ARTICLE

Decolonizing World Heritage Maps Using Indigenous Toponyms, Stories, and Interpretive Attributes

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ABSTRACT

Maps and GIS used for the nomination and subsequent management of UNESCO World Heritage sites have primarily served bureaucratic resource management purposes. However, bureaucratic maps offer an opportunity to represent associative cultural landscapes, intangible cultural elements, and the geographies of Indigenous peoples. Indigenous toponyms can be found on many World Heritage maps for sites located within settler societies such as New Zealand, Australia, the United States, and Canada. Currently, bureaucratic heritage maps do not emphasize or even have a method for presenting the meaning and significance of Indigenous toponyms. Instead, the names are represented as static, inanimate objects void of meaning. This article presents archival evidence that bureaucratic state maps found within some UNESCO World Heritage nomination dossiers and resource management plans contain Indigenous cartographic elements that Indigenous communities could use as the basis for creating Indigital story maps.

Keywords: story mapping, Indigenous peoples, Indigenous knowledge systems, world heritage, Indigital

RÉSUMÉ

Les cartes et les SIG servant à l'inscription et à la gestion des sites du patrimoine mondial de l'UNESCO ont été utilisés en premier lieu à des fins administratives de gestion des ressources. Les cartes administratives offrent toutefois la possibilité de représenter les paysages culturels associatifs, les éléments du patrimoine culturel immatériel et les géographies des populations autochtones. On trouve des toponymes autochtones dans plusieurs cartes du patrimoine mondial de sites présents dans des colonies de peuplement comme La Nouvelle-Zélande, l'Australie, les États-Unis et le Canada. À l'heure actuelle, les cartes du patrimoine à vocation administrative n'ont ni la propriété de mettre l'accent sur le sens et la signification des toponymes autochtones, ni même de méthode permettant d'en rendre compte. Les toponymes sont plutôt représentés comme des objets statiques, inanimés et dépourvus de sens. Les auteurs produisent ici des preuves documentaires indiquant que les cartes administratives des États que l'on trouve dans certains dossiers de proposition d'inscription au patrimoine mondial de l'UNESCO et dans des plans de gestion des ressources contiennent des éléments cartographiques autochtones susceptibles de servir de base à la création de cartes-récits en numérique par les communautés autochtones.

Mots clés : cartographie des récits, numérique, patrimoine mondial, populations autochtones, systèmes de savoir autochtone

Introduction

With the formation of the World Heritage Convention in 1972, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) began to actively exchange geographical information with Indigenous peoples in order to create and protect World Heritage sites (IWGIA 2012). Maps and GIS are important within the UNESCO World Heritage site nomination and management processes, because maps show the location of property boundaries, buffer zones, and resource areas. However, site boundaries often intersect and overlap with land considered sacred to Indigenous peoples. One such World Heritage site is Tongariro National Park in Aotearoa/New Zealand. UNESCO designates Tongariro as a cultural landscape or a place holding tangible and intangible features considered sacred by the Māori people. Indigenous involvement in World Heritage cultural landscapes requires "managing recreational uses and interpreting the Indigenous spiritual values of these parks" (Zeppel 2010, 96). Maps can play an

important role in the interpretation of landscapes through the use of Indigenous toponyms and associated stories. Our focus in this article is specifically on maps containing Māori toponyms, because they represent a starting point or a location from which to launch into stories and their meanings. Meaning becomes an attribute to be interpreted by map users. Indigenous story maps and bureaucratic maps can be similar, but there are some significant differences in how they express information. For example, both use toponyms as a form of georeferencing. However, toponyms in current nomination and resource management maps tend to tell us little about the meaning and history of those names. In story maps, toponyms carry "a cargo of meaning and memory, they signpost the fact that place has a human dimension" (New Zealand Geographic Board 1990a, xiii). Storytellers, their stories, and maps can add context and meaning to the landscape for the benefit of conservationists, resource managers, and park visitors.

European colonialism and imperialism have shaped mapping encounters and exchanges for the past five hundred years and continue to affect cartographic practices during the era of increasing global interconnectedness (Laituri 2011). The breadth of cases on mapping Indigenous lands is too extensive to review here. *The History of Cartography, Volume 2, Book 3*, edited by G. Malcolm Lewis and David Woodward (1998), and Mark Warhus's (1998) *Another America* are excellent sources of historical research that can help scholars understand the dynamic cartographic encounters between Europeans and Indigenous peoples (also see Lewis 1998). The *History of Cartography* volume includes a study by Barton (1998), who researched early encounters between Europeans and Māori iwi. Chapin and others (2005) present a thorough review of the mapping of Indigenous lands with or without consent or participation by Indigenous communities in Asia, Australia, Aotearoa/New Zealand, Africa, and Latin America, primarily during the late twentieth century.

A number of important mapping methods have emerged, including counter-mapping, land occupancy and land-use mapping, map biographies, ethnographies, bioregional mapping, sketch mapping, and story mapping (Aberley 1993; Caquard and Cartwright 2014; Chapin and Threlkeld 2001; Peluso 1995; Tobias 2000). Atlas collections are particularly important sources of place names, oral histories, and cultural sites in the Philippines (Conklin 1980), Canada (Carlson 2001; Deh Cho Land Use Planning Committee 2003; Riewe 1992), Belize (Toledo Maya Cultural Council and Toledo Alcaldes Association 1997), the United States (Ferguson and others 1985), and Aotearoa/New Zealand (New Zealand Geographic Board 1990a). Stories and narratives are integral within the history of cartography (Caquard 2013; Caquard and Fiset 2014; Caquard and Wright 2014). Indigenous geographers have experimented with cartographic designs, stories, diary entries, and perspectives (Pearce and Hermann 2008; Pearce and Louis 2008); place names and performance (Louis and Kahele 2017); native language, stories, and geospatial databases (Palmer 2012); and decolonial mapping (Lucchesi 2019). Lucchesi (2019, 22) argues for moving beyond the real or imagined restrictions of colonialism toward cartographic representations that "tell a story as it [is] related to place and space . . . that tell stories in a meaningful way". There is a need to think about how Indigenous peoples can use maps and stories for interpretation of UNESCO cultural landscapes.

The purpose of this article is to present archival evidence that bureaucratic state maps found within some UNESCO World Heritage nomination dossiers and resource management plans contain Indigenous cartographic elements that Indigenous communities could use for creating story maps. Specifically, we focus on the Tongariro National Park nomination and management documents. We argue that story mapping is a proactive approach that enables communities to incorporate their own voices, languages, names, and stories into maps. Community-initiated story maps can use online audio, visual, and mapping applications to communicate knowledge and information, regardless of the state's position on Indigenous participation in World Heritage matters.

Let us begin a conversation and brainstorming session. In what follows, we first, briefly, discuss the data sources and methods used in this research. Second, we focus on the entanglement of Indigenous and English toponyms that is part of many heritage maps. Third, we argue that names alone are not sufficient. Stories and knowledge about toponyms should be included on story maps that emanate from Indigenous communities. Fourth, the names and stories represent what we call "interpretive attributes." Finally, we argue that there are sufficient Indigenous representations in World Heritage documents to create what the first author refers to as "Indigital story maps" and offer brief conclusions.

Brief Primer on UNESCO World Heritage Nomination and Mapping

Why is UNESCO World Heritage mapping important to Indigenous communities? The nomination of some UNESCO World Heritage sites has been controversial and challenged by Indigenous groups around the world. For example, UNESCO and the World Heritage Committee approved the nomination of the Great Rift Valley Lake System (Kenya) without fully consulting with Endorois community members. Demarcation of new WHC sites has impacted the mobility, land claims, economics, and culture of Indigenous peoples at other heritage sites, including the Wet Tropics of Queensland (Australia), the Western Ghats (India), Canaima National Park (Venezuela), the Laponian Area (Sweden), Tongariro National Park (Aotearoa/New Zealand), Papahānaumokuākea (USA), and Kakadu National Park (Australia), among others (IWGIA 2012). Such

issues demand that UNESCO's World Heritage nomination and protection of heritage properties implement tenets of the United Nations Declaration on the Rights of Indigenous Peoples (UNESCO 2012b) to promote effective Indigenous co-management of the sites (UNESCO 2012a). UNESCO nomination dossiers are organized packages of scientific text, maps, photographs, and management plans used to justify the outstanding universal value of sites (Labadi 2013). Nation-state governments are obligatory within the nomination process (Meskell 2013), determining whether Indigenous voices are present within the nomination documents and maps. Palmer (2016) describes a network of Aṉangu knowledge holders and Australian government actors who cooperatively developed hybrid maps and other geographic representations. In addition, the New Zealand government used Indigenous maps, stories, and languages to visually convince UNESCO, the World Heritage Committee, the IUCN, and ICOMOS of the significance of the Māori cultural landscape at Tongariro National Park (Palmer and Feyerherm 2018).

Geospatial technologies, such as maps and GISs, are integral to the UNESCO World Heritage site nomination process and subsequent management. UNESCO requires a minimum of three maps: (1) property boundaries; (2) property buffer zone boundaries; and (3) a map locating the site within a national and international context (UNESCO 2017). The vast majority of maps and GISs associated with UNESCO World Heritage nominations and management are bureaucratic tools designed with scientific management tasks in mind. For example, although many of the maps contain Indigenous language toponyms, the meaning of the toponyms is locked within static point, line, and polygon features. According to UNESCO officials, a significant turning point for Indigenous peoples' participation was the 1992 implementation of the cultural landscape as a new category, alongside natural and cultural sites. UNESCO cultural landscapes include intangible cultural heritage. Intangible cultural features are the "living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe" (UNESCO 2019). How can the entangled and intangible cultural features associated with UNESCO-designated cultural landscapes be represented using story maps?

Brief Statement on Data Sources and Methods

We researched UNESCO World Heritage nomination dossiers because they contain a significant number of primary and secondary source document materials. The first author used the data sources to record Indigenous toponyms, stories, languages, symbols, maps, and other geographic representations. All of the nomination dossiers are currently archived at the World Heritage Centre and the International Council on Monuments and Sites (ICOMOS) Document Centre in Paris, France. The dossiers contain property descriptions, justifications, management plans, and maps. We focused on documents and maps associated with Tongariro National Park. The World Heritage Committee and UNESCO first added Tongariro National Park to the list of natural sites in 1990, but changed the designation to a cultural landscape in 1993. Tongariro is important to the Māori, especially Ngāti Tūwharetoa, because their identity is closely associated with the mountains as ancestors (ICOMOS 1993). Document sources used in this study included the Tongariro National Park Management Plan, the Tongariro/Taupo Conservation Management Strategy, the Ngāti Tūwharetoa Environmental Iwi Management Plan, and the Ngāti Rangi Taiao Management Plan.

We applied archival research methods including the recording and analysis of cartographic materials found within nomination dossiers, resource management plans, and place name atlases. The first author analyzed and recorded information found on maps, including map type, title, date, cartographer, map elements, context, presence of Indigenous language and names, and data sources. Next, the first author digitized the coded information and maps using NVivo software. Finally, a database containing the above coded information emerged, revealing a total of 440 World Heritage maps coming from 14 nomination dossiers. In this article, our focus is primarily on the Tongariro National Park nomination dossier. Secondary sources, story mapping workshops, and semi-formal interviews with Māori informants at the New Zealand Department of Conservation (DoC) contributed information about mechanisms for Indigenous place-making, place-naming, and digital mapping in Aotearoa/New Zealand.

Entangled Toponymies

Toponyms are fragments of cultural landscapes, representing canoe journeys, trails, "footprints or tracks" (Basso 1996, 31), named and given meaning by the ancestors of Indigenous communities living in and around World Heritage sites. As Louis (2004, 9) explains, toponyms are "performed in daily rituals . . . [as a way of] re-creating cultural landscapes." At Uluru–Kata Tjuta, toponyms are spatialized by gender: Uluru (female) and Kata Tjuta (male) (Palmer 2016). In Tongariro National Park, Māori place names on early maps of the area and park signage provide "evidence of widespread use of the areas by the Māori in pre-European times" and evidence of settlements (Department of Conservation 2002, 202). Toponyms can also signify acts of negotiation and decolonization. For example, Te Kāhui Maunga is the Māori name for Tongariro National Park and may appear on maps, park signage, and the Visitor Centre in the future (Department of Conservation, personal communication, 19 July 2019). Several reciprocal mapping projects jointly developed between Māori knowledge holders and the Aotearoa/New Zealand government have generated cultural atlases that incorporate Māori

place names, land histories, storyscapes, and boundaries (see New Zealand Geographic Board 1990a, 1990b). Connecting the tracks, footprints, and ancestral relations with people, the environment, tourists, decision-makers, government officials, technologies, and ceremonies enriches cultural landscapes, liberates the meanings of places, and demonstrates openness and reciprocity.

To decolonize map spaces is political because map spaces are contested. But this is nothing new for Indigenous peoples living within settler states. In Aotearoa/New Zealand, there have been political struggles over renamed sites and mountains that historically commemorated British men and places. World Heritage maps typically represent property boundaries, buffer zones, and resource areas. For example, the Tongariro Management Plan map (Department of Conservation 2006) shows the convergent geography of land tenure (Figure 1). Cultural collisions created a dizzying entanglement of named places that linger within Aotearoa/New Zealand Geographic Board documents:

> Be thankful that so many place names have survived, even after two hundred years of European names supplanting the original Māori names, otherwise we might have lost the large chunks of our history embodied in the names. (New Zealand Geographic Board 1990b, 9)

In the struggle to decolonize maps, a significant number of "Māori names have now been restored" (Smith 1999, 157). The Māori Oral History Atlas brought together Māori community members and state agencies in a major naming project that combined place names, stories, and maps. Authorizing the use of toponyms on maps is usually an authoritative act by state agencies (Tucker and Rose-Redwood 2015). However, in community-driven story mapping projects, state governments are not obligatory points of passage (Latour 1987). Community storytellers, their stories, and maps can add context, give meaning to maps, and construct geographies without state permission because Indigenous people hold the power to entangle through the sharing of stories, information, knowledge, and interpretation of cultural landscapes.

The Fluidity of Stories

Stories can be decolonizing because they give a human voice to maps and GISs. Stories and storytellers animate cultural landscapes. Indigenous stories are powerful and rarely need representational technologies to transmit meaning, teachings, information, or knowledge. Oral transmission has worked for millennia. Fluid stories create a dynamic encounter and exchange between storytellers, participants, words, voices, and meanings, and bring cultural landscapes to life. Indigenous stories have even become a part of the entangled narrative fabric of nation-states. For instance, the Ngāti Tūwharetoa story of *Ngatoro I Rangi and Tia: Mountains of Fire* published within the Māori Oral History Atlas, Vol. 1, is a story of national significance in Aotearoa/New Zealand and one that presents Tongariro National Park as a "living landscape" (UNESCO 1993; New Zealand Geographic Board 1990a). The neighbouring Ngāti Rangi environmental management plan explains the significance and interrelationships of Ranginui (Father Sky), Papa-tū-ā-nuku (Mother Earth), and Rūaumoko (Mt. Ruapehu) and the guiding principles of sustainable living (Ngāti Rangi Trust 2019):

> Tongariro and Ruapehu are mountains sacred to the Māori, especially Ngāti Tūwharetoa and Ngāti Rangi who have lived beneath them for centuries. The mountains are recalled in ancient tribal stories as great forces in a universe where everything is alive. They are seen as atua, spiritual places which command and give life to the natural world, and whose wild and capricious actions can create and destroy on a huge scale. To appease such elemental forces a sacrifice or an offering was often required, or a tapu respected. The mountains are regarded with humility as well as with awe (Department of Conservation 2002, 213).

Māori stories and knowledge about Tongariro National Park differ considerably from the stories told by Western science. Indigenous philosophies animate cultural landscapes. The land is alive and breathing. A landscape that is alive and breathing potentially receives more respect and care from visitors than an inanimate, lifeless park.

Stories can locate and describe the origin of the Earth through myths, oral histories, and genealogies. Stories make clear the relations between people, ancestors, land, water, and sky. As an example, Tjukurpa is an Aṉangu knowledge system that provides humans with guiding principles and proper ways of behaving at Uluru-Kata Tjuta in Australia (Palmer 2016). Narratives and oral histories can incorporate the view of elders, youth, and women that can enrich the cultural landscape experienced by the general public or policy-makers (Smith 1999). How might communities begin assembling story maps that incorporate toponyms and stories using GISs or online mapping applications (Caquard 2013)?

Interpretive Attributes

Toponyms are a form of georeferencing and stories are teachings, information, and knowledge about sites. From a technical perspective, these elements are rudimentary to GISs, represented as points, lines, or areas. In vector data models, the points, lines, or areas act as locators or georeferences for story maps. Georeferenced locations often incorporate attributes. In the world of GISs and digital mapping, attributes give locations characteristics such as the

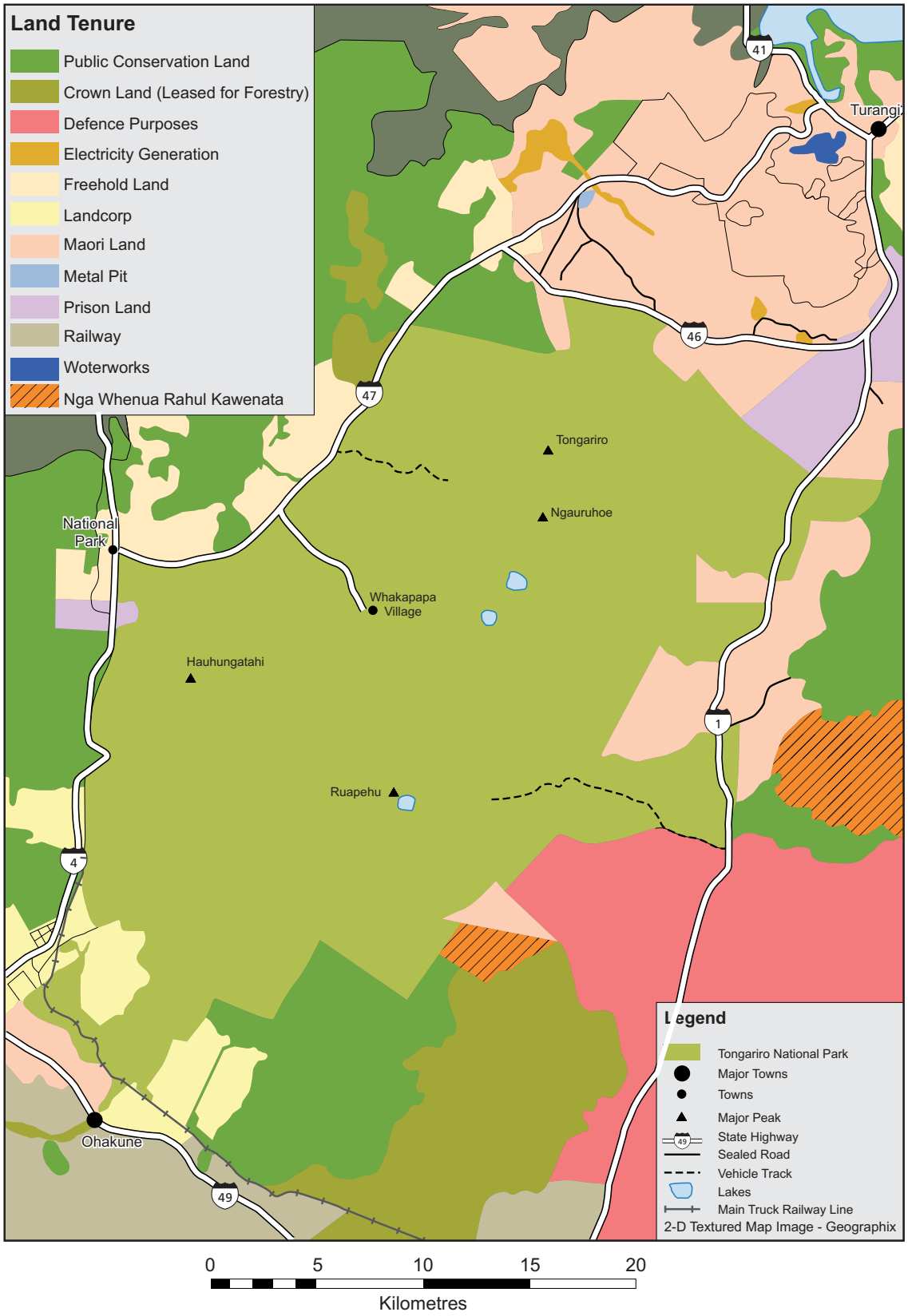

Figure 1. The convergent geography of land tenure surrounding Tongariro National Park
Source: Department of Conservation (2006).

population of a city, area of a region, age of a population, or ethnicity of a nation-state. At the same time, GIS attributes designate mapped features as objects, and their characterization is fragmented and atomized. Interpretative attributes are more complete, flowing, holistic, human, and subjective, less precise, more animated, and less mechanistic.

Stories can introduce park visitors and resource managers to the meaning and importance of intangible elements associated with cultural landscapes. Let us consider the intangible elements and ancestral beings that shape the understanding or knowledge of Uluru–Kata Tjuta. An Anangu community member named Tjamiwa described how

> The tourist comes here with the camera taking pictures all over. What has he got? Another photo to take home, keep part of Uluru. He should get another lens – see straight inside. Wouldn't see a big rock then. He would see that Kuniya living right inside there as from the beginning. He might throw his camera away then. (Uluru–Kata Tjuta Board of Management and ANPWS 1991)

This statement suggests abandoning the mechanistic "system world" to engage with the animated "life world" (Habermas 2015). For years, the Anangu community asked the general public not to climb Uluru because of its animated, spiritual significance. The same could be said about Tongariro National Park's volcanic peaks: Tongariro, Ngaruhoe, and Ruapehu. A Māori community member said that when he explains the sacredness of the volcanoes to the general public he uses the analogy that the mountains hold a sacredness similar to the way Catholics see the Vatican as holy (Department of Conservation, personal communication, 19 July 2019).

Hybrid and fluid interpretive attributes are not always the preferred strategy for representing Indigenous geographies. Some Indigenous knowledge spaces and maps are explicit, bounded, or relatively closed off. In Aotearoa/New Zealand, several strategies have been implemented by Indigenous communities to protect mātauranga Māori (Māori

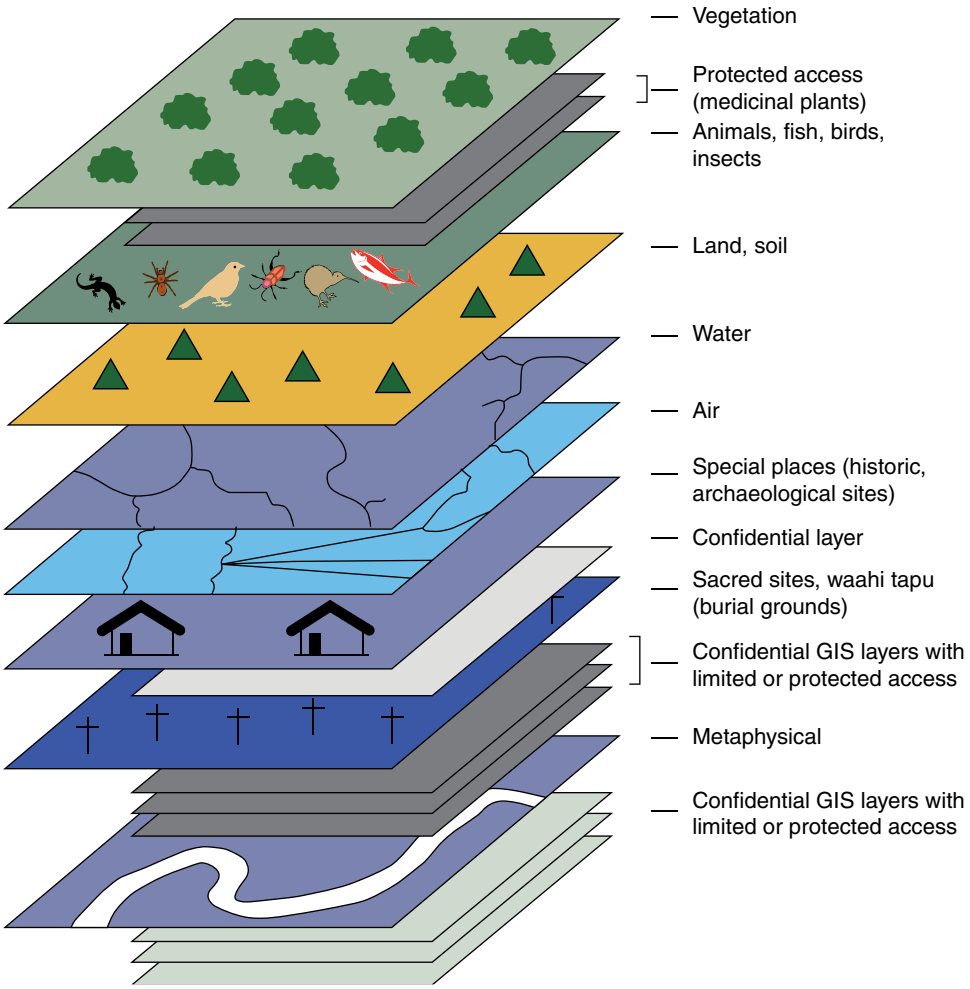

Figure 2. Modelling a GIS with selective access
Source: Reproduced with permission from Harmsworth and others (2005).

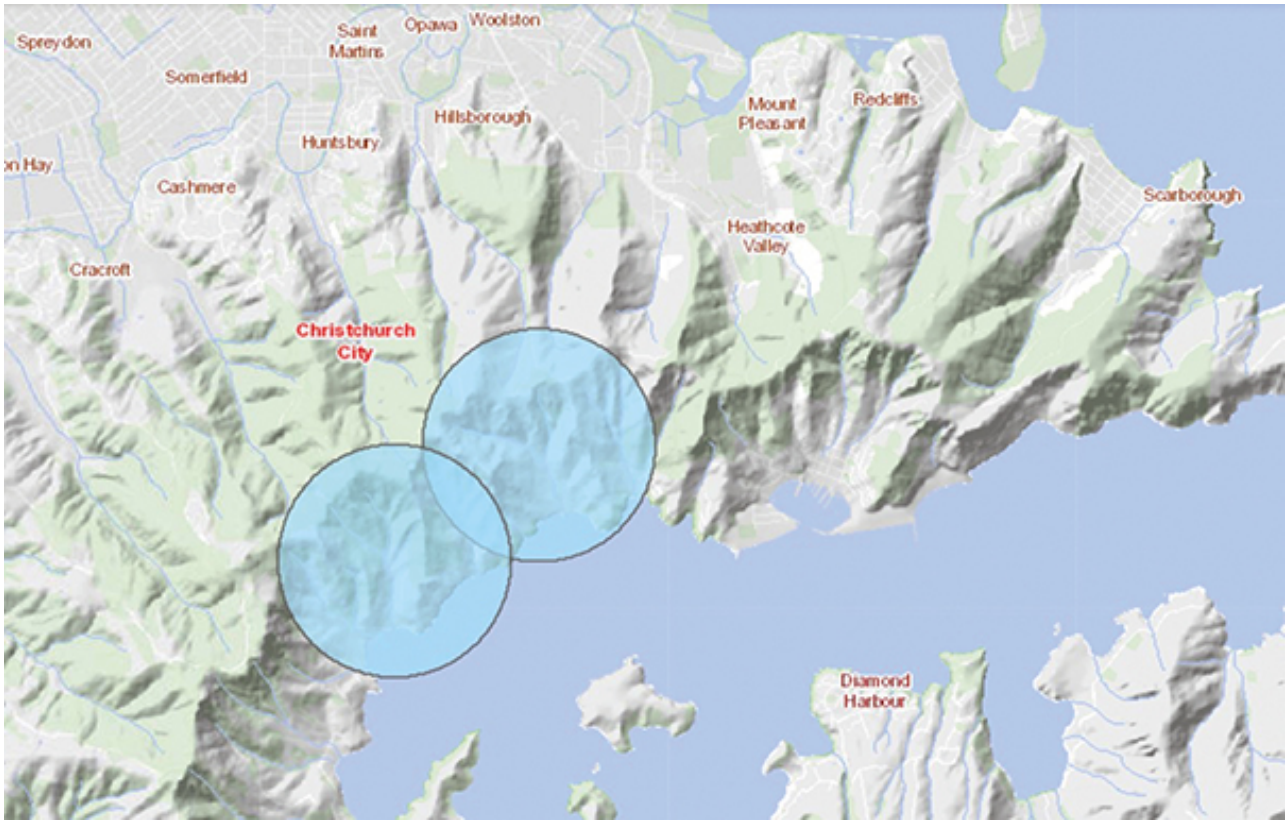

Figure 3. Silent Files Areas near Christchurch, NZ

knowledge), intellectual property rights, and sensitive sites, while developing a conventional GIS model that facilitates collaboration, planning, and resource management. Figure 2 shows confidential or restricted access datasets. One database, developed by the Motueka Iwi Resource Management Advisory Komiti (MIRMAK) for the pan-iwi group Te Tau Ihu, focuses on managing access (creating confidential layers, excluding datasets from the public domain, establishing iwi ownership, and housing the primary GIS database), use (establishing protocols around intellectual property rights, licensing and use agreements, and data maintenance), and security (ensuring that sensitive information is placed in the proper files, creating read-only layers and rules about sharing data; Harmsworth, Park, and Walker 2005). Similarly, scaling can be used to camouflage the exact locations of sensitive sites. Figure 3 is an example of such sensitive sites or "silent files" from the Canterbury Maps Viewer Silent Files Areas (Ngai Tahu) layer, which is used to inform the land use consent process. In each of these cases, Indigenous communities are able to choose how digital technologies are used to compile and present knowledge.

Indigitization

Indigitization describes an amalgamation of Indigenous, scientific, and technological knowledge systems characterized as fragmented, contradictory, and full of uncertainties (Palmer 2009; 2012; 2016). There are four main tenets of Indigitization: (1) combining Indigenous and scientific knowledge systems requires reciprocity; (2) Indigitization is everywhere; (3) Indigitization may be distant from the reality of many Indigenous groups on a global scale; and (4) Indigenous and scientific systems are combinable because both are open, dynamic, and ever-changing (Palmer 2012; Erb, Hearne, and Palmer 2018).

The processes of Indigitizating UNESCO World Heritage maps has already begun. All nomination dossier materials, including maps, are digitized and featured on the UNESCO World Heritage Centre Interactive Map. Indigenous toponyms and stories are embedded within the documents. Indigital maps are open and dynamic, such as the Ngāti Tūwharetoa oral history account published in the Tongariro National Park nomination dossier. The oral/written account took on the roles of convincing UNESCO and the World Heritage Committee, at great distances, that Tongariro was culturally significant to the Ngāti Tūwharetoa people (Palmer and Feyerherm 2018). The oral history account is equally powerful, locally, among the Ngāti Tūwharetoa people. No doubt the story exists within computer memory, enthusiastically typed out by someone using corporate word-processing software. The story may exist in the form of a book proposal, attached to an e-mail, and sent out for review, globally. In addition, Indigital story maps are hybrid, as two or more systems

mix and produce a third. We have discussed the hybridity of nomination maps. Those toponyms can be digitized directly into online mapping applications such as Google Maps or OpenStreetMap. Each name can be represented as a point, line, or area feature on the map. In this case, the Internet, YouTube, and the multitude of social networking sites are alternative options for reaching the general public, globally. Indigital story maps are reciprocal. Seemingly tech-driven projects morph into new unexpected constructs such as the Cherokee syllabary found on digital devices such as smartphones and computer keyboards (Erb and others 2018).

Conclusion

This article has celebrated the entanglement and hybridity of select UNESCO World Heritage maps and management plans. We have provided some evidence and ideas for communities to engage with, animate UNESCO World Heritage sites, and communicate knowledge, information, or concerns to the general public/tourists. Names are one foundation of story maps. Indigenous toponyms mingle with European ones on dozens of World Heritage maps. The heritage maps, in their current state, are hybrid language constructs. Indigenous communities know the names and their meanings. Each name has a story behind it, and this forms a second foundation of the maps. Stories are universal to all human cultures; however, the meanings of stories vary from listener to listener. Thus, the many interpretations of stories make up the foundation of interpretive attributes. Story maps can be extremely open and inviting, but this is not the case for all knowledge and information about the land. As a result, story maps may not be applied to every decolonizing situation. Those communities that initiate story maps combining Indigenous names, stories, and meanings with digital computer applications create Indigital story maps.

Can Indigital story maps decolonize bureaucratic maps and GIS? Wood and Fels (1992) argue that maps serve the state, but the power of maps can also work for us. This is the hope here. Indigital story maps present at least three opportunities for Indigenous communities to decolonize bureaucratic representations of World Heritage sites. First, Indigital story mapping encourages the presentation of Indigenous voices. Voices speak the names of places and of ancestors. From the names come stories. Stories argue, resist, inform, and welcome and ensure participation by Indigenous communities. As Lucchesi (2019) argues, Indigenous decolonial mapping should focus on innovation and creativity as an approach to reclaim what has been dispossessed and stolen, because Indigenous people are sick of the same old colonial narratives and mapping processes recycled repeatedly (Palmer and Rundstrom 2013). UNESCO maps will always make claims to the land, because that is what state maps do. However, their authority can be challenged by the names, stories, and voices of Indigenous people and by remaking maps (Wood 2010). Indigenous communities, not third party scholars, will ultimately decide if this kind of action is appropriate. Unexpected relations have historically emerged from encounters between Indigenous peoples and Europeans. For example, many U.S. federal government boarding school superintendents punished Indigenous children for speaking their own languages in the 1920s and 1930s. By 1945, some of those children, Comanches and Navajos, for example, became adult military code talkers (Meadows 2002; Holm 2009; Stout 2012). Indigenous code talkers "are credited with saving the lives of many American soldiers and with contributing to the successful campaigns of Guadalcanal, Tarawa, Peleliu, Saipan, Iwo Jima, Okinawa, and others" (Meadows 2011, 18). Indigenous languages contributed to defeating twentieth-century fascism. Surely, Indigenous community naming and storytelling can challenge the authority of state bureaucratic maps.

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