

The Woman on the Other Side of the Wall: Archiving the Otherwise in Postcolonial Digital Archives

Prologue

*T*his essay was conceptualized as a moment in a long conversation with Dicle Koğacıoğlu about what she called the “tradition effect.” I met Dicle soon after I moved to Columbia University. She was a fellow in the Center for the Study of Law and Culture, which I codirected at the time with Katherine Franke and Kendall Thomas. My feeling of deep kinship with her was immediate. Both our feet usually tapped too loudly during workshops. Both of us too often forgot to raise our hands before blurting out our ideas. Though I never bumped into the fender of another car as she did as we drove along the Bosphorus, Dicle intent on explaining to me the local and regional discourses about the Turkish difference. Is it any wonder we continued to talk and argue long after she left Columbia—in New York and Istanbul and Providence? She remains undiminished, unfathomably alive to me. She will always remain with me. She is the woman who walks through the wall.

I

It is a justifiably famous, if enigmatic story. In “The Library of Babel,” Jorge Luis Borges portrays the universe as a vast honeycombed library in which every book that ever was or ever will be written, every thought that has been or could be thought, is contained in its randomly organized, often senseless manuscripts. Because there is nothing outside the library, its inhabitants suffer dangerous illusions of what is knowable. If everything that can be known is contained within the library and yet the library’s contents are unknown, the illusion emerges that it might be possible to know the library as a whole—a totality with a single law organizing its disparate parts. Perhaps a book will be found that provides the catalog of the entire library, and this will be the key to its universal knowledge. Or perhaps an encyclopedic knowledge of one region of the library, or just one of its hexagon-shaped rooms, would be sufficient to unlock the logic of the whole. Quite famously, a radical sect of librarians seeks to burn all books that seem to them to contain nothing but gibberish in hopes of making the task of comprehension more manageable. But what if one day, much to their surprise, a stranger walked in from the other side of one of the hexagon-walled rooms carrying a new book or embodying a different memory and practice? Where would she have come from if an outside to the library has been categorically excluded? And how could her book be incorporated into the theories of knowledge that had assumed the closed world of the library, and more: had assumed that all knowledge and all thought were contained in the traditions of the book? Would she or it have to be burned? Or could a new library, or a new bookcase or a new alcove in the old library, be built that could shelve this book or her embodied memory? Is the problem the book, the woman, her memory, or the idea of a singular and total universe?

This essay probes a set of problems that have emerged as Indigenous and non-Indigenous colleagues and I have struggled to create a postcolonial digital archive in rural northwest Australia. This archive does not as yet exist. If it existed as it is currently conceived, it would organize mixed (augmented) reality media on the basis of social media and operate it on smart phones. The smart phones would contain a small segment of the archive. And this segment would be geotagged so that it could not run unless the phone was proximate to the site to which the information referred. The pitch we present for the project to potential donors and supporters goes something like this:

Our project implements and investigates “mixed reality technology” for re-storying the traditional country of families living on the quasi-remote southern side of the Anson Bay area at the mouth of the Daly River in the Northern Territory. More specifically, it would create a land-based “living library” by geotagging media files in such a way that media files are playable only within a certain proximity to a site. The idea is to develop software that creates three unique interfaces—for tourists, land management, and Indigenous families, the latter having management authority over the entire project and content—and provide a dynamic feedback loop for the input of new information and media. We believe that mixed reality technology would provide the Indigenous partners with an opportunity to use new information technologies to their social and economic benefit without undermining their commitment to having the land speak its history and present in situ. Imagine someone preparing for a trip to far north Australia. While researching the area online, she discovers our Website that highlights various points of interest. She then downloads either a free or premium application to her smartphone. Now imagine this same person in a boat, floating off the shore of a pristine beach in the remote Anson Bay. She activates her smartphone and opens the application and holds up her smartphone to see the video coming through her phone’s camera. As she moves the phone around she sees various icons representing stories or videos available to her. She touches one of these icons with her finger and the story of the indigenous Dreaming Site where she finds herself appears; she can also look at archival photos or short animated clips based on archived media files. The archive is a living library insofar as one of its software functions allows new media files to be added, such as a video of people watching the videos of the place.

When we pitch this project to libraries, granting agencies, and private donors, some questions we are asked include: “How does this way of archiving Indigenous knowledge affect Indigenous traditional culture?” “Can Indigenous people actually shape and run such a project?” “In what sense is it of interest to libraries and their mission to house significant, publicly accessible knowledge?” “In what sense is this an archival project?” “What will be included and what excluded?”

When we evoke the archive, what are we conjuring by way of inclusion and exclusion? What, for instance, is the difference between an archive and a collection or between an archive and a hoard or between an archivist and a collector and a hoarder? What is altered when the archive is housed in a library, in a classified state vault, in a dour professor's office, or provided a GPS coordinate so that it can be accessed only in a certain place with a specific piece of technology? I have a collection of earrings that I have found on the streets of New York City. It is one of the things I do—I collect discarded earrings, often to the chagrin of my friends, digging them out of the rot that accumulates in the seams of pavements. Why I do this—or, less agentially, why my eye catches these accidentally discarded objects and why my hands reach down and scoop or dig them up—is one question. But another question, more relevant to the task at hand, is: under what conditions would this collection of lost jewelry become an archive or a part of an archive? Am I an archivist, a collector, a hoarder? Does it matter whether I've indexed my earrings or simply thrown them onto a shelf in my study? Similar questions arise about any number of collections ranging from mint condition Barbie dolls to tongue suppressants.

Every collection, if taken too far—by necessity a vaguely defined borderland—threatens to mark the collector as having a “condition,” in the case of hoarding, the mental disorder *disposaphobia*: the compulsion to keep and hide; to cherish and conceal; to be surrounded by increasing abundance yet to be increasingly deprived as the treasured objects slowly seal the subject into an ever more restricted zone of movement. Earrings are hopefully far too small to present a real threat to me. But hoarding other objects—stacks of newspapers, old underwear, or empty plastic Diet Coke bottles—compromises life even if, under the right media conditions, it can create new cycles of wealth and restriction, if not necessarily for the hoarder. Take, for instance, the popular American television show *Hoarders* or Song Dong's critically renowned MOMA exhibit *Waste Not*. *Hoarders* tries to distinguish between a collector and a hoarder on the basis of a disorder of the will. Hoarders are unable to part with their belongings even when these belongings seriously disrupt everyday functions and relations. Indeed, strictly speaking, the belongings no longer belong to the person. The person has become the exhausted archivist who cannot shut the book return. She belongs to the books. *Waste Not* takes a less psychological point of view on hoarding. Beijing-based Song Dong disgorges the complete contents of her mother's home, amassed over fifty years in conformity to the concept *wu jin qi*

yong, “waste not,” which allowed people to survive the hardships of the transition from the Mao to the post-Mao economy.

But while taking different stances on the sources and meanings of collections and hoards, these two shows may well become part of another circuit of collection, archiving, and restriction. *Hoarders* will enter and be registered in the archive of twenty-first-century American pop television, perhaps at the Film and Television Archive at UCLA; *Waste Not*, in the Museum of Modern Art’s archive of art exhibits. An archivist will have to manage their selection, catalog, preservation, and accessibility. And, having been entered into these archives, these shows will become the material for new writings, collections, hoards, and archives, which, if significant, will be recycled back into these or other archives, slowly sealing the library into an ever more cramped space. Compact bookcases will be installed. Remote storage spaces will be built, new jobs created for shuttling objects back and forth. And the accounting of all of these activities will create their own archives. And so it goes in “the social life of things” (Appadurai). Collections threaten to become hoards, which might become archives, which are stuffed into libraries or state vaults, which threaten to produce the surreal spectacle of Borges’s exhausted archivists of the Library without end. Who might be in better need of an intervention than these archivists who toil in an “indefinite and perhaps infinite of hexagonal galleries,” neither hoarders nor collectors, but rather mere managers of the universe of things that cannot be disposed of and that keep spawning new things? And why wouldn’t they dream of an endless expanse of digital space where there seems no limit to what can be stored and what can be found—if someone can pay the storage fees? Isn’t our project part of this dream, a social media-based method of allowing an endless series of new cartographies to be formed and circulated?

II

Acknowledging the impossibility of stilling these incessant definitional quandaries and categorical peregrinations, some scholars, such as Jacques Derrida and Michel Foucault, have tried to understand the archive as a kind of power rather than a kind of thing. For Derrida, “archontic power” is the name we give to the power to make and command what took place here or there, in this or that place, and thus what has a place in the contemporary organization of a law that appears to rule without commanding (*Archive*). Archival power authorizes specific forms

of the future by domiciling space and time, the here and now relative to the there and then; us as opposed to them. And it does so by continually concealing the history of the manipulation and management of the documents within existing archives. Cribbing from Foucault, power archives itself in the sense that the sedimentation of texts provides a hieroglyph and cartography of dominant and subjugated knowledges (*Archaeology*). But for Derrida, archival power is not merely a form of authorization and domiciliation of space and time, and not merely a sedimentation of texts that can be read as an archaeology of power. It is also a kind of iteration, or drive. It is what compels Borges's librarians to look ceaselessly for the document that will give an account of the total and thus final truth of *this place* and yet not disturb the organization of power that makes this place as such. Thus archival power depends not only on an ability to shelter the memory of its own construction so as to appear as a form of rule without a command but also on a certain inexhaustible suspicion that somewhere another, fuller account of this rule exists. Maybe a door will open and a woman will appear.

In the shadow of these discussions, scholars such as Anjali Arondekar, Michel Rolph Trouillot, Ann Laura Stoler, and the Subaltern Studies Collective have noted that archives are not sites of knowledge retrieval but of knowledge production. Archives are not recorded moments of history but monuments of states, colonies, and empires. In this view the archive is, as Foucault argued, an index of historical struggle. Whether of Barbie dolls and tongue suppressants or of piles of trash and formations of life, all archives seek to ensure the endurance of something, its temporality and territorial expression. The task of the postcolonial archivist would seem to be clear. The postcolonial archivist is charged with finding lost objects, subjugated knowledges, and excluded socialities within existing archives or to repatriate exiled objects, knowledges, and socialities. For instance, in "Digitization, History, and the Making of a Postcolonial Archive of Southern African Liberation Struggles," Allen Isaacman, Premesh Lalu, and Thomas Nygren argue that when modifying "archive," the term *postcolonial* signals "the need for scholars to overcome the traces of colonialism and apartheid that persist through forms of knowledge production" (59).

If the archive is meant to preserve or challenge the present organization of power by authorizing and domiciling contested histories, then one of the major problems the archive faces, whether national, colonial, or postcolonial, is the preservation of the documents that will be

or are domiciled. How does one support the endurance of what must be preserved? The U.S. Congress addressed the problem of the endurance of the paper archive when in 1988 it initiated the “brittle books” program. It requested that the National Endowment for the Humanities begin micro-filming millions of volumes subject to a “slow fire” as the acidic levels in older paper slowly turned books to ash. And more recently, increasingly large portions of library budgets are dedicated to migrating digitized information across ever-changing hardware and software platforms. But landfills of “critical evidentiary material” in the form of “thousands of personal papers, pamphlets, photographs, newspapers, and other critical documents not in secure repositories are inadvertently destroyed” well before they reach an archive because the archons have decided that they are not relevant to this or that domiciliation (Isaacman, Lalu, and Nygren 56). They have no perceived public significance. And a far vaster—indeed an infinite—library of knowledge never migrates from its organic form (memory, bodily praxis) to a standard text form (book, audio, or video recording). No more than the thousands of pamphlets, these organic forms are not perceived to be relevant, or relevant enough, to the domiciliation of authority. Isaacman, Lalu, and Nygren single out this vast array of memory as of particular relevance to the postcolonial archive in South Africa. “With the passing of time, more and more elders who played critical roles in the armed struggle have died, as have the women and men who served as ordinary foot-soldiers. Gone with them are their personal narratives, which could have provided a valuable interior view of the combatants’ experiences” (56).

But if “archive” is the name we give to the power to make and command what took place here or there, in this or that place, and thus what has an authoritative place in the contemporary organization of social life, the *postcolonial archive* cannot be merely a collection of new artifacts reflecting a different, subjugated history. Instead, the postcolonial archive must directly address the problem of the endurance of the otherwise within—or distinct from—this form of power. In other words, the task of the postcolonial archivist is not merely to collect subaltern histories. It is also to investigate the compositional logics of the archive as such: the material conditions that allow something to be archived and archivable; the compulsions and desires that conjure the appearance and disappearance of objects, knowledges, and socialities within an archive; the cultures of circulation, manipulation, and management that allow an object to enter the archive and thus contribute to the endurance of specific social

formations. The shaping of objects entering the archive presents a number of new questions. What kinds of managements—trainings and exercises of objects and subjects—are necessary for something to be archived? Does an object need to become “an object” within a certain theory of grammar before it can be locatable? What kinds of manipulations simply make the objects within the archive more usable but never touch their status as an archived collection, say, the way an archive is rearranged when moved from an office or home into a library, or, say, when the creation of a digital index mandates the Web-based document be marked with metadata? Rearranging the stacking and boxing; providing an index; providing metadata that allows search functions: why don’t, or how do, these acts of reassemblage touch the status of the archive? And at what moment or to what degree does the “manipulation” of an archive transform it from an archive into something else, such as a scholarly work that draws on an archive but is not itself an archive—or is not until that scholar’s entire work and conditions of work are themselves deemed archivable, turning something that used an archive into a second-order archive? The building of the postcolonial archive is not, in other words, engaged in the same kind of reading practice that defined the hermeneutic tradition of the book, but is a different kind of interpretative framework that focuses on the generative matrix in which archival forms, practices, and artifacts carry out their routine ideological labor of constituting subjects who can be summoned in the name of a public or a people (see Gaonkar and Povinelli).

The dream is that, if done properly and with a rigorous and firm commitment, the postcolonial archive will create new forms of storage and preservation and new archival spaces and time, in which a social otherwise can endure and thus change existing social formations of power. The woman who suddenly walks through the wall into the honeycombed library will not merely find a place on the shelf but will build a new kind of shelf, maybe a digital shelf, not really a shelf at all, especially if the shelf appears and disappears according to where one is standing. Maybe this shelf will house a digital archive or itself be in the digital archive as a metadata standard. But then, won’t her appearance initiate a new problem? And does this “new problem” signal an actual new problem or rather the old power of the archive? After all, what makes archival power such a difficult force to grapple with is that archival power is not *in the archive*, nor can it be contained to the archive, whether old or new media, brick and mortar or virtual library. As Derrida argues in *Archive Fever*, archival power works against every given archive. It produces—or is—a compulsion

to dig deeper into and beyond every given archive, to dream of the person who will open a wall to an alcove that cannot be opened, so that some final document can be found hidden among the infinite Library, a document that would decide fate or be the final arbiter of a power that claims to be outside given power and, at the same time, the final and most effective mask of given power. In this place, the archive is a kind of Lacanian desire, always dissatisfied with its object, always incessantly moving away from every textual artifact, the thrill of discovery quickly giving over to the anomie of lack, propelling the archivist into more and more collections.

III

If the purpose of a postcolonial archive is to support subjugated knowledge, help alternative socialities endure, and challenge the formation of power that national and colonial archives promote and conceal, then some of the best attempts at achieving these goals can be found in recent Australian Indigenous digital archival projects. There are numerous projects underway. They experiment in archival form, computer hardware interfaces, and software applications. Some projects run on local networked computers; others on password-protected Web sites. All seek to support an Indigenous way of life, whatever that might mean in the present and the anticipated future, even as all of them challenge dominant archival logics. Given the centrality that territory and history play in settler colonies like Australia, it is hardly surprising that these archival projects seek to support alternative cultural beliefs about and social protocols concerning the domiciliation, territorialization, and authorization of historical knowledge. While other old and new media archives might meet archival power obliquely, Indigenous archives directly confront the ontological and geontological presuppositions on which they are based. Before discussing our project, let me mention two others.

We can begin with Kim Christen and Chris Cooney's Web project, "Digital Dynamic across Cultures," in *Ephemera*, an issue of *Vectors: Journal of Culture and Technology in a Dynamic Vernacular*. In their authors' statement, Christen and Cooney note their desire to encode "the unique systems of belief and of shared ownership that underpin Warumungu knowledge production and reproduction, including a system of 'protocols' that limit access to information or to images in accordance with Aboriginal systems of accountability." Christen is an anthropologist who has worked with the Central Australian Warumungu in and around

Tennant Creek for over a decade. Cooney is a digital media designer. *Vectors* is an experiment in electronic scholarly publishing. Many if not most scholarly electronic journals merely reproduce the print version in a Web-accessible form that allows content to be downloaded onto and printed off a computer. (Or the journal skips the original print version altogether, simply allowing Web-accessible downloading.) Few journals make use of even the most limited new media capabilities, such as supplementing the online print version of an essay with sound or video files (say, if *differences* asked me—or made it mandatory for me—to provide an audio file of the dog stories I discuss toward the end of this essay for its online version). The journal *Vectors* attempts to move beyond even this supplementary logic. It seeks to create a new kind of authorial voice and argumentative form in the interactive region between new and old media, programmer/designer and scholar, and the exposition and performance of theory. What is produced is not so much an essay as an interactive site. If designed effectively, the *Vectors* collective believes the argument of an essay will emerge as the “reader” explores the site. This form of media allows Christen and Cooney to stage the coauthorization of Indigeneity as it emerges across the complex actors in the digital archive.

The argument that “Digital Dynamic” seeks to make through its dynamic interface is twofold. On the one hand, the project challenges liberal assumptions about the role of systemized, intentional human agency in knowledge production, retrieval, and circulation. As in all of the projects in *Vectors*, the argument of “Digital Dynamic” is “run” by a database and algorithm. In this sense, the database, vis-à-vis the anthropologist and designer, is the immediate author of the argument. The database is populated with photographic, video, and audio files from Christen’s extensive Warumungu archive. But the archivist—the actor, or actant—was not Christen, or not fully and finally Christen, but an algorithm and database, built by Cooney and other staff at *Vectors*. This algorithm pulled from Christen’s entire archive “a representational assortment of content” that then populated the database. Every time a visitor logs into the site, another randomized algorithm shifts the material available to her and, in the process, according to Cooney and Christen, precludes the possibility of the user being able to “systematically [. . .] know ‘the Other.’” This dual algorithmic function allows “enough content for Kim [Christen] to make her point but not too much so as to overwhelm the user” and allows “each visit to the site” to be unique even though the “different assortment of content” makes the same argument (“Digital Dynamic”). It is as

if Christen and Cooney were intentionally confounding the librarians of Borges's imagination.

On the other hand, "Digital Dynamics" puts pressure on the presumed sociality of the archive. The project implicitly contrasts two forms of sociability: stranger sociability and kinship sociability. Stranger sociability is a way of knowing how to go about navigating and interacting in the world and circulating things through the world—from buying an ice cream cone to sitting in a movie theater—with people to whom one has no known relationship beyond being, as we put it in creole, *stranger-gidja*, strangers to each other. As Michael Warner has noted, whereas in an earlier European context, a stranger might have been a "mysterious" or "disturbing presence requiring resolution," in the context of contemporary publics, strangers can be, and indeed must be, "treated as already belonging to our world" (56). Stranger sociality forms the basis of the modern public as a dominant social imaginary and mode of identification. Thus in their everyday practices of being—their political imaginary, market interactions, and intimate aspirations—everyone acts as a stranger to other strangers. (In various Web environments, such as Second Life, the avatar stylizes stranger sociability.) In contrast, kinship sociability, such as among the Warumungu, imposes a very different condition on the circulation of things, humans, nonhumans, objects, narratives, ideas, and so on. The circulation of knowledge and its biproducts are based on thickly embedded social relations that are constantly negotiated within and across the social categories that compose them and their territorial substrate and expression. No one is fixed in any singular identity, and humans are and can become nonhuman agents (when they die they become *nyuidj* who inhabit the landscape, and when alive are already the descendants of specific kinds of posthuman creatures). But these movements of being are not achieved by abstracting the person from her social skin. They are achieved by thickening this skin and its imaginings. Images and other textualized forms are never detachable from these thick social worlds; there is not an image and an image-handling and interpreting subject, but only the co-constitution of the materiality and meaning of each.

Christen and Cooney attempt to make these points in an interactive rather than an expository way. The point is not simply to tell readers that the divide between stranger and kinship sociabilities exists, but to have them experience their place in this division as they attempt to navigate the Warumungu archive. When a user enters the site, a pop-up screen tells her that "access to certain elements of Warumungu culture

is restricted.” And as she explores the site she “may come across images, videos or other content that have been partially or completely blocked from view.” The viewer is then urged to learn more about the protocols for Warumungu sociality and to “Enjoy!” (This enjoyment button is especially interesting insofar as it simultaneously incites the *jouissance* of the other and counters the notion that the social restriction of the subject is against enjoyment.) When the user clicks on “protocols” at the bottom of the screen, she is told, although there is no Warumungu word that translates as protocol, that the use and circulation of cultural knowledge (tangible and intangible) is based on restrictions (what one cannot do) and acting guidelines (what one must do to act responsibly) and that these protocols are especially important when outsiders engage with Warumungu people and their knowledge. After reading this pop-up screen (or simply hitting “close” without reading it), the user sees Warumungu territory represented as a set of interactive dots (think here of the ubiquitous “dot paintings” of central Australia). Each dot represents a place and is surrounded by other dots that represent events and activities. Which dots appear depends on what the algorithm selects. If a user selects the “Patta” dot (“Patta” is the Warumungu name for Tennant Creek) and if the algorithm has generated the constellation “women’s ceremony,” and if the user clicks on “women’s ceremony,” another pop-up screen tells the user that Warumungu women sang and danced at the opening of a new rail line in Tennant Creek and that while the performance was “open” to outsiders, photographs and video shouldn’t be taken without the permission of the traditional owners and performers. Once again, the viewer is urged to “learn more about this protocol” by clicking on “learn more about this protocol.” And so it goes as a user moves around the archive.

Thus, from the moment the user opens the archive, a metadiscourse about the circulation of cultural knowledge and its social forms and formations confronts her. At once and at the same time, the archive addresses a mass “you” who are assumed not to be a part of the Warumungu knowledge public; makes it impossible for this mass second person to continue further without interacting with the screen of exclusion (even if users don’t read the pop-up screens, they have to do something to get rid of them); and positions this stranger as a voyeur in another social world. The site insists that “you-the-stranger” are now within a differently organized social world in which all people, except “you,” have a place based on territorially embedded kinship and ritual relations. It insists that the social rules that organize the access and circulation of information in “your”

world do not work in this world. You cannot purchase this information, nor can you gain this information in any way that sidesteps the social and cultural protocols of the Warumungu. Your ancestry and ritual status is what matters here. And insofar as it does, the user cannot feel unencumbered by social identity. Rather than the new media freeing the viewer from her social skin and allowing her to become a cultural avatar, it fixes her social identity as stranger, outsider, voyeur, and suspect. One can here see why librarians would ask us how this kind of archive relates to the mandate to support publicly available information. Warumungu knowledge and its power to territorialize people are not organized on the basis of the *demos*. Knowledge does depend on accidents of birth—even as, from a Warumungu point of view, no birth is simply an accident. As a result, the postcolonial archive will never be compatible with the colonial archive because it opposes the sense of limitless public access to knowledge on which the colonial archive is based—and it exposes how all archives restrict access to all sorts of material based on the assumption that free access is free of social figuration.

But it would be wrong to imagine these modes of sociality as civilizational contrasts rather than spaces of ongoing negotiation and experimentation. Strangers are a constant presence among the Warumungu in places like Tennant Creek. Some but not all of these strangers are absorbed into local kinship cosmologies. They are given specific kinship or ritual relations and encouraged to act on the basis of these ascribed relations. But both socialized strangers and strangers who remain unsocialized bring new modes of knowledge production, storage, and manipulation with them: mobile phones, Bluetooth connectivity, laptop computers, MP3 players, and so on. Moreover, Indigenous teenagers are often in advance of their non-Indigenous teachers in terms of their use and understanding of new media sites. Helen Verran and Michael Christie have examined a set of new social forms and socio-ethical issues that emerge when Indigenous communities use new media to learn about and represent their countries. More specifically, they have proposed a software program called TAMI (texts, audio, movies, images) that would allow Indigenous communities to create their own new media narratives of place. TAMI would use novel base-code to flatten the ontological presuppositions of the metadata organizing most digital archives. In a standard digital database, metadata is used to structure, define, and administer electronically organized data. For instance, metadata might refer to the time and date a piece of data was created; to the file-type (.mov, .doc, .mp3); to the author, title, or location of

the original document; to the type of object (plant, animal, person, place, event); or the relationships that exist among various metadata categories. In the semantic web, ontological space is composed of syntactically organized metadata. (The semantic web expands the properties and classes, the relations between classes, properties of scale and equality, as well as a richer array of properties to the metadata.) The only a priori ontological distinction Verran and Christie hope would be in play in their database would be the distinction between texts, audios, movies, and images. The idea is to allow for “parents, children, teachers, grandpas and grandmas generating and collecting digital objects of various types. It sees users as presenting and representing their places and collective life by designing and presenting/performing collections for many sorts of purposes” without predetermining the purpose or end of this assemblage and reassemblage.

Although Verran and Christie were never able to garner the money needed to finance the building of TAMI, it was nevertheless a controversial project. The debate pivoted over the effect that computer-based learning through “databases and other digital technologies” would have on local Indigenous commitments to collective “embodied in-place experience” (Verran 102). Would TAMI displace the ontological assumptions of metadata only to undermine the geontological properties of Indigenous knowledge? Verran acknowledges this as a pressing concern given that, on the one hand, for many Indigenous persons, “the notion of being in the world has human existence as an outcome or expression of place” and, on the other hand, when lodged on computers, learning about country can happen far away from the country one is learning about. The fear that a local Indigenous geontology is incompatible with modern technology is itself part of a more general fear each advance in technology triggers both for the civilizational trajectory of “Western culture” and for the authenticity of the Other (see Darnton and Roche). This sense of incompatibility and contagion is especially heightened when dealing with so-called oral cultures. For example, the fear of epistemological and ontological contagion was rampant in Australia in the 1980s during a set of highly contested Indigenous land claim hearings that included rural and urban claimants, the highly literate, and the partially literate. Opponents of specific Indigenous claimant groups would pose the question of how claimants came to know what they knew about the land under claim. Had they learned what they knew through “traditional” methods such as collective practices in-country supervised and initiated by elders? Or had they learned through the solitary practice of book reading? As Verran notes, this suspicion

of textually mediated Indigenous learning is exacerbated in computer archiving even though “Aboriginal people are already, in their own places and their own ways, beginning to explore the knowledge management possibilities for themselves” (104). And this is the vital difference of Verran and Christie’s project: given the right software conditions, can the new media allow Indigenous Australians to repurpose their ways of being in the land and becoming for the land according to their own desires, including their desire to become fluent in the new media and perhaps alter what in-place learning is?

In critical ways, our augmented reality project lies precisely in the geontological space that Verran calls “embodied in-place experience.” But locating ourselves here does not solve the problems associated with Verran and Christie’s project, and it opens a new set of concerns. Members of the project understand human existence to be an outcome of being in place and in other humans. But they also understand place-existence to be an outcome of being in humans and other places. What is at stake here is not merely a set of protocols for circulating knowledge but also how knowledge is a way to create and maintain the cosubstantiality of forms of being. In other words, the point is not knowledge per se but the purpose of knowledge. Knowledge about country should be learned, but abstract truth is not the actual end of learning. Learning—knowing the truth about place—is a way to refashion bodies and landscapes into mutually obligated bodies. The French philosopher Pierre Hadot’s work on the post-Socratic concept of ascesis, self-transformation, might come to mind at this point. The refashioning of self cannot be separated from an entire host of relations with place, including material transfers: eating, pissing, shitting, sweating in a place and sending matter back into soil; and semiotic transfers: speaking to place and reading the semiotic interplay of place. And it includes forms of embodiment over time, which non-Indigenous strangers may think of as a culturally inflected way to refer to memory, with memory understood as a psychological state of storing, retaining, and recalling information. But these in-place beings are not memories. They are not psychological states. Places absorb the spirit of specific people, *nyuidj*, who then appear to living people. Over time, the specificity of the person is slowly lost and absorbed into a more general kinship or linguistic category (Povinelli, “Poetics”).

The design of our project intends to secure the digital archive to this alternative sociology and geontology and their subsequent modes of domiciliation, authorization, and territorialization. Our archive relies on

social media so that its content can be concealed and exposed, expanded and contracted according to the dialogical conditions of a social network. And each one of these social networks would create its own cartographic imagining of geographic space and being. Would this network, however, be composed according to kinship rather than friendship assumptions? Moreover, in standard GPS cartographic projects, space is coded according to a number of features, say, coding a GPS-generated map in terms of climate change, water cover, or tree coverage. Maps are then laminated on top of each other to understand the dynamic relationship among these environmental forms. But our “maps” would not necessarily rely on the notion of a geographically correct substrate. As a result, the various maps cannot be coordinated. Place may appear distended. In-place-beings might move or be moved as they sense and respond to the presence of any number of human and nonhuman beings. Indeed, space may appear as the result of the networks’ agreements and disagreements about the social meanings, locations, and purposes of various kinds of human and nonhuman agents.

While this might seem interesting, a significant problem emerges when we place the technical nature of this new archive in the actual social conditions of using the archive. If all files within the augmented reality archive must be geotagged to be played (i.e., media is given a set of GPS coordinates that mandate that all knowledge is in-place knowledge), doesn’t this mean that some substrate of the geographically correct continues to inform the archive? Moreover, given the cost of traveling to the places in which the archive would be located, one ironic result could be that non-Indigenous people would be able to visit these sites more than the makers of the archive. They might end up being the woman who emerges from the other side of our wall, overwhelming the site with their experiences.

All of these projects are part of a virtual *explosion* (or, a *virtual explosion*) in the construction of postcolonial digital archives in Australia. Each of them, though in very different ways, attempts to utilize a specific matrix of circulation not merely to move a new set of “objects” through the matrix of circulation but to model a novel form of sociability in it. Many of these archives are responding to other initiatives directly funded and managed by federal, state, and territory government agencies. For instance, the Department of Local Government, Housing, and Sport, through the auspices of its Library Information Services and specifically its new Library Knowledge Centres, has established ten Indigenous digital

archives in remote communities throughout the Northern Territory and hopes to establish more with a grant from the Gates Foundation. These knowledge centers are themselves based on a piece of software called Ara Irititja (“stories from a long time ago”) developed for the Anangu Pitjantjatjara communities in Central Australia. The Ara Irititja Web site notes that an “important feature of the database is its ability to restrict access to individual items” to protect “cultural sensitivities.”¹ Of central concern to the Anangu is their ability to “[restrict] access to some knowledge on the basis of seniority and gender.” And so the Ara Irititja software integrates “these cultural priorities into the design of its digital archive.” In an earlier version of the public Web site, a user could click on the link provided, read the introduction or click “skip introduction,” and enter the archive. To edit the archive, a user needed a password, but even without one a visitor could still enter and move around it. Inside the archive, an algorithm based on kinship, ritual, gender, and territorial identities controlled what could be selected and seen.

All of these projects attempt to counter a dominant logic governing online archives. To understand how these postcolonial archival projects present a counterdiscourse to the dominant logic governing online archives, one need simply enter the online archive “pictureaustralia.org” and type “Aboriginal ritual” or “Aboriginal ceremony.” Photos that should never be seen by the uninitiated or by one gender or another are immediately available to anyone with a computer, an Internet connection, and the ability to type these three simple words. In short, the postcolonial digital archive opposes not merely those who would argue for all intellectual knowledge to circulate freely in an open information commons, including scholars such as Lawrence Lessig, who would nuance the concept of an open information commons by distinguishing between intellectual property and intellectual nonproperty, but also those who believe that a public is ever abstracted or abstractable from its social features.² The Warumungu and Ara Irititja sites force readers to have a social skin, to make stranger sociality an impediment to information access/acquisition and thus knowledge production and circulation.

But as closely as these various postcolonial digital archives strive to match local protocols about knowledge acquisition, retrieval, and circulation with new media forms of the same, the media matrix in which Indigenous protocols, knowledges, and objects circulate demands they conform to certain conditions that seem to appear and disappear as one moves across three interactive regions: code, interface (information

arrays), and screen. In other words, all of these subjugated knowledges enter the demanding environment of digital information (Gaonkar and Povinelli). To be sure, the Internet is a dynamic space and thus what is being demanded is under constant construction. We are currently witnessing the movement from the “read-write” Web (Web 2.0) to the semantic web (or Web 3.0). But this dynamism is not formless. It continues to demand that “things” conform to whatever conditions of entry, movement, location, and export prevail. For instance, to tabulate and access information within a digital database, the information must be configured to be readable by an underlying code and the software that serves as the intermediary between the code and the user interface. Take, for example, JavaScript, which the journal *Vectors* uses. JavaScript relies on a Boolean logic of “NOT,” “AND,” and “OR” operations (or gates), standard if()/then() functions, and various object-detection protocols. (There are also “NOR,” “NAND,” “XOR,” and “XNOR” gates.) Software allows a computer to find “objects,” decide on events, and apply functions. The location of objects, the advent of an event, and the application of function are constantly occurring in the digital background as a person navigates online. When, for instance, you go to the *Vectors* site, a piece of code examines your computer to see if it is compatible with JavaScript or another piece of software. If the “object” exists, in this case JavaScript, then the condition becomes true and a block of code is executed, allowing the computer to run a JavaScript-based site.

It is out of these basic logical building blocks that software designers create applications. Cross-cultural archives present an intriguing problem for many designers—and the enjoyment of trying to solve novel environments needs to be noted. Indeed, the user is not the only human agency addressed by the command: “Enjoy!” This point was brought home to me during a conversation I had when on a fellowship at *Vectors*. As part of the weeklong seminar, the director of the Sustainable Archives and Library Technologies at UCSD led a workshop. During the long conversation, the topic drifted to the problem of cultural sensitivity and knowledge access and circulation in digital archives. The director was quite happy to discuss this problem and had been working with some Australian archivists on Indigenous knowledge and digital preservation. It was exciting, if at times quite challenging, he said, to write software that reflected local rules for knowledge access, circulation, and storage. From his perspective, the first thing a designer had to do was sit down with the right people, have them explain local rules for storage, access, and circulation, and then program these rules into a set of protocols in the languages of “if()/then()” gates.

If a person is a woman, then she has access to this part of the archive. If a person is a relative of the person referred to or represented in a text, that person would have a coded set of rights to that text. (In Ontological Web Language, OWL, the woman would be a class within the subclassOf and would have hasGender and hasRelative that would open or close the flow of information.) I asked, “How do you know who the right people are? What if there are disagreements about the rules and protocols?” The director was curious, engaged, thoughtful, and hardly surprised by this query. He certainly didn’t need a lecture from me that “cultures” are not homogenous. He responded that if there were disagreements, a designer could use a set of “if . . . then” functions to model this disagreement among subgroups. But, I persisted, what if the disagreement is of the following: “yes you can make a digital archive; no you can’t.”

I use this anecdote to suggest how seductive this game of gates is. Notice that my “challenge” was within the logic of the machine itself: “yes . . . no.” In other words, across our parley, knowledge is reduced to rules for locking and unlocking information into streams of circulation. The challenge is to configure social life into a set of discrete objects that can be found or not-found (true/false). The challenge is to find out what the minimal abstract qualities of the objects are and then what their rules for access and combination are. Once one solves these challenges and configures life so that it fits this form, then a designer can write code to reflect “social context.” The code can even “learn” (“If the same serial number hits this site in this place x number of times, give her more information”) and have a “social conscience” (“If this credit card contributes x amount of money to progressive Indigenous causes, give it more information”). In our project, information could be weighted according to the number of visits to a site with extra information released each time a visitor returns to a site. But learning, conscience, and context are construed within a specific metasocial framework: a social writing of the social as a problem of informational access and circulation; of the correct combinations to lock and unlock informational flows, as if knowledge production produced objects. The social context is written in a language that can be accessed by any computer anywhere—exactly the critique Verran and Christie tried to counter. We return to what at first appeared to be a strong division within digital space between those for and against an open commons to find that all digital commons, colonial or postcolonial, must be written in a code that assumes the social is a set of rules that can be written to operate independent of social context.

IV

Thus we see that the specific circulatory matrix of the new media places a number of conditions on how an object must allow itself to be configured as a condition of its circulation. What this configuration entails, and how the configuration might change—or how the matrix itself might change as it absorbs and shapes new materials—is only one part of what is at stake in building a postcolonial archive that will challenge archival power. It is certainly true that deep within the recesses of the new media are presuppositions about information and its sociability, on top of which the postcolonial software seeks to write a new history. And it is equally true that this specific matrix of circulation fashions the edges and expressions of information as the price of entering and circulating through this specific cultural form. But there are other conditions shaping and thus helping direct the futurity of things entering, exiting, and remaining in the postcolonial digital archive. Here, we might return to Isaacman, Lalu, and Nygren's lament that the organic ground of the postcolonial archive—the people whose personal narratives are the loci of memory as archive—is not being sustained long enough every day to transfer the archive as embodied knowledge and memory into textual knowledge and memory.

Take, for instance, the social environment in which my colleagues and I must build our augmented reality project. I first began talking with Indigenous colleagues and friends in 2005 about what to do with my extensive archive. At that time, the politics of recognition were still a dominant discourse of Indigenous-Settler relations. To be sure, the conservative Liberal-National alliance had controlled federal government for nine years, gaining the Senate and thus holding unchecked power in parliament in 2004. During this time, the prime minister, John Howard, had made serious discursive inroads into the self-evident worth of the recognition of Indigenous culture and of the bureaucratic structure that had accumulated around this self-evident good. In 1996 his government had cut \$470 million from support of Indigenous programs, claiming all Australians were equal and should be treated equally. In 1999 he refused to apologize for past wrongs done to Indigenous people, including the Stolen Generation. (The Stolen Generation refers to the extended period during which Aboriginal and Torres Strait Islander children were removed from their parents.) Howard claimed that present Australians should not be held responsible for the actions of past Australians. Further, he and others in his

government argued that government policies such as the Stolen Generation had been intended to help, not harm, Indigenous people and should not be judged according to present values and views. In 2002 his government initiated a review of the parallel governing body, the Aboriginal and Torres Strait Islander Commission, and in 2004 abolished it, claiming corruption, nepotism, and incompetence.

But the decisive turn in the public politics of recognition occurred in 2007. The federal government pushed for the release of the *Little Children Are Sacred* report of the Northern Territory Board of Inquiry into the Protection of Aboriginal Children from Sexual Abuse.⁵ The report was careful to disambiguate Indigenous social and cultural traditions from contemporary sexual abuse. The federal government was not. The Howard government seized the opportunity to make a frontal assault on the underlying notion of cultural recognition as such. Aboriginal culture had been exposed. Indigenous gender relations and ritual practices were based on premodern attitudes and trajectories. The paternalistic attitude of the 1950s was revealed to have been prescient. The shocking stagnation of Indigenous life from the perspective of health, education, morbidity, and employment was not a failure of government and state care but of Indigenous culture (Povinelli, "Culture"). Conservative papers staged Indigenous gender oppression and articulated it to other highly stereotyped gender oppressive cultures.

It would be hard to underestimate how this sex panic roiled public opinion about the truth and destiny of Indigenous culture. It seems safe to claim that this sex panic contributed to a sudden questioning of the previously unquestioned support of Indigenous culture. The veneer of spirituality referred to and nurtured by intersecting discourses of popular culture (one thinks of a long list of films and books, *The Last Wave*, *Picnic at Hanging Rock*, *Where the Green Ants Dream*), high art (see Myers), televisual pedagogy (shows on the ABC and SBS as well as on the National Indigenous Network), and law (legislation and rulings referring to Aboriginal land-based spirituality as the basis of culture) was suddenly overlain with the specter of sexual abuse. Once traditional culture with associated sexual abuse, a subsequent hegemonic link could be made between entrepreneurial (neoliberal) modernity and sexual remedy. This link was made, and supported, by the conservative government until it was ousted in 2007. And it continues to be made by conservative advocates in the national press and liberal or previously liberal-leaning multiculturalists (Sutton). According to these pundits,

what Aboriginal people want is to be liberated from the oppressive weight of an outdated culture.

The articulation of Indigenous tradition to social deviance legitimized a material reorganization of government and private spending in relation to Indigenous people and communities. The Howard government loudly proclaimed the withdrawal of state support of remote Indigenous life to deprive Indigenous people of the supposed conditions of a sexualized culture and to force them into market-based goods and values. If Indigenous people wanted continued financial support for life outside the mainstream of the market economy, they would have to turn to that economy for financing. Communities were forced to sign ninety-nine-year leases over their lands if they wanted to continue to receive infrastructural improvements and educational support. They were no longer allowed to control who entered their communities. And the police presence in communities radically increased.

It was in these new conditions that members of our project had to make decisions about how, why, and to what end things should enter the digital archive and be allowed to circulate across various kinds of kin networks and stranger publics. Take, for instance, two narratives we considered inserting into the digital archive. The first tells the story of some dogs who moved across country trying to cook cheeky yams. (This kind of yam must be cooked or soaked to leach out the arsenic in it.) As they move across the landscapes trying again and again to consume the yams, the dogs slowly transform from an original, more human figure to their current dog form. At one site the dogs try to make a fire by rubbing fire sticks together. Because it is the rainy season, all the dogs do is dig deep holes that fill with water (becoming water wells) and, in the process, lose their fingers. At another place, famished, they decide to eat the yams without cooking them, subsequently burning their tongues and losing their ability to speak human language.

Some of these stories have already been published and circulate in the reading public. But as far as I know, the location of these sites is not indicated. Nor is it made clear how the various stories contribute to the larger cartography of the region. It would be wrong to assume that this cartography is “one.” Anyone who is Indigenous, or works with Indigenous people, knows that every landscape is a complex dynamic between local contested cartographies and geontologies. Indeed, the point of composing this postcolonial digital archive is to allow for variation, contestation, change over time in narrative form and purpose and in changing

environments (say, if the features have been dramatically changed by erosion of land development). That is to say, there is nothing particularly unusual about the issues raised by this story of dogs and their prehistory.

If there is nothing unusual about the issues raised by this story of dogs and their prehistory, another story presents the problem of the figuration of such stories before they enter the archive. This second narrative also performatively entails the geontology of the region's land and seascape. But this narrative is about a young woman who, having dressed as a man to go hunting, encounters an older man who, discovering the truth of her sex, fights her, rapes her, and then departs. This narrative presents some similar issues as the narrative of the famished dogs: the same internal disputes, metapragmatic functions, geontological background assumptions. But this time these issues are located at the intersection of national narratives about the scandalous revelation that rather than spirituality, it is sexuality, and a violent, predatory sexuality, that lies at the heart of Indigenous culture. What is "the truth" of this narrative? What parts that might have been backgrounded during the heyday of cultural recognition are now foregrounded? This reorganization of foreground and background is not countered by pointing out that countless stories of sexual and physical violence can be found in the spiritual texts of the religions of the book, often said to be the civilizational ground of Western culture.

How will our project configure these narratives to address the different viewing publics? Perhaps we could have a password-protected space within the social media where various versions of the narratives would be located. While editing these narratives might solve the present problem of a suspicious public, does it touch archival power? Here we remember that archival power is not merely what is in the archive, how this *what* is subtly or not so subtly shared and qualified, and how to preserve various organic grounds of memory. Archival power is also, and perhaps most profoundly, about the orientation of truth to some lost trace of the real. We return not only to Derrida but also to Borges and his librarian/archivists who construct various theologies of the book to isolate the singular truth of the library. As Derrida suggested, archival power is best understood in relation to the archival drive that every actual archive initiates. Archival power is a kind of Lacanian dissatisfaction with every actual source material, an incessant movement beyond every actual archival presentation. Having levels within our digital archive would heighten the intensity of this drive rather than lessen it. It does, however,

increase the seduction of the project for capital and public interests. And this is not without own value. But it is not a value that works against the archival grain.

Years ago, when I first began discussing what to do with my archive, some older Indigenous men and women, as well as some younger ones, told me to burn it and bury it. Their reasoning was straightforward from one perspective. If no one acted in a way that kept what was in my archive alive, then it was simply dead matter that should be treated like other dead matter and returned to the ground from which it came. Of course, other reasons were also present: rage at a life, desire to be done with struggle, rejection of certain aspects of local being in the world. Burn the archive. But this was not a universal opinion. Others said that the purpose of having sat and poured this knowledge onto paper and tape and into me was to store it for their children and grandchildren. They were reflecting not merely some rote belief that Indigenous culture should “pass down through the generations” but a deeper understanding of the difficulties of navigating the various demands they faced as young people and that their children face today.

This is not a romantic notion of parenting. Present in this knowledge was also rage and resentment, including rage and resentment at me for having the complex means and wherewithal to sit and be a storage container as others died, were killed, or crippled themselves with substances. And in this was also my rage and resentment for having found myself in a position of obligation I do not seem able to let go of—with all the consequences on personal relations there and elsewhere. I have on many occasions thought of burning the archive myself and justifying it with the permission I was given. “Burn it,” they said. I am tempted to join the sect of Borges’s library that burns every book that would appear as gibberish.

But even then I would be preserving an archival trace—“they said.” Neither editing nor burning the archive will touch archival power. I would have to burn my own history, never have existed; and theirs as well. Unless I do, someone somewhere, some text, here or there will remember that there were people who knew something and perhaps left some part of this something behind, maybe in a book or an attic or on the ground. And this something somewhere will finally tell us what our universe means without us having to stop and look around and ask, what is here now?

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Notes

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| 1 | See http://www.irititja.com . | 3 | The Northern Territory Government Web site provides the full report, which was released on June 15, 2007, at http://www.inquirysaac.nt.gov.au/ . |
| 2 | See also the <i>Creative Commons</i> at http://creativecommons.org . | | |

Works Cited

- Appadurai, Arjun. *The Social Life of Things: Commodities in a Cultural Perspective*. Cambridge: Cambridge UP, 1988.
- Arondekar, Anjali. *For the Record: On Sexuality and the Colonial Archive in India*. Durham: Duke UP, 2009.
- Borges, Jorge Luis. "The Library of Babel." *Collected Fictions*. Trans. Andrew Hurley. New York: Penguin, 1998. 112–18.
- Born, Georgina. "The Social and the Aesthetic: For a Post-Bourdieuian Theory of Cultural Production." *Cultural Sociology* 4.2 (2010): 171–208.
- Christen, Kim, and Chris Cooney. "Digital Dynamic across Cultures." *Ephemera*. Spec. issue of *Vectors: Journal of Culture and Technology in a Dynamic Vernacular* 2.1 (2006). <http://vectorsjournal.org>.
- Darnton, Richard, and Daniel Roche. *Revolution in Print: The Press in France, 1775–1800*. Berkeley: U of California P, 1989.
- Derrida, Jacques. *Archive Fever: A Freudian Impression*. Chicago: U of Chicago P, 1998.
- Dong, Song. *Waste Not*. Museum of Modern Art. *Projects 90*. New York. 24 June–7 Sept. 2009.
- Foucault, Michel. *The Archaeology of Knowledge and the Discourse on Language*. New York: Pantheon, 1982.
- Gaonkar, Dilip Parameshwar, and Elizabeth A. Povinelli. "Technologies of Public Forms: Circulation, Transfiguration, Recognition." *Public Culture* 15.3 (2003): 385–97.
- Hadot, Pierre. *What Is Ancient Philosophy?* Cambridge: Belknap, 2004.
- Hoarders*. Arts and Entertainment Network. 2008–present.
- Isaacman, Allen F., Premesh Lalu, and Thomas I. Nygren. "Digitization, History, and the Making of a Postcolonial Archive of Southern African Liberation Struggles: The Aluka Project." *Africa Today* 52.2 (2005): 55–77.
- Lessig, Lawrence. "Reclaiming a Commons." Keynote Address. Building a Digital Commons. Berkman Center, Cambridge, MA. 20 May 1999.
- Myers, Fred. *Painting Culture: The Making of Aboriginal High Art*. Durham: Duke UP, 2003.

Povinelli, Elizabeth A. "The Crisis of Culture and the Arts of Care: Indigenous Politics in Late Liberalism." *Culture Crisis: Anthropology and Politics in Remote Aboriginal Australia*. Ed. Jon Altman and Melinda Hinkson. Sydney: U of New South Wales P, 2010. 17–31.

———. "The Poetics of Ghosts: Social Reproduction and the Archive of the Nation." *The Cunning of Recognition: Indigenous Alterities and the Making of Australian Multiculturalism*. Durham: Duke UP, 2002. 187–234.

Stoler, Ann Laura. *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense*. Princeton: Princeton UP, 2010.

Sutton, Peter. *The Politics of Suffering: Indigenous Australia and the End of the Liberal Consensus*. Melbourne: Melbourne UP, 2010.

Trouillot, Michel Rolph. *Silencing the Past: Power and Production of History*. Boston: Beacon, 1995.

Verran, Helen. "The Educational Value of Explicit Noncoherence: Software for Helping Aboriginal Children Learn about Place in Education and Technology." *Critical Perspectives, Possible Futures*. Ed. David W. Kritt and Lucien T. Winegar. Lanham: Lexington, 2007. 101–24.

Verran, Helen, and Michael Christie. "Using/Designing Digital Technologies of Representation in Aboriginal Australian Knowledge Practices." *Human Technology: Interdisciplinary Journal of Humans in ICT Environments* 3.2 (2007): 214–27.

Warner, Michael. "Publics and Counterpublics." *Public Culture* 14.1 (2002): 49–90.