, "Allegorical Impulse," 69.
41 Owens, 64.
42 Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene," 160.
43 Haraway, 162.
44 Weheliye, *Phonographies*, 13.
45 Chakrabarty, "Climate of History," 219–220.
46 Chakrabarty, 222.
47 Harrow, *Trash*, 2–3.
48 "Romanticism and the Life of Things," in Mitchell, *What Do Pictures Want?*, 186.
49 Elsewhere, Mitchell writes of the fascination with objects in contemporary empire: "I'm thinking here not just of the rampant forms of materialism in contemporary consumer culture, the elephantine proportions of SUVs and suburban chateaux, but the ways in which the visceral reality of the body, the infinite archive of unrecyclable (but sometimes collectible) waste products, the plethora of obsolete gadgets, are filling up the world as if it were one giant junkyard." "Empire and Objecthood," in Mitchell, *What Do Pictures Want?*, 152.
50 Jack Shainman Gallery, "Zwelethu Mthethwa: New Works," press release, n.d., accessed February 21, 2020, http://www.jackshainman.com/exhibitions/past/2009/zwelethu-mthethwa/.
51 Oguibe, "Beyond Death and Nothingness," 48.
52 Oguibe, 51.
53 Oguibe, 51.
54 Moten, "There Is No Racism Intended," in *The Universal Machine*, 9.
55 Vogel, *El Anatsui*, 89.
56 Grabski, *Art World City*, 146, 147.

57 Grabski, 144.
58 Duchamp, "Apropos of 'Readymades,'" 47.
59 See Weiss, *To and from Utopia*.
60 Boetzkes, "Waste and the Sublime," 23.
61 Fair, "Dressing Up," 63–94.
62 Fair, 77.
63 Fair, 79.
64 Fair, 80.
65 Critical Art Ensemble, "Free Range Grain."
66 Pentecost, "soil-erg."
67 Bateson, *Steps to an Ecology*, 489.
68 Bateson, 488.
69 Harrow, *Trash*, 36–37.
70 Harrow, 37.
71 Olayiwola, "From Celluloid to Video," 58.
72 Olayiwola, 59.
73 Larkin, *Signal and Noise*, 218–219.
74 Kahiu has continued this trajectory after *Pumzi*, directing a full-length cinema feature film, *Rafiki* (2017). At the time of this writing, she had just been hired by Universal Pictures and Working Title Films to produce her first studio film. Kahiu, like Blomkamp, is making an unusual leap, from being a filmmaker in an African scene to Hollywood, made all the more remarkable because of the overwhelming numbers of white male directors there historically.
75 See in particular Okwui Enwezor's criticism of white South African artists who use the figure of the black African, the "quietly suffering but still noble African." Enwezor, "Reframing the Black Subject," 27.
76 Owens, "Allegorical Impulse," 69.
77 Owens, 70.
78 See Allison K. Young's discussion of Siopis's *History Paintings* in Young, "'We Never Did Return.'"
79 Latour, "On Technical Mediation," 33.
80 Wanuri Kahiu, "Afrofuturism in Popular Culture," TedxNairobi, September 14, 2012, https://www.youtube.com/watch?v=PvxOLVaV2YY.
81 Kahiu.
82 Sarr, *Afrotopia*, 11. Translation by author.
83 Sarr, 11.
84 Davis, "'Roots and Wires' Remix," 64.
85 O'Toole, "2017."
86 Rezaire, "NTU."
87 Steyerl, "In Defense," in *Wretched of the Screen*, 33.
88 Steyerl, 39.

89 Mackey, "Guilty Speculations," 536. Quote by Wanuri Kahiu in "Afrofuturism in Popular Culture."
90 Bateson, *Steps to an Ecology*, 12.
91 Bateson, 44.
92 Bateson, 47.
93 Thompson, *Shine*, 10.

Afterword

1 Heywood, *Njinga of Angola*, 215.

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