From home base to database … and back? The circulation and virtualities of Amerindian knowledge in the digital era

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Translator: Margaret Buckner

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As the Internet, electronic mail, compact discs, and digital telephones sweep through much of the United States, Native American activists are asking themselves whether and how the new technology can empower Native communities. Or will the new technology of telecommunications and computers serve only as a modern-day version of the telegraph and railroad that ran right through Indian lands with little benefit to the tribes?
(US Congress 1995)

In the mid-1960s, in an essay that reverberated widely, philosopher Marshall McLuhan (1964) proposed that the impact of new communication technologies was the equivalent of the Copernican revolution, summarized by the famous saying, "The medium is the message." In this view, the development of what we now call Information and Communication Technology would disrupt not only how information is shared but also our ways of life and how we think. At the time, so-called "illiterate" societies were still totally excluded from discussions on the sociocultural impact of new media, as though the idea that they might be affected were unthinkable. After McLuhan, scholars such as Jack Goody (1968) asked about the effects of the introduction of (analog) communication technologies in oral societies, but they were far from imagining that, in the following decades, "indigenous media studies" would arise as a separate subfield, phrases such as "embedded esthetics of decolonized media" would become commonplace (Ginsburg 2018), or articles would be published with such titles as "The cellphone is the grandfather of the WaiWai" (Souza

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and Machado Dias Jr, 2019, our translation) or with hashtags such as @kwẽ-Xerente (Oliveira Júnior 2019).

Clearly, since McLuhan, much water has flowed under the bridge, or, rather, many waves have bounced from satellite to satellite. In spite of the digital divide, indigenous populations, starting with those of the Americas, are now completely involved in what is called, in Brazil, "*ciberinclusão indígena*" (Nava Morales 2020), or, in the United States, "indigitalization" (Pace 2018, using an expression already present in Australia; see Thorner 2010; Ormond-Parker et al. 2013). Thanks to Mozilla's Nativo Project, the Firefox browser is now available in several Amerindian languages, including Guarani (under the name of Aguara Tata ["fox of fire/fire fox"]) and Kaqchikel Maya. Attempts to indigenize technology are now legion; they even, in the framework of what is readily called in Spanish-speaking America "*activismo digital*," appear on the agenda of Native American associations such as Digital Smoke Signals (http://www.digitalsmokesignals.com/) and the platform *Lenguas*, whose goal is to "adapt and adopt technology and the internet to revive indigenous languages" (https://rising.globalvoices.org/lenguas/acerca-de/, our translation) (Llanes Ortiz 2016a). More discretely, some Amerindian languages are now only spoken in WhatsApp chats, especially when migration stretches the boundaries of the intimate space where endangered languages tend to be confined.[1]

If members of Amerindian societies are among the least connected to the internet, it is certainly not by choice. With rare exceptions, access to networks, infrastructure, materials, software, and computer skills is especially complicated; however, these difficulties are often inversely proportional to desire for and creative investment in digital technology. In the Javari River basin, for example, the first generation of young Matis who learned to speak Portuguese hoped to learn how to use computers even before learning to read and write (Ph. Erikson, personal communication). As was emphasized in a report presented to the US government over 25 years ago (and in our opening epigraph), it would be unfortunate if the internet were introduced along the lines of the outdated telegraph network, whose wires passed through Native American lands without bringing them the slightest benefit, or, worse yet, bringing them only the dismal news of the imminent arrival of the cavalry. In their political struggles, a growing number of Amerindians have chosen to be present on the internet: both symbolically and pragmatically, solar panels and computers have become essential counterparts to Kayapo clubs (Turner 2016) and Ashaninca bows (Espinosa 1998). The same is true for linguistic and cultural revitalization

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1. Indeed, how could I have imagined, when I began my fieldwork among the Itza' Maya of Guatemala, that one of the last fluent conversations in that language would take place remotely, by WhatsApp, between doña Petrona Vitzil Tesucún (now 94 years old) and myself, 8,000 km apart?

projects, which have obvious political dimensions, as confirmed by the abundant literature on projects to decolonize archives and the famous "indigenous right to know" demanded by Vine Deloria in the late 1970s in his spirited plea for policies to be established for the local dissemination of Amerindian heritage (Krebs 2012; O'Neal 2015).

It is undeniable that the spread of the internet (and more generally that of digital technology in all its forms) has had a huge impact on the way Amerindians see the preservation, circulation, and transmission of their knowledge. In this context, and stimulated by reflections from a collaborative project for digital repatriation in which they were heavily involved,[2] Philippe Erikson and Valentina Vapnarsky organized for the 56th International Americanists Conference a three-part symposium entitled "Digital repatriation of traditional indigenous knowledge: a threat or an asset for its transmission?" (Salamanca, July 2018). The goal was to seek a better understanding of how digital technology was impacting the repatriation of audio and video recordings, photos, and even objects and herbariums to indigenous communities in the Americas. The group of texts published in this double issue evolved from papers presented at the symposium.

The symposium was organized into three panels. The first looked at collaborative projects initiated or carried out by museums and involving indigenous communities. The second dealt with procedures and consequences of the repatriation of sound recordings, with special interest in how they were reappropriated locally. The third panel focused on cultural and political processes born of the local reappropriation of documentation projects initially intended for the academic world. Most of the articles in part one of this issue come from papers presented in the final two panels. The themes addressed in the first panel will appear in part two of this double issue, nº 107-1 of the *Journal de la Société des américanistes*. Finally, we should mention that one of the papers presented at the Salamanca conference has already been published in this journal outside of this issue (Beiras de Carril and Cúneo 2020).

Digital repatriation: community impacts

The roll-out of digital technologies in tandem with that of heritage institutions has raised an unprecedented voracity for archives in the West. Stimulated by the growing ease of access to new technologies—including in places seemingly farthest from urban centers and the modern world—this ferocious appetite

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2. SAWA, "Savoirs autochtones wayana-apalaï (Guyane) – Une nouvelle approche de la restitution et ses implications sur les formes de transmission," www.watau.fr. Though the original title of the project included the French word *"restitution"* ("repatriation,"), today we feel that "return" would be preferable (the French alternative *"rapatriement"* presents other difficulties).

for conservation accompanies the will to divulge archival content, which has led to the multiplication of projects to "repatriate" data relating to so-called "traditional" knowledge of indigenous populations. For close to two decades, such projects—whether personal, community-based, or institutional—have allowed the (virtual) return and the (very real) circulation of sound, audiovisual, and photographic recordings collected in the field, in the form of either digital copies of old data, or more recent materials recorded digitally (Powell 2016; Reddy and Sonneborn 2013). In a similar movement, though here the process may originate from a refusal to return actual objects, ethnographic collections curated in distant museums themselves have become accessible, or are scheduled to become so, thanks to online databases or even to 3D reproductions of objects to be "repatriated" (Hennessy 2009; Gibson and Kahn 2016; Hollinger et al. 2013).

On the whole, these projects have been motivated, more often than not, by postcolonial (or decolonial) ethical considerations, which is most praiseworthy. Repatriation appears today to be a moral imperative, a form of symbolic compensation for the long history of depredation, pillaging, and, more recently, mineral extraction experienced by indigenous communities, who have become—in the contagious terminology of the world of archives—"source communities."[3] Moreover, these "restitutions" are aimed at empowering minority indigenous peoples; they are seen as legitimate efforts contributing to cultural preservation and revitalization. However, repatriation can sometimes be distorted, for it often takes place through a series of twists and turns more complex than a simple "return to sender." To use the beautiful formula of Boast and Enote (2013), "virtual repatriation is neither virtual nor repatriation." These authors therefore logically promoted the notion of "e-patriation," a less arrogant stance, it is true, but still far from masking the myriad problems.

In fact, repatriation often takes chaotic paths. It can have unexpected, if not undesirable, consequences, in spite of archival ethics procedures and best practice protocols, which are sometimes totally overwhelmed by local circumstances. Actors and observers can find it hard to tell up from down. An ethnographer in search of field collections, a curator in search of legal rights, an archivist in search of authors, the recorded in search of those who ran off with the recordings… In the end, everyone is seeking a source, and going back to the source often means going back and forth. Moreover, our fascination with the *longue durée* and the preservation of vestiges of the past is far from universal (Erikson and Vapnarsky, in press). What we archive and preserve here might elsewhere have limited or ever-changing value; it could become a commodity for barter, an object of curiosity, a subject of conflict, a political

3. This term, we must admit, is preferable to "resource communities," which reduces them to simple providers of objects or knowledge.

symbol, a weapon, a secret to be hidden, material to be recycled, a ritual item for a second funeral, or simply a meaningless gadget. What was thought to be a vestige of knowledge can turn out to be inert or can reveal itself as a hyperactive principle in forging social relations or in creating new esthetic, epistemic, and communicative forms. Finally, what was supposed to revitalize transmission of knowledge can instead block or subvert it.

The growing importance of new information and communication technologies in political struggles also has an impact on internal leadership structures. Mastering the colonial language (in other words, being competent in a European language) used to give young people the wherewithal to threaten the hegemony of their monolingual elders (Chaumeil 1990). Today, at a time when bilingualism has gained ground, mastery of the internet is what makes the difference, and allows young people to skip steps towards visibility in the political arena, as was the case when young Kayapo women came to the aid of old chiefs like Raoni, certainly prestigious yet totally helpless when faced with digital technology (Turner 2016).[4]

While there exists a vast literature on the impact of digital technologies in regions such as Australia and Oceania in general, as well as in Canada and the United States (see, for example, Barwick, Green, and Vaarzon-Morel 2020; Bell, Christen, and Turin 2013; Brown and Nicholas 2012; De Largy Healy 2011, 2017; Lachapelle and Dupré 2010; Gunderson, Lancefield and Woods 2019; Morgado Dias Lopes 2010), little has been written on digital repatriation in the Americas south of the Rio Grande. This asymmetry is perhaps due to national differences in the articulation of the way indigenous peoples' rights are dealt with at the institutional level, on the one hand, and local capacity (or desire) for the infrastructure for large-scale implementation of digital technologies and for building archives and databases, on the other. A growing body of the literature arises at the intersectio at the intersection of several epistemic fields (archival studies, museography, media sciences, ethnology, ethnomusicology, and linguistics). In Latin America, reflections on digital repatriation arise mainly from ethnomusicology (Seeger 1991, 1996, 2004, 2019; Hill 2015; Beaudet 2017) and are taken up by anthropologists and linguists involved in multimedia archival and revitalization projects (see especially Cesarino 2017; Fausto 2016; Graham 2009, 2016; Heurich 2018; Llanes Ortiz 2016b; Monod Becquelin,

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4. Another exemplary case is that of the Surui (Paiter), among whom the implementation of an ambitious cultural and economic development project—the "Plano Suruí 50 Anos," for which internet access was crucial—resulted in the rise in power of a new leader, who, armed with digital technology, was able to establish himself as a sort of *ad hoc* supreme leader, designated by the neologism (or the old term now reactivated) *Labiwaye Saga*, which means "first chief," or "first among chiefs." For the younger generations, however, in addition to mastering the internet, would-be leaders must also have a university degree (Suruí et al. 2014; Souza and Tomizawa 2015; C. Yvinec, personal communication).

Vienne, and Guirardello-Damian 2008; Seifart et al. 2008; Turner 1991, 2002; Wortham 2013, 2018) or in museum contexts, as we will see in the second part of this issue. In light of the experiences of digital repatriation observed elsewhere, this issue seeks to draw attention to several lines of questioning that such experiences might inspire in Latin America. How does digital technology affect repatriation? What processes of re-creation does repatriation entail, and how is it impacted by various media? How does the reproduction of digital copies fit into Amerindian systems of temporality? What is meant by finding "community sources," and what happens when they are contacted and what should then be put in circulation, or perhaps even returned? How is knowledge disseminated, and how does this affect more traditional patterns of transmission?

Digital technology: vector of durability or obsolescence?

If the arrival of digital technology has boosted initiatives for the return of collected data as compared to the days of analog technologies, it is first and foremost because of the ease of production, reproduction, and multiplication of copies that this technology brings.[5] The internet, for its part, has opened up access to recordings and images from a distance and thus has exponentially intensified their redistribution and circulation along networks that are controlled or improvised to greater or lesser degrees. Nevertheless, as authors such as Ginsburg (2008) and Geismar (2013) have highlighted, the analog format is fundamentally more stable technologically speaking, and renders both access and conservation easier to manage. An audiocassette that survived the chaotic journey home from the field in the 1980s or 1990s, once placed in a slightly ventilated library storage closet (or even left forgotten in a shoebox under the collector's bed), will end up being easier to locate and listen to than a sound file recorded digitally in 2001 and saved in a now obsolete format using outmoded software on a dilapidated computer that has barely escaped being junked. (True, the cassettes were probably more at risk from flooding due to a neighbor's broken pipe, but, upon reflection, a computer would have suffered the same fate.) That is, unless, from the earliest digital recording, an arrangement had been made to assure an expensive, multi-sited, and cloud-based archival system for the copying, conversion, and migration of the data. Under the guise of being a sustainable solution, digital technology is thus characterized by built-in obsolescence. This obsolescence, together with the instability and the dizzying deluge of software programs, necessitates perennially funded programs both for conservation and for training in ever-newer technologies.

5. For very old materials, digital technology can also bring better-quality and easier listening or viewing, as Valdovinos shows in this issue with the example of wax cylinders that were digitized.

On the face of it, then, digital technology is not a more user-friendly format for indigenous communities. It has the advantage, however, of facilitating remote access and dissemination as well as the multiplication of copies. With online databases, recordings, in theory, become accessible to anyone, anywhere. Nevertheless, the people who participated in the creation of the recordings (or their descendants) usually have no idea where these materials are located, or even that they exist. And even if they should hear a rumor of far-off treasure troves of digital recordings, interested parties generally have no easy means of consulting these collections. Beyond the basic question of access to computers and the internet, there is also the problem of knowing how to browse internet sites that, from both ergonomic and linguistic perspectives, are far from inclusive. The same is true for databases that host recordings from collection projects (especially, but not only, for endangered languages or in ethnomusicology), which were carried out with the best of intentions and following the highly commendable ethical principles for collaboration with, repatriation to, and access for the source communities. Even these databases are hosted on esoteric sites that are difficult to identify and manipulate, with search engines available only in dominant languages such as English or Spanish (for example, Endangered Languages Documentation Program, of SOAS, https://www.eldp.net/, or the Archive of the Indigenous Languages of America, of the University of Texas, https://ailla.utexas.org/). At best, such sites might occasionally use a vehicular language for the welcome page or on a broad structural level, as with platforms such as Telemeta, devoted to ethnomusicology https://archives.crem-cnrs.fr, or Paradisec, which deals with Oceania https://www.paradisec.org.au.

Thus, in spite of extensive collections being available online, the person-to-person pathways back to the community used for analog materials are still active and in fact remain indispensable. These pathways include anthropologists, who not only manage their own data but also act as intermediaries for former collectors, current inquirers, archivists, and supposed members of the source community, who are involved to varying degrees, from those who have asked to be involved to those who have asked for nothing. These pathways can take linear form, and even resemble rhizomes, a series of small linked clusters; or they can evolve into larger and larger collaborative projects that bring together heritage and/or scientific institutions, researchers, and participants from "source communities." In this *JSA* double issue, the articles in part one deal more with personal initiatives, while those in part two focus on institutional projects, even if there is no marked difference in the way a project is received locally.

The four articles in part one deal with the experiences of anthropologists who were personally involved in digital repatriation projects. They all describe a return to the field site with digital recordings intended for hosts they've known for a long time. Margarita Valdovinos returned to the Cora copies of ritual songs recorded on wax cylinders by Konrad Preuss between 1905 and 1907.

Jean Langdon took to the Siona copies of myths recorded over half a century earlier either by herself or by Luis Felinto Yaiguaje, an erudite Siona, or by the linguist Manuel Casas Manrique, who had studied the language from the 1930s to the 1960s. Maria Luísa Lucas distributed to the Bora digital copies of multimedia materials that had been collected between 1969 and 1984 by anthropologist Mireille Guyot and deposited in an archival collection at the Centre de recherches en ethnomusicologie (CREM) of the Laboratoire d'ethnologie et de sociologie comparative (LESC) at the Université de Paris Nanterre. Finally, Clarice Cohn chronicles the reception Xikrin Kayapo gave to digital copies, stored on SD memory cards, of silver halide photos from her own collection taken in the last quarter of the 20th century, which she returned to those photographed. All these articles relate experiences in which interpersonal relations play a central role, with the anthropologist fully investing herself, personally handing over the materials, and understanding local issues reasonably well, which is what makes them powerful and significant. Institutional partnerships are no less present, though perhaps in the background, in each of the repatriation cases described here. While the relationship between the anthropologist and the host community is always central, the anthropologist still acts as a mediator for the institutions that hold and preserve the collections to be repatriated, or, at the very least, that can authorize or finance digital repatriation: the Ibero-Amerikanisches Institut of the Staatliche Museen zu Berlin for Valdovinos; the Universidad de los Andes for Langdon; the Bibliothèque Éric-de-Dampierre and the platform Telemeta for the sound archives of the CNRS and the Musée de l'Homme (both hosted by the LESC) for Lucas; and, lastly, the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), which funded Cohn. As Geismar (2013, p. 259) so rightly observed, "Only by positioning the digital as a continuum in a much longer history of power relations, technological affect and effect, and classification can we truly understand the capacities and contradictions of digital return." Even where digital technology is concerned, repatriation operations are still low-tech, personal, and piecemeal.

The digital resurgence: reproduction, recontextualization, and regeneration

In the digital era, initiatives of all kinds are intensifying, both those involving archives, with their increasingly complex environments and production chains, and those in the field. In the field, the growing number of initiatives can be explained by the ease with which one can now make copies, re-create new materials based on them, and upload them to targeted or open exchange networks from a smartphone or cybercafé to the cyberjungle of the cyberuniverse, where indigenous people move about with dexterity and resourcefulness (Vapnarsky and Erikson, in press). Also, in the all-digital world, the original loses much of its primacy, while the ease with which digital files can be lost, erased, or

overwritten leads to items being reduplicated and recirculated in endless loops, with copies changing status with each new recipient in ever-changing contexts. These new forms of repatriation thus generate new networks of relations and interconnections, which can be weak or strong, but which are wider, more numerous, and likely more dynamic than ever before. These networks involve people as much as the objects themselves, and more and more actors are involved or affected up and down the chain, even for simple returns to particular people. In the archive, the digital file implodes and becomes more complex as cascading metadata become an integral part of the recording. Repatriated recordings mirror and echo each other and propagate in a variety of forms and formats: collective performances, messages that are secret or go viral, artisanal workshops, films, apprenticeships, dreams, etc. (see also Geismar and Mohns 2011).

   The return of digital materials can result from an explicit sollicitation. Such was the case for Cohn, who responded to such a request in keeping with the modern ethnographer's ethical stance of returning materials recorded in the field. The Sawa project was similarly set in motion by a request for the repatriation of old recordings, as we'll see in part two of this issue. Returns can also be motivated by factors outside the source community, such as when a student working on a dissertation uncovers old recordings (as was the case for Lucas and Valdovinos). And sometimes a series of events leads to the conjunction of internal and external motives (Langdon). Repatriation nevertheless always results in transporting the materials into new settings, which often radically changes their initial character, whether they be songs fragmented by the technology of wax cylinder recordings, narratives detached from their enunciative context, or images of people who have since died. This difference between the original recording and digital copies can make the latter more attractive, or, on the contrary, make them too weighty for the "source communities" and their diverse members to want to deal with: the materials can be unidentified or, on the contrary, overly identified—too close to people and events one does not wish to remember, too close to shoulder the responsibility for sharing them. The anthropologist who returns recordings in digital form, expert though he or she may be, often poorly judges or underestimates the reactions and expectations the materials will arouse. Langdon's experiences clearly illustrate the heterogeneity of such reactions and how they evolve over time. Reception can be mixed; returned materials can be ignored or even rejected outright, sometimes with vehemence and accusations of interference. Thus, Valdovinos discovered with perplexity (and even disappointment) that Cora ritual specialists did not recognize as their own the old recordings she brought back to them, even though they had been recorded in those very communities and corresponded to ritual practices still carried out. Had she returned them in vain? Inversely, thanks to her expert knowledge of the local proscription on remembering the dead, Cohn took great care to avoid bringing back photos of

deceased loved ones. Paradoxically, in spite of the fresh pain such a request might bring, she nevertheless was confronted by persistent local demand for the return of such images.

These varied reactions are due in part to the fact that the digital materials are being returned to a changed world. In the context of indigenous peoples, the situation is unfortunately one of continual, sometimes increasing, violence and spoliations of all kinds. Repatriation is all the more complex, but also all the more important, in that the communities involved have experienced, or are experiencing, a turbulent history, battered by civil or national wars, armed paramilitary groups, drug cartels, epidemics, and oil and mineral extraction policies. The articles on the Siona, especially, but also the Bora and Kayapo-Xikrin illustrate how horrendously ordinary such onslaughts are. Restitution is thus caught up in a variety of political, cultural, and environmental negotiation strategies, from the legitimation of land rights to demands for social recognition and appropriate educational systems, which involve new sets of actors such as NGOs, militant groups, jurists, and local government officials. These tense (to say the least) situations sometimes make digital repatriation projects practically impossible. Thus, in spite of its being indispensable, the mediating role Valdovinos has played among the Cora risks being interrupted by the arrival of drug cartels in the region. In other cases, the returned recordings collide with collective memorial efforts or changes in religious beliefs and affiliations, such as adopting evangelism or rejecting shamanism (see also Nannyonga-Tamusuza and Weintraub 2012, in an African context). On another level, a more sensitive younger generation can also be uncomfortable seeing a semi-nude grandmother or a grandfather enjoying a meal of palm grubs, just as young Shuar (Aénts Chicham) visiting New York were upset by shrunken heads in the American Museum of Natural History (Rubenstein 2004). "We all forget parts of our past, but some of us want to remember more than others" (ibid., p. 18).

Nonetheless, though these sorts of upheavals transform the meaning of repatriated materials and also what the recipients might intend to do with them, it is not in fact necessary for the context to have changed that much for the meaning or status of a returned object to be altered. It is in the very nature of repatriation to bring back a decontextualized object that must then be recontextualized. First, a sound or image file is extracted from its original context and then plunged into a new context—and there is no longer a need to demonstrate the pragmatic attribution of meaning, even when apparently fixed cultural categories are involved. Then, technical and situational aspects of capturing the performance will have had an effect on what was recorded, which results in materials that are often, in memorial and practical terms, very different from the performances the participants and their descendants have in mind.

The articles in this double issue show this in various ways. The most striking examples are doubtlessly the Cora not recognizing the ritual songs recorded in

their own community, and, in a different way, the Sionas' lack of interest in older versions of myths they know well. Valdovinos retraces the many steps involved in the return of Cora songs collected under dictation or recorded on wax cylinders at the beginning of the 20th century. The collection techniques had greatly transformed the song production by requiring either an *in-situ* passage from oral to written (which converts performative songs into narrative commentary), or a performance that was fragmented or condensed, since wax cylinders could only record a few minutes of song. The singers recorded by Preuss had adapted to recording conditions by creating *ad hoc* versions, simplifying, synthesizing, and adopting indexical and epistemic detachment. They ended up with utterances stripped of the enunciative and rhetorical structures that are normally essential to ritual discourse and that the collector strove to document. The return of these materials a century later required above all for them to be recognized and reappropriated at the local level. This involved a long and complex task of transcription, translation, and comparison with modern performances carried out by ritual specialists who themselves had great difficulty understanding the nature of what was being returned to them and how it was that they themselves were the source. Repatriation also entails the creation of new *ad hoc* productions, such as retro-translations that lead to reformulating the original text in an effort at clarification for present-day reading or listening audiences. Repatriation itself generates new recordings, this time directly in digital format and with high-fidelity microphones, which then allows for the deciphering of older versions. This, in turn, also spawns the creation, official repatriation, and wider circulation of the new multimedia recordings.

In a similar way, Jean Langdon's efforts to restore myths and shamanic chants and narratives to the Siona led to their revival and the creation of hybrid forms of entextualization. While the anthropologist wore herself out devising the appropriate formats to restore the diversity of recorded stories and their multifaceted character—individual, multivocal, multitemporal, and eminently marked by their sociohistorical context—the Siona asked her, on the contrary, to produce a single, synthetic, fixed version. They had come to realize that myths should follow the positivist, linear patterns of Western-style history in order to aid them in their legal struggles for land rights. As much as their repatriation, the reformulation of the materials was what mattered to them, and, at least in that instance, ethnopoetics clearly did not fit with the local agenda, either in the search for justice or in efforts to bring simpler teaching formats to schools in spite of supposedly ethnopedagocial methods. While, on one hand, the Cora songs recorded by Preuss and repatriated thanks to Valdovinos were, in order to become meaningful, re-embodied in the discourse and praxis of their (re-) performance, on the other hand, Langdon was expected to scrupulously strip the pragmatic flesh from the transcriptions of the Siona songs. If there is a rule, it

is that there are no rules, and between these two cases that are polar opposites, lays a wide range of intermediary cases.

Amplification and fixation

The digital format plays an important role in the transformations highlighted here, from the possibility of getting more manageable and better-quality versions, to the ability to re-record fuller and longer performances of "the same kind," to the wide distribution of copies of the original items and copies of subsequent recordings. The idea of identical copies associated with digital technology strengthens a false sense of identicalness, since under the effect of the creative recontextualization inherent in the process, the returned items are never exactly the same as the original recordings. The idea of identical copies also makes content seem more stable than it actually is, perpetuating the illusion of permanence, despite the fact that the recorded materials never stop changing either in format or in how they are received. At the same time, repatriation freezes the genres and versions of a given moment, whose importance is then amplified, which is another aspect of the transformation brought about by the act of returning materials.

Indeed, from making an original recording to returning it, there is great risk of involuntarily and arbitrarily creating official versions, whose primacy would only be due to the combined hazards inherent in selective collecting, retaining, and redistributing. One version can acquire the status of being the standard within the "source community," the model against which other versions will be judged, in spite of its fundamentally singular and contextual nature. As a matter of fact, any given version is necessarily that of a particular moment, individual, kin group, moiety, and/or political faction, and it exists in synchronous and diachronic relation to other concurrent versions. Monod Becquelin, Vienne, and Guirardello-Damian (2008) illustrate the inner workings of this mechanism using the exemplary case of the Xinguan Trumai, where access to myths recorded in the 1960s by a former chief and excellent narrator led to the creation of an "official" version; the slightest change is now considered to be a mistake, even though variations used to be integral to the narrative act. Langdon recalls the eminently dialogic, intertextual, and multiperspectival nature of historic memory in Amazonia (Graham 2005); it is now being crushed by the differential retention brought about by the processes of documenting, archiving, and post-production (such as condensed summaries of versions of myths created by these processes). There can be many social and political consequences, ranging from real or affected disinterest for returned materials to agonistic competition between versions, and including the adoption of a chosen version as a piece of folklore, an emblem, or a model to be copied and

disseminated. The effect of standardization, of "idealization" (to use Valdovinos' term), or frozen versions of reference is greatly accentuated in the context of language loss, rapidly changing verbal practices, and the decline of some genres. This same process affects the very genres collected, since the most formalized genres are usually the ones that make it through collection filters and are given heritage status.

Aware of these issues, Cohn relates the reticence an anthropologist can feel about providing a version to schools, wary of participating in freezing in place and homogenizing knowledge, which goes against oral traditions and genres, even if such a version is requested by indigenous actors themselves. The various decentralized systems for diffusion offered by the internet and social media can create a version that goes viral as well as stimulate the re-creation of competing versions. Concerned scholars are trying to put into place participatory and multimedia pedagogical methods in order to preserve the multivocality of oral traditions (Avilés González and Leonard 2018). These dynamics are not necessarily new; they could be seen as effects of the writing down of oral tradition and publishing it on paper (even if such texts were more difficult to access and involved other semiotic transformations; Déléage 2017; Franchetto 2020). Thus, to counter the effect of having a standard version, erudite members from each of the groups belonging to the pluriethnic ensemble of the upper Rio Negro opted for the juxtaposition of versions, creating a scriptural polyphony in which the maximum number of versions of their origin myths could be written down. The outcome was a veritable explosion of "ethno-heritage" publications (Hugh-Jones 2019; Angelo 2020), whose production and propagation were greatly facilitated by digital technology (Diemberger and Hugh-Jones 2014).

What is returned and who gets access?

The reappropriation that occurs after materials are returned is accompanied by a series of social practices: sitting and listening with each family; holding group workshops; organizing ceremonies for handing over flash drives; holding revitalization, reconciliation, or healing rituals; proposing translations; publishing copies; distributing copies on CDs, flash drives, and memory cards; sharing on social media networks; creating internet websites; organizing real or virtual exhibitions, etc. All this raises the question: "what should be returned?," which is immediately followed by "who should it be returned to?" Here again, reality, which varies in time and place, outpaces even the most informed and conscientious returner. The articles by Lucas and Cohn reflect precisely this issue. They show, first, the complexity of people's reactions when they are presented with old voices and images. These materials can generate variously confusion, embarrassment, fear, pain, or, less commonly, comfort or effusive surprise and joy. Lucas observed that tobacco consumption was often used as a prophylactic

treatment by people she gave recordings to. Though reconnection with things or people from the past can sometimes be fruitful, it is often associated with pathogenic effects, either because returned ritual words may be thought to still be potent, or, more broadly, because old materials revive memory. Yet memories of the past should be avoided, or framed in a particular way, especially in the Amazonian context, where forgetfulness is the main ideological means of separating the living from the dead. Still, it is not uncommon for descendants to insist on seeing images of or listening to recordings of the deceased, if not on keeping these new material apparitions, as Lucas and Cohn testify.[6] They both try to explain what motivates the attraction, which could seem paradoxical. Could it be the cognitive pleasure of recognition? Could it be the need to acknowledge the death of spatially distant relatives, as a Bora woman said? Or, for songs, could it be that the shamanic role of the voice of the deceased is transposed to a sound-emitting machine: from "radio shaman" to shaman radio, or, in current fashion, from shamanic flash drive to "flash-drive shaman" (Viveiros de Castro 1992; Heurich 2018)? Whichever explanation is preferred, the dilemma posed by Cohn remains essential: should materials be returned or not? Which aspects of the past should be recuperated and which should be forgotten or erased? And who should decide? If a now-deceased grandfather would have been horrified by the thought of a woman listening to a given recording, could that very recording now be passed on to his granddaughter, who, in the meantime, has become a feminist intellectual? The possibility of copies *ad infinitum* intensifies the consequences of such choices, while ethical and legal injunctions render such decisions complex.

The positioning regarding access rights to copies of repatriated items can also change rapidly, as is shown in detail by Lucas. The contents of recordings deal with human and extra-human relations and with knowledge that is often specialized; they are bound to specific experiences of transmission, acquisition, and use of such oral competence. When copies arrive and are presented locally, they trigger questions about the possibility of words and knowledge being separated from these experiences and from their epistemic, relational, sensory, and emotional aspects. Though the return of largely forgotten knowledge is often said to revive memory and restimulate practices, nowadays it just as often causes the people involved to worry about the social, somatic, political, and cosmopolitical effects of uncontrolled circulation. Moreover, it can bring about conflicts in how the knowledge should be transmitted and in the legitimacy of

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6. We had the same experience with the children and grandchildren of Pilima, a renowned Wayana shaman, who died just before the presentation of the web portal www.watau.fr giving access to returned digitized materials in his village (see part two of this double issue, "Digital Repatriation, Indigenous Reappropriations," forthcoming, in vol. 107-1 of the *Journal de la Société des américanistes*).

the living possessors of such knowledge (Treloyn, Matthew, and Charles 2016). The return of knowledge can also destabilize normal learning methods, such as those involving master and apprentice or learning through dreams, visions, or ecstatic trances (Fausto 2016).[7] Thus, the Bora changed their minds about accessing recordings stored in the Telemeta database that Lucas returned to them on USB drives. After first agreeing to wide distribution, traditional authorities then collectively decided to refuse access not only to non-Bora, but also to those Bora who had distanced themselves geographically and especially socially from their native *maloca* (longhouse). Perhaps stimulated by Lucas's efforts at repatriation, but also by widespread practices of exchanging digital cultural avatars on smartphones, Bora youth have recently created parallel networks to circulate the audio recordings of rituals as a means to cope with the Covid-19 crisis. Nevertheless, they seem to limit themselves to circulating recent recordings, thus respecting, whether consciously or not, restrictions imposed by the elders.

How can and should online databases adapt to such restrictions? Who decides on local rules for distributing materials, and to what extent should databases be made available on such a large scale, in a world in which the migration of digital items surpasses that of populations? Leopold (2013) retraces how, in spite of limited-access protocols meticulously put in place in consultation with the Cherokee at the Museum of the Cherokee Indian of North Carolina, digital copies of recordings (some considered particularly sensitive) had already, and without consultation, been deposited in publicly accessible databases at partner institutions in the National Anthropology Archives network, outside the control of the people they concerned. Such cases of the "hyper-dispossession" of "hyper-searched" data by archives, to use the expression of Gray (2019), still seem commonplace, as illustrated by the actions taken by the Ts'msyen (also known as Tsimshian) community of Lax Kw'alaams, of which Gray was a member, to at least obtain free access to liturgical recordings that had been sold to Columbia University, in exchange for a semi-annual payment, by an amateur collector with a clear penchant for hoarding.[8] But beyond these negotiations, the Ts'msyen are seeking "full restitution," which means putting the materials under their control.

7. In projects to archive their culture, tapes are now the basis for the remuneration of Kuikuru singers: "There is now an owner of the tapes […] but no new song owners. This is why singers now demand to be paid once more whenever people are allowed to learn from the tapes. This is not a ruse, but the computation of a new relation in the age of digital reproduction. What they are counting is not a right to copy, but their capacity to make someone else embody a knowledge, 'to have the songs in his/her belly,' which can only result from a relationship between people" (Fausto 2016, p. 149).

8. The contract was settled in 1964 and lasted until her death in 1980, for the total amount of $170,000.

While indigenous populations struggle to regain control of their materials and the circulation thereof, and as anthropologists strive to instill in the technocratic machinery the ethical imperative to limit certain rules of "open science," online databases live their own lives of data transfer and sharing. The legal wheels are complex and highly asymmetrical, especially when financial remunerations are at stake. We cannot discuss this here, except to say that what perhaps constitutes the most basic question is also the most delicate one: Who is the "author" of recordings (Guillebaud, Stoichita, and Mallet 2010)? And other questions immediately follow: Who are the rightful owners? And what rights do they have: possession, access, distribution, destruction, etc.? Whether initiatives undertaken by indigenous populations are aimed at accommodating national and international laws (see www.localcontexts.org), or propose an "Indian copyright" based on cultural protocols and not on impersonal monetary transactions, or make the more radical demand of placing materials under local regulations of knowledge ownership and responsibility, they are all fighting against what they consider "the commoditization of our knowledge into property" (Gray 2019). The concepts of authorship and ownership explode, and songs can pass from belonging to an archive to belonging to the mythical events from which they emerged, or to the spirits that are incarnated or reincarnated in the songs. Who has rights to songs that are believed to come from spirits (Seeger 2004; Cesarino 2016)? And, more concretely, how can a contract be established in due and proper form when notions such as copyright and intellectual property are locally irrelevant (Aubert 2010)?

Virtualities

While fleeting audio recordings of recent rituals were circulating among the WhatsApp accounts of Bora youth, Lucas heard, in the middle of the village, voices restored from the past being broadcast from a megaspeaker at the center of the *maloca* during a virtual shamanic neo-performance. The ease with which recorded materials saved in high-tech format can take the place of a shaman in an ostensibly traditional ceremony raises not only the question of the virtual becoming real, but also that of the status of the digital copy and its relation to the original. It is indeed remarkable that, in the repatriation process, indigenous people seem to worry very little about the original recording in its material quality. Inversely, in Australia, Aborigines are demanding not just the return of sound recordings, but also the return of the original recordings, which are often compared to human remains: "Like bones, recordings are not the objective relics of past research, but rather are subjective remains of ancestors with which living people have active responsibilities and relationships" (Treloyn, Matthew, and Charles 2016, p. 98). In the Americas, only a few native communities (mainly in the USA) have demanded the return of original recordings (Lancefield 2019

[1998]). Is this paucity due simply to the poor access that these populations still have to materials that were recorded in their communities, all the more when they were not asked for consent, as indicated by growing demands not for just "potential," but for "full" restitution as in the Ts'msyen case (Gray 2019)?[9] In other cases, could the lack of demand for the originals be a sign of a desire for distancing, for example, due to potential danger from possible witchcraft, or due to fear of contamination from cameras or tape recorders, which, when they first appeared in the 20th century among recently contacted native populations, were accompanied by epidemics (Oakdale 2018)? Or, more radically, does indifference towards the original reflect its irrelevance at the local level?

Like Cohn, many anthropologists must respond daily to requests for the swift return of digital materials; they copy one memory card onto another, then lose track of copies, knowing they will quickly disappear from their medium due to a simple logic of container capacity and also of renovation and mobility. For if digital space seems infinite in the heavens, it turns out to be quite limited here on earth, whether deep in the Amazon forest, in Mexican villages, or on mini memory cards. And if the Xikrin and other indigenous groups are interested in digital data, it is precisely because it can be exchanged, destroyed, or made to vanish as fast as it multiplies and spreads. In this situation, it is not the supposed durability of digital data that counts, but rather its versatility.

Without question, our society has gone overboard in preserving and safeguarding data through the use of a system that is in fact extremely unstable. While indigenous society and traditional knowledge are often painted as being highly stable and safely transmitted from generation to generation, our understanding of temporal systems in the indigenous societies of the Americas, and in particular in the Amazon, leads us to wonder whether the built-in obsolescence and instability specific to digital technology might not, in fact, be closer to the way indigenous peoples of the Americas conceive of knowledge, objects, and persons. Implying reformulations, transpositions, and variations, such conceptions tend to value renovation, transformation, and forgetting. While archivists dream of permanence, durability, and immutability, Amerindians seem to appreciate returned materials in digital form above all for their instability, malleability, and virtuality. This is hinted at by the creative wave of new media productions (film, radio, internet) based on documentation projects (Pace 2018), or by the integration of USB drives into ritual performances. The multi-sited nature, the

9. For decades, the Cruzo'ob Maya have enforced, for insiders and outsiders alike, a prohibition on recording and photographing a large number of community rituals for religious and political reasons. Any person breaking this rule will have his or her camera confiscated, or the cassette, tape, or memory card destroyed, and may even end up in the local jail. It is not difficult to imagine that if they discovered old recordings of these same performances, the Cruzo'ob Maya would probably demand not only their recovery but, above all, their destruction.

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evanescence, and the enunciative and multimodal polyphony that characterize Amerindian ceremonial practices, along with the instability of their sonic, visual, or invisible virtualities, paradoxically recall the astounding multiplication of voices and images generated by computer code.

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