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The role of culture in sustainable communities: the case of Rapa Nui (Easter Island, Chile)

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Abstract

We explore how the combination of cultural heritage and present-day cultural affiliations influences the construction of the concept of sustainability at the scale of the community using the case study of Rapa Nui (Easter Island, Chile). We argue that overlapping affiliations—expressed through administrative culture, organizational culture, and professional culture—influence the views held by governance leaders. Furthermore, the role of cultural heritage must be considered in efforts to change and perpetuate sustainability-related behaviors within a community. Using archeological and historical evidence from the pre-contact and historical record of Rapa Nui, we discuss how cultural heritage evolved endogenously in response to biophysical and socio-economic forces. We then explore how this cultural heritage interacts with cultural affiliations through the analysis of interviews with six governance leaders. Five different discourses that reflect elements of the common heritage of the respondents as well as elements of their various administrative/organizational/professional cultural affiliations emerge from this analysis.

Keywords Sustainability · Cultural heritage · Cultural affiliations · Rapa Nui (Easter Island) · Communities

Introduction

With increasing emphasis on the role that communities play in creating a sustainable future comes the need to understand the role that cultural heritage and cultural affiliations play in how sustainability is understood at the local level. Caldas et al. (2015) argued that sustainability science research and policy are entwined with culture as an integral component needed for affecting and directing change. The argument is as follows: since actions related to sustainability are enacted by people, and people share cultural heritage as part of their worldviews and their shared cognitive

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structures, cultural values will inevitably influence the choice and adoption rate of practices that can lead to greater degrees of community sustainability. In this way, culture impacts biological, physical, social, and economic systems and, therefore, must be included as a target of sustainability efforts. The role of culture in facilitating change, however, need not simply be exogenous to this process. Shared cultural values can be endogenous and can shape the nature of interaction with natural and social systems as much as these systems can shape cultural values. In this way, assessing and incorporating traditions that shape the actions of individuals and groups offer an essential “lens” through which sustainability would be understood and the basis upon which actions might be enacted. Incorporating cultural heritage and contexts plays an essential role in sustainability research as it relates to human communities. We must, therefore, add “culture” to the list of principles that form the basis of community-scale sustainability: equity, economy, environment, and culture (Soini and Dessein 2016).

In addition to cultural heritage, which is largely grounded in the past, people also have cultural affiliations related to their present-day roles. These cultural affiliations may be political, administrative, organizational, and/or professional. Because sustainability policies are debated, developed, enacted, and implemented by governance officials with varying cultural affiliations, it is important to understand the extent to which these present-day aspects of culture interact with cultural heritage to produce current conceptions of sustainability.

This article explores an example of the role cultural heritage, and cultural affiliations play in shaping sustainability using a case study conducted on Rapa Nui (Easter Island, Chile). First, we develop a conceptual framework for the study of cultural heritage and cultural affiliations and outline their impacts on local sustainability perspectives and priorities. Second, we present archeological evidence that shows how biological, physical, social, and economic systems shaped the cultural heritage of Rapa Nui in ways that sustained populations until European contact. Third, we analyze content generated by interviews with key governance informants on Rapa Nui as a way of exploring the island’s contemporary discourses on sustainability. Our study concludes by showing that despite sharing a common cultural heritage, governance officials view the relationship between sustainability and culture in quite different ways. The data also suggest that these differences can be explained in part by their various cultural affiliations that are connected to their roles within the Rapa Nui community.

Culture as a lens and a component of sustainability

What is sustainability?

Before jumping into a discussion of the relationship between culture and sustainability, it is important to define what is meant by sustainability. Here, we start with the “three Es” approach sustainability that includes environment, economy, and equity. This approach stems from the Bruntland Report (*Our Common Future* 1987) definition of sustainable development as that which “meets the needs of the present

without compromising the ability of future generations to meet their own needs.” This definition embraces a human-centered approach to sustainability in which the primary goal is to increase the welfare of humans through more equitable access to economic resources while also ensuring that the world’s environmental resources are not depleted.

This “three Es model” has been modified over the years. Often, the equity dimension is referred to as the social dimension. Additionally, others have argued that governance (Ali-Toudert and Ji 2017; Huang et al. 2015; Michael et al. 2014; Mischen et al. 2019a, b; Valentin and Spangenberg 2000); and culture (Duxbury and Jeanotte 2011; Soini and Birkeland 2014; Soini and Dessein 2016) should be added as dimensions of sustainability. Governance, in particular, refers to the ability of communities to engage in self-determination (Mischen et al. 2019a, b). In this sense, governance is viewed as a means of achieving equity, economic, and environmental goals of sustainability but is also an end in itself. Likewise, culture, as will be discussed more fully below, can be viewed as a means of achieving sustainability and/or as something worth sustaining that is distinct from equity-based “social” factors.

Furthermore, we argue that sustainability should not be treated as a state that can be achieved at a particular time but is best conceived of as a process by which goal-oriented, imperfect knowledge shapes behaviors in the present and more importantly, the future. Given the inability to perfectly match action with future conditions, sustainability can only be retrospectively assessed (Costanza and Patten 1995). For instance, we can say that a community that is located in a particular place sustained itself over some period of time. We cannot, however, say that specific actions that might be taken today by a different community are, or are not, sustainable. While we can argue that a group of individuals who are using freshwater faster than it is being recharged is doing so at an unsustainable rate of water use relative to present knowledge. Technological abilities and climatic changes, however, may show that we are wrong. Sustainability in the context of the present, therefore, is a dialog through which we can evaluate the probability of various future states as well as the relative value we place on various outcomes.

Culture as a lens: cultural affiliations

Differences in culture are often used to explain how different groups of individuals understand and engage in practices that further sustainability through their focus greatly varies (e.g., Husted 2005; Parboteeah et al. 2012; Park et al. 2007; Tata and Prasad 2015). In 1997, Hofstede made the first formal recognition that cultural values shape sustainability-related perceptions and actions. He proposed five cultural dimensions that can be used to identify cultural attitudes toward sustainability: power distance, individualism-collectivism, masculinity-femininity, orientation toward time, and uncertainty avoidance. Using this framework, Husted (2005), for example, concluded that countries with low levels of power distance, high levels of individualism, and low levels of masculinity are more likely to pursue sustainable development.

Other approaches to incorporating cultural attitudes into studies of sustainability have proposed using political affiliation as a variable that contributes to explaining levels of support for sustainability-related actions. For instance, Veenstra et al. (2016) showed that political affiliation, when measured in terms of ideology and party membership, influences not only respondents' beliefs about environmental and health risks of hydraulic fracturing for natural gas but also the type of media sought to provide information about such issues. Similarly, Mendy (2010) found that Chilean political party affiliation was a significant factor in whether or not a local legislator would support pro-environmental legislation.

While cultural values expressed at the group-level values certainly impact individuals' perceptions of sustainability, Erez and Gati (2004) argued that individual cognitive perceptions must also be assessed and factored into analyses. Individual perceptions are culturally constructed by psychological processes that contribute to the coordination of a person's behavior in ways to align actions with pertinent cultural heritage (Kitayama 2002). The processes influencing human thought and action, however, are probabilistic and not deterministic because people share values across a myriad overlapping set of social groups (Bordieu 1977). Following this notion, Caldas et al. (2015, p. 8157) proposed endogenizing cultural heritage in sustainability research and policy as means of recognizing that culture is "both a property of the individual and a property of the social context in which individuals exist."

Based on this background, we argue that building an understanding of contemporary sustainability attitudes of communities in any location requires incorporating an investigation of the array of cultural affiliations held by individuals, particularly those responsible for policies and actions within the community: governance leaders. An assessment of these values must consider the multiple frames of reference from which these attitudes are formed while also considering individual and group-level effects. Thus, one step toward defining the processes by which sustainability is perceived in a community is the identification of the roles that governance leaders fulfill coupled with an assessment of how affiliation to these roles influences their perspectives on sustainability practices and policy. The perspectives of governance leaders include not only political affiliation but also administrative, organizational, and professional cultural affiliations.

Among the potential set of affiliations that contribute towards individual cultural values for governance leaders, administrative culture is the most obvious (Anechiarico 1998). While political culture is associated with ideology and organizational values that persist within a specific organization, administrative culture can be conceived as the mid-point between these two values, reflecting beliefs about the role of government in governance (Henderson 2004). Anechiarico (1998, p. 17) noted that administrative culture "is the air that the administrators breathe. More specifically, administrative culture is a transmissible pattern of beliefs, values, and behaviors in public agencies about the agency's role and relationship to the public. Administrative culture is produced by a combination of historical, structural, and contemporaneous political factors that share internal rules and customs and the predisposition to reform." For instance, Henderson (2004) argued that the American administrative culture is a product of a variety of historical factors such as "independence"

from Europe, American corporate behavior, and the 9/11 terrorist attack. Unlike other group-level cultural values, administration culture most strongly influences the means and the efficacy by which governance leaders engage in the act of sustainability.

Professional culture consists of the shared values and beliefs of a group of individuals who share an occupation. Professional culture is often distinct from political and organizational culture and contributes additional factors in shaping sustainability-related decisions and actions. Parker and Dent (1996), for example, described how UK National Health Service managers perceived the actions of doctors as stymying organizational change. In this case, the researchers recognized that managers all shared *perceptions* of their own jobs that shaped their actions and language. Managers, for example, view health-care seekers as “customers” as a way of connoting business and efficiency, while doctors use the term “patients” to emphasize “overtones of client dependency and professional expertise” (Parker and Dent 1996, p. 351). Such professional language highlights the potential for professional cultural differences to serve as obstacles to collaborative governance and thus collection action that might foster sustainability (Gober et al. 2013).

Finally, the perception of sustainability can be impacted by organizational culture. Organizational culture consists of the views shared by members of a single organization who participate in its operation. Yesilkagit (2004) has shown, for example that organizational culture has been shown to affect the success of public administrative reforms. Similarly, Romzek and Johnston (1999) have outlined how organizational culture contributes to the differences in the way in which welfare reform for the United States has been implemented. Following these examples, researchers have noted that organizational culture influences the degree to which corporations adopt sustainable practices (e.g., Baumgartner 2009; Linnenluecke and Griffiths 2010).

Culture as a component of sustainability

The assessment of culture in shaping perceptions of sustainability can be investigated in three distinct ways: culture as something to be sustained, culture as a mechanism for promoting sustainability, and culture as a sustainability-focused system (Soini and Dessein 2016). First, when culture is treated as a feature of a group to be sustained, it is usually framed in terms of a component of shared heritage. As such, culture can be treated as information that is physically embodied, in the sense of buildings or other objects, or can be intangible, such as knowledge (Duxbury and Jeannotte 2011; Soini and Birkeland 2014; Soini and Dessein 2016). Cultural heritage is identifiable as traditions in which information is passed from one generation to the next with sufficient fidelity. Ideas about sustainability, in this way, can be traced over past and future generations (Duxbury and Jeannotte 2011; Soini and Birkeland 2014). Traditions that involve sustainability-oriented practices may form a component of cultural diversity and cultural rights within a population (Soini and Birkeland 2014). In the context in which cultural diversity is a value within a population and when the rights of culturally affiliated groups are recognized, cultural variability can serve as a resource that must be respected and considered, particularly in

planning and management decisions related to sustainability. We refer to this as the “culture as a pillar of sustainability” approach.

Second, cultural traditions can also serve as a mechanism for promoting sustainability practices. Shared ideas among related individuals are an avenue in which local knowledge and insights into contemporary practices persist within a group (Duxbury and Jeannotte 2011; Soini and Dessein 2016). For many indigenous groups, sustainability knowledge and practices form the key aspects of cultural heritage that groups are seeking to protect (Soini and Birkeland 2014). This second view of “culture as an enabler of sustainability” overlaps with governance, environment, economy, and equity concerns in customary law.

Finally, a cultural system can serve as the means of sustainability (Soini and Dessein 2016). Under this view, cultural views about sustainability can strongly guide the rules by which populations interact with the natural environment. In this sense, culture does not just link the other aspects of sustainability but instead encompasses all of the pillars of sustainability. Soini and Birkeland (2014) refer to this idea as “eco-cultural civilization.” Using this representation of culture and sustainability, “sustainability is no longer seen as a set of options that can be chosen or denied, or which can be integrated or not, but rather it becomes an inseparable part of a culturally-embedded development paradigm that is largely shared among policy-makers, citizens, public and private institutions, and so on” (Soini and Dessein 2016, p. 5). We refer to this as the “culture as sustainability” approach.

Summary

It is through the process of shared histories, interaction, and social learning that groups of individuals located in geographic space will come to share a panoply of cultural values. Even within geographic areas, however, individuals will share variable degrees of ideas based on specific histories, family, and neighbors as well as cultural affiliations based on political ideology, the organizations for which they work, their professions, and the type of administrative role they fill. All of these factors may shape how individuals perceive sustainability and contribute to their practices and policies. Teasing apart these various sources of perspectives offers an opportunity to determine opportunities and challenges within any group towards promoting new initiatives in sustainability.

Case study: Rapa Nui (Easter Island), Chile

Rapa Nui (Easter Island, Chile) is known worldwide for its megalithic statues called *moai*. With a spectacular pre-contact archeological record, the island has recently attracted well-over 60,000 visitors per year, up from just a few thousand just two decades ago (CODEIPA 2015). Rapa Nui, however, is only 161 km² in area, is located thousands of kilometers from any other island (see Fig. 1), and lacks much in the way of natural resources. According to the 2017 census, the island is home to about 7750 residents, 3152 of whom self-identify as a Rapanui descendent (INE

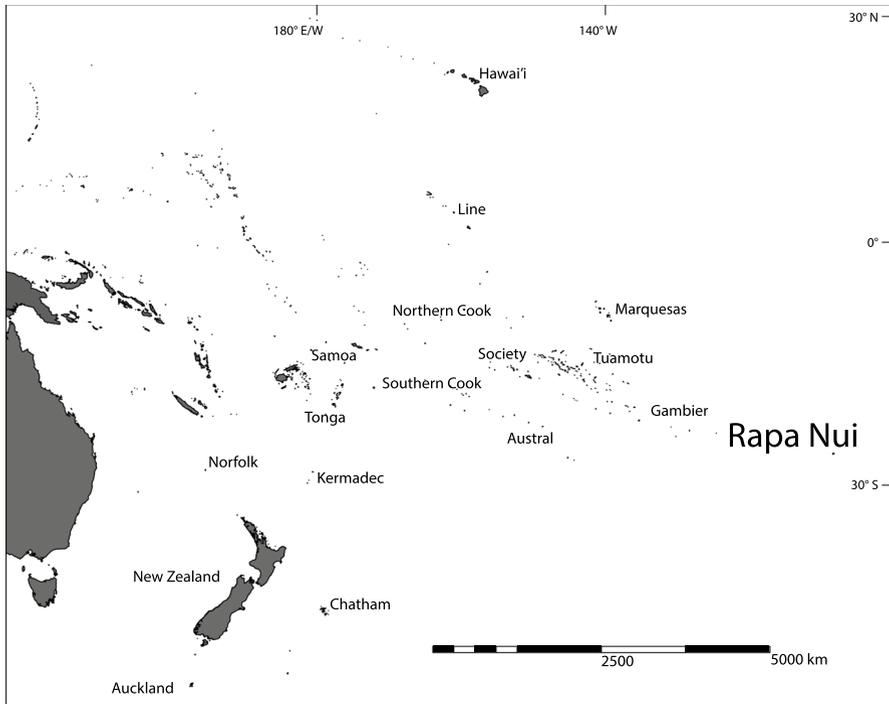


Fig. 1 Location of Rapa Nui

2019). Due to its natural constraints and given the tremendous recent surge in tourist visits, the island currently faces a number of critical sustainability issues including limited locations for waste disposal, pressures on sewage and wastewater treatment, saltwater intrusion into drinking water, and declining biodiversity (Campbell 2006; Delaune 2012; Duran and Rodriguez 2012; Figueroa and Rotarou 2016a, b). While tourism has increased the island's economic opportunities for residents, the increase in the number of visitors on the island has strained natural resources. Such effects on islands like Rapa Nui are particularly impactful relative to those experienced in mainland contexts (Bass and Dalal-Clayton 1995). Even still, Rapa Nui is particularly sensitive to environmental impacts given its diminutive size and the nonrenewable nature of the resources that create interest for tourists—its spectacular archeological and cultural treasures.

Contrary to many earlier narratives (e.g., Bahn and Flenley 1992; Diamond 1995, 2005), the pre-contact history of Rapa Nui shows that its communities grew sustainably for roughly 500 years before the arrival of Europeans (Hunt and Lipo 2011). After the arrival of Europeans in 1722, the island was subject to a number of extrinsic impacts: the introduction of disease, new economic resources, slave raiding, and other historic events (Fischer 2005; Hunt and Lipo 2011; Peiser 2005). New diseases carried by Europeans had included smallpox, dysentery, leprosy, and tuberculosis, all of which took a major toll on the islanders as they had little if any natural immunity. At the same time, whalers ransacked the island for supplies and workers for

their ships. Between 1862 and 1888, slave raiders (“blackbirding”) came from Peru to take islanders by coercion and force (Maude 1981). In a massive raid in 1863, as many as 1500, Rapanui had been abducted or killed (Fischer 2005). By 1877, the adult native population residing on the island had reached its recorded low of just 110 (Fischer 2005; Peiser 2005). While this loss of population likely contributed to a significant loss of cultural traditions, the persistence of the Rapanui language demonstrates remarkable cultural persistence despite these tragic events.

Environmentally, the island was transformed by the imposition of a large sheep ranch operation by the Williamson-Balfour company (Fischer 2005). Between 1888 and 1933, foreign ranch administrators allowed as many as 60,000 sheep to range across the island (Charola 1994). The impacts of this grazing dramatically changed the island’s vegetation and remain visible in the massive gullies and sheet erosion that are observed across areas on the eastern side of the island (Mieth and Bork 2005).

In 1888, Chile annexed Rapa Nui. However, the people of Rapa Nui remained indentured workers for the sheep ranch through the first half of the 20th century. The era of corporate sheep ranching only ended in 1953 when the Chilean government refused to renew the company’s permit. The population remained governed by the Chilean Navy, which maintained a permanent base on the island. Over time, the Rapanui people have begun to take over the island’s governance. In 1965, Alfonso Rapu led a group of residents in an insurrection for recognition of the Rapanui people as Chilean citizens, which ultimately forced the Chilean government to begin to return parcels of land to the Rapanui. He was later elected mayor of the island. This insurrection led to full Chilean citizenship for the islanders in 1966. In 1984, his brother, Sergio Rapu, became the first Rapanui individual to be appointed governor and led the island through 1990. Since that time, the island has seen increasing roles for the Rapanui people in governance and overall self-determination.

Today, Rapa Nui is a province of the Valparaiso region of Chile, which has a population of over 1.7 million people located primarily on the mainland. As a province, it has an appointed governor who reports to the intendant of the region. A majority of the island’s residents (87%) live within Hanga Roa, the capital and sole municipality on the island. Hanga Roa is led by a mayor who is elected by its residents every 4 years. Of the island’s land area, 43 percent falls within the Rapa Nui National Park, which was managed until 2016 by the National Forest Corporation (CONAF). CONAF is a private, non-profit corporation responsible for the management of Chile’s forest resources and is overseen by the Ministry of Agriculture.

The emergence of local island governance has grown over time, much of it as a consequence of the tremendous increase in tourism. A boom in global tourism and tourists from Chile has led to multiple daily flights from Santiago, Chile, and a weekly flight from Tahiti. One significant consequence of this growth in tourism is migration from Chile to support the tourist industry. While the growth in visitors has greatly increased economic opportunities for the islanders, increases in permanent residents and the strain on resources have led to challenges and conflict. With greater economic independence, groups of Rapanui people have become increasingly vocal about the island’s need for locally based governance. For example, in 2015 the Rapa Nui Parliament, an indigenous rights group established in 2001 by

the Council of Elders (<https://minorityrights.org/minorities/rapanui/>), took over the Rapa Nui National Park by blocking the access roads (<https://www.easterisland.travel/blog/tag/rapa-nui-parliament/>). In addition to concerns about the transfer of land to non-native corporations, the group objected to the continued mainland-based administration of the National Park and as well as the continued immigration of Chilean citizens to Rapa Nui. On August 15, 2015, the Rapa Nui Parliament began to try to collect the 60 USD entry fee that was previously charged by CONAF for access to the Park. On August 29, police cleared the roadblock and CONAF regained control of the Park. In an effort to find an administrative solution to such issues, the Rapa Nui Commissioners of the Easter Island Development Commission (CODEIPA) asked CONAF to establish a wholly indigenous management system for the park. CONAF instead presented a co-administration plan (known as GOSPAN), in which the role of the Rapanui people was merely consultative (CODEIPA 2015, p. 2). CODEIPA responded with its proposal for an organization called the *Comunidad Indígena Ma'u Henua*, an organization composed of members of native Rapanui families. This organization has been implemented in three phases with the complete indigenous control scheduled for 2025.

Beginning in 2016, the island's parkland has been managed by *Comunidad Indígena Ma'u Henua*. In addition, the island's governance is shared by other indigenous groups including CODEIPA, an organization that manages the development, the Rapa Nui Parliament, and the *Honui* committee, a group that represents the 36 families on the island. Thus, it has been through this process of conflict and resolution that the island has seen the recent emergence of a strong and comprehensive native governance system enabling self-determination and self-management of the island's resources.

Data and methods

Sample selection

It is with this history and context in mind that we chose key informants to explore existing sustainability perspectives among Rapa Nui governance leaders. We made our selection of key informants based on the events described above and chose individuals to represent the five different governance perspectives. Our questions were focused on ascertaining the degree to which sustainability perspectives were reflected by different administrative, organizational, and/or professional cultural affiliations. In January 2016, we conducted interviews with six key informants over five interview sessions. These key informants included as follows:

- The governor, appointed by the Chilean government to oversee the Island as a whole. As an appointee of the Chilean government, this respondent is accountable to the national government, reflecting an administrative culture that is different from that existing on the island.
- The former governor, currently a business owner and active in the tourist industry as well as a published archeologist. This respondent was the first native gov-

ernor of Rapa Nui and his position in both the business community and as an archeologist studying Rapa Nui, two different professional cultures, makes him an important participant in the governance of the island, despite no longer holding office.

- The mayor of the commune of Rapa Nui, located in Hanga Roa. Unlike the governor, the mayor is elected by the people of Hanga Roa, the only municipality on the island. As an elected official, the mayor is accountable to the people.
- Two members of the Rapa Nui Parliament. The Rapa Nui Parliament is an indigenous rights organization that maintains the historical governance practices of Rapa Nui. Although it does not hold an official governance role as recognized by the Chilean government, it has considerable power on the island.
- The Director of CONAF. As the bureaucratic agency that controls 43% of the land area of the island, CONAF represents a traditional western bureaucratic administrative culture. It has evolved from a traditional public administration approach to a New Public Management approach to governance (Lipo et al. 2020). Furthermore, it represents a different professional culture, forestry, and the protection of the environment.

While all of these participants share a common cultural heritage, that is, they are all of Rapanui descent, we expected that these key informants, due to the positions they hold, would provide varying views on what it means for Rapa Nui to be sustainable. Despite few in number, these respondents represent different administrative cultures (e.g., Chilean/western and traditional), different organizational cultures (e.g., CONAF and Rapa Nui Parliament), and different professional cultures (e.g., tourism industry, archeology, and forestry). All are central to the governance processes of the island and their actions will result in the policies and practices that could lead Rapa Nui towards greater sustainability. In order to understand the specific sustainability policies that will emerge, one must understand how each of these governance leaders constructs the concept of sustainability and how their present-day cultural affiliations influence these constructions.

Data collection and analysis

We conducted interviews with the past governor and current mayor in English. Our interviews with the director of CONAF and the current governor took place in Spanish with the aid of a Rapanui translator. Our interview with the two members of the Rapa Nui Parliament was conducted in Spanish, Rapanui, and English. In these interviews, one of the members of Parliament spoke English and the other spoke only Rapanui. During the interview with the Parliament members, the member who spoke English translated what was being said by the member who spoke only Rapanui. We recorded all the interviews, transcribed the English and Spanish portions, and then translated the Spanish portions of the transcription into English. The interviews ranged from 45 to 60 min in length. Although we conducted each interview “on the record” via an approved IRB protocol, the names of individuals were

not used. Additionally, we allowed participants to stop the recording and say things “off the record.”

As an exploratory study, our interviews were minimally structured and centered around the question of what perceptions about sustainability for Rapa Nui. Our follow-up questions related to learning more about the steps required for the island to achieve greater degrees of sustainability. This tactic allowed for the exploration of topics such as education, tourism, and the structure of government, as well as environmental issues. The interviewees largely controlled the direction of the interviews, and therefore, offered an opportunity for different topics to emerge through the course of our discussions.

A case-based approach to the data was used in order to investigate the individual narratives that might reflect the cultural affiliations of the informants. Using Atlas.ti (ATLAS.ti Scientific Software Development GmbH), we coded each interview using a set of start codes representing the three most commonly recognized aspects of sustainability—environment, economy, and social equity—as well as governance and culture as suggested by Mischen et al. (2019a, b). Sub-codes were then developed inductively to explain in detail how each of these aspects of sustainability was discussed. Taking a phenomenological approach, we opted to use in-vivo coding for many of these subcodes, using the actual words and phrases of interviewees as opposed to our interpretations. By using the actual words of the interviewees, we hope to present the world as they see it.

Following Hajer and Fischer (1999) and Pahl-Wostl et al. (2008), we recognize the cultural underpinnings of sustainability discourses. To organize our analysis, we modified Dryzek’s (2005) approach to studying environmental discourses to account for the larger concept of sustainability. We analyzed each of the narratives by asking the following four questions. First, which aspects of sustainability are recognized? That is, which of the five major start codes were used in each of the interviews? Second, what assumptions are made about relationships? Third, who are the agents and what are their motives? And fourth, what are the key metaphors or rhetorical devices employed? To answer these last three questions, we examined the subcodes that emerged in the second phase of coding. Since we began the interviews with a general question regarding what it means for Rapa Nui to be sustainable and then followed up with prompts regarding other aspects of sustainability that may not have been mentioned in the initial response, we placed greatest importance on the initial response to the question of what sustainability means on Rapa Nui, treating this as the dominant narrative. Lastly, we examined how “culture” was discussed in each of the interviews more holistically and categorized this discussion as taking one of the following three approaches – culture as a pillar of sustainability, culture as enabler of sustainability, or culture as sustainability. The results of this analysis are summarized in Table 1.

Due to the small number of interviews that we conducted and our adherence to taking a phenomenological approach to our study, we are unable to make sweeping claims about the role that particular cultural affiliations play in the construction of sustainability discourses or the way culture is viewed vis-à-vis sustainability on an island-wide basis. The purposeful selection of these various governance individuals, however, provides sufficient information to explore whether cultural affiliations

Table 1 Sustainability themes found in interviews of 6 Rapanui governance leaders

Narrative (role)	Aspects of sustainability recognized	Assumptions about relations between individuals and groups	Agents and their motives	Key metaphors and other rhetorical devices	Culture in relation to sustainability
Self-rule (Rapa Nui Parliament)	Culture, governance, equity	Colonization	Native protectors and foreign colonizers	Survival, localism	Culture as sustainability
Love (Mayor)	Culture, governance, equity, environment, economy	Auto- governance	Citizen participants and elected facilitators	Love	Culture as sustainability
Conflict resolution (Former governor, archaeologist, business owner)	Culture, governance, equity	Conflict	Self-interested individuals	History and artifacts, broader Polynesian culture	Culture as sustainability
Limiting the number of permanent residents (Governor)	Governance, equity	Administrative coordination	Administrators representing stakeholders	Process	No reference to culture
Self-reliance (CONAF)	Environment, governance	Coordination between administrators and environmental governance	Administrators as protectors of the environment	Self-reliance, vulnerability	Culture as a pillar of sustainability

associated with their positions of leadership on the island contribute to meaning making about sustainability, and therefore, have the potential for future examination in the study of sustainability at the local level.

Findings

When asked what it means for Rapa Nui to be sustainable, the initial answers from the five key informant interviews included themes of self-rule, love, conflict resolution, limiting the number of permanent residents, and self-reliance. Only the last of these themes referred to the island's natural resources directly. The other themes we noted were primarily, but certainly not exclusively, associated with people and their interactions.

Given the history of Rapa Nui, it is not surprising that sustainability would be equated with self-rule by members of the Rapa Nui Parliament. According to one of the elders, the Rapa Nui Parliament is “the resistance, the continuity of the resistance to the colonizer. It is the voice of the Rapa Nui nation, the voice of the Rapanui people, who fight for inalienable rights of land and of cultural resources, etc.” The Parliament representatives saw self-rule as the necessary mechanism for preserving culture, language, sites, and artifacts of historical importance, as well as the natural resources that supported the community. Sustainability was equated with survival, of the culture and of the environment. For these respondents, self-rule requires localism of government, and a way of making decisions, not simply the authority to make decisions. They viewed Parliament as a protector of all aspects of sustainability as opposed to the colonizers who would view the land, its resources, and artifacts as things to be collected. Two stories illustrate this. First, they spoke of tourists who stole parts of artifacts. They also spoke of scientists who came to the island and collected plants that had medicinal benefits.

This narrative of self-rule contains three of the five aspects of sustainability. Self-rule is clearly connected to not only governance, but also equity and culture. At first, culture was presented as something to be sustained. Later in the interview, the conversation turned to cultural practices that were viewed as sustainable. These practices included replanting pineapple tops in common areas so future users would have continued access to pineapples. Through this story, there was an acknowledgement of the environment, but it was not part of the dominant narrative. For the most part, culture was discussed as that which sustained the Rapanui people. Cultural traditions and cultural knowledge were the basis of governance, agriculture, and medicine. The members of the Rapa Nui Parliament viewed culture as the source of their survival in the distant past as well as in the present day. Because culture is inherently intertwined with governance, the environment, and equity, culture is viewed as the mechanism for creating sustainability. Therefore, this interview represents the “culture as sustainability” perspective.

A focus on community control was also echoed by the Mayor of Hanga Roa who used a colonial term for a town hall, *cabildo*, to describe the process by which he invited the community to participate in the creation of a plan for the community. He describes an event that took place in December 2012, when about 700 people (more

than 10% of the adults on the Island) came to share “their impressions, their opinions, their thoughts, and dreams” for the future. According to the Mayor, “... everyone gave their opinion of what is going on on the island, the good and the bad things that we have experienced in the past 25 years. The elders, especially the elders are calling our attention to how we have forgotten the old way of interacting with ourselves. Of being, for example, respectful with the elders, respectful with our cosmos, our habitat, respectful with the children and the women, and the people in general.” The mayor concluded from this meeting that the island was suffering from a “lack of love.” He argued that development occurred too quickly and as a result, “we forgot the basics, which is the respect for the culture, the people, the habitat, the environment. So, there is a lack of love, in every issue.” For the mayor, governance was not just an institutional process, it was personal. For example, he notes that:

Oh, how time has changed the island. Today we don't have governance—auto-governance. Today, we believe in a third person to govern me. That's nothing. In my opinion ... it is against God's mandate to have a third person to govern you. You should govern yourself, in love, with love.

The narrative offered by the Mayor intertwines the pillars of sustainability in its themes. The act of bringing people together to discuss the future of the island illustrates the essential process of community-based governance. Culture is explicitly referenced as an important aspect of the past as well as a guide for future action. Respect for people, habitat, and environment invokes the equity and environment pillars. Although his suggestion that economic growth was a reason for the erosion of the culture, equity, and environmental conditions, his focus for blame is largely targeted at the rate of growth and not the increasing economic capacity of the island in general. As observed in the interviews with the members of Parliament, culture is treated as the means by which heritage and current values of the community are brought together and as the mechanism that makes sustainability possible on the island. This interview, therefore, provides another example of the “culture as sustainability” perspective.

The topic of respect and other interpersonal elements are reflected in other interviews as well. On a small, remote island with limited possibilities for movement to the mainland or another inhabited island, people must find ways to get along with one another. In order to be sustainable, communities must have peaceful methods of conflict resolution. The former governor who is also an archeologist and business owner spoke about the ways in which past communities constructed *ahu* and transported *moai* to serve this purpose. He noted how the rotating power of the “Bird-man court,” an island-wide competition observed in the 19th-century, served that purpose once *ahu* and *moai* activities ceased. In order to translate these concepts into the contemporary island, the former governor expressed his desire to bring *ho'oponopono*, a method of conflict resolution that embraces reconciliation and forgiveness from Hawaii, to Rapa Nui. Echoing the themes raised by the mayor of Hanga Roa, this former governor viewed sustainability as the responsibility of individuals and the development of respectful interpersonal relations.

This tension between native Rapanui and Chilean residents was strongly connected to the discussion of conflict resolution. Unlike the other narratives, this

concern does not include an environmental aspect explicitly but is focused on governance, culture, and equity. The former governor, however, highlighted the importance of environmental and economic issues that were common to both classes of residents. Indeed, much of the interview was concerned with these topics environmental impact and threats to the island due to overall population growth. From saltwater intrusion to the pros and cons of tourism to the proliferation of vehicles on the island, the former governor referenced all five pillars of sustainability. In this way, the governor's perspective also included culture as a lens through which sustainability is understood. Thus, his narrative reflects the "culture as sustainability" perspective.

Due to events taking place among the community at the time of the interviews, the current governor focused her interview response on proposals that sought to limit the number of permanent residents who are allowed to live on the island. These proposed limits were suggested as a key aspect of sustainability. In this regard, her response was primarily couched in terms of governance rather than environmental resources per se. She explained that "es el sueño de todos" (it is everyone's dream) to set a limit on the number of people who can enter the island and remain as permanent residents. She also identified the total number of tourists who annually visit the island as a problem, particularly as these numbers place tremendous stress on the island's infrastructural features such as roads. She also discussed the process by which the Rapa Nui National Park was co-administered with CONAF and expressed the desire for Rapa Nui to become an autonomous administrative region. This change, she argued, would enable the local government to meet the sustainability challenges of the island. This response was unique among our interviews as the current governor presented sustainability not as an outcome but as a process. In this way, the governor saw her role in promoting sustainability as the coordination of the island's stakeholders. Her perspective highlighted specific interest in the governance and equity pillars of sustainability.

In her interview, the governor made references to the environment and the economy. In particular, she saw Rapa Nui's unique environment as a primary reason that local autonomy over mainland governance was important. She reasoned that self-governance and management would enable greater control over taxes and other aspects of the island's economy. Her perspective notes that in order to sustain the environment, economy and culture require sustaining the island through the establishment of an indigenous-based administrative entity. This administrative entity would then maintain peace. From the governor's perspective, culture was not viewed as a significant contributor to sustainability.

Lastly, the interview with the Director of CONAF was primarily focused on the issue of self-reliance. Her view of sustainability was prefaced by a statement that islands are more vulnerable than the mainland, "so, everything has to be from the island to the island." In this interview, the Director raised environmental concerns that were linked to sustainability. For example, she noted the need for improving the island's systems for composting, recycling, renewable energy generation, and the protection of freshwater. The Director also echoed themes found in the other four interviews: a lack of coordination among the agencies involved

in sustainability concerns and the inability of current governance to achieve positive environmental outcomes.

At the time of the interviews, CONAF was charged with the administration of the Rapa Nui National Park. Thus, the organization was responsible for protecting the artifacts that are found within its boundaries. The director noted that “90% of the archaeology” is located in the Park boundaries. In this sense, the Director’s perspective reflected a “culture as a pillar of sustainability” approach, because of its focus on culture as something to be preserved, rather than something that enables sustainability or is at the heart of sustainability.

Discussion

As shown in Table 1, only one of the dominant narratives contained all five aspects of sustainability that are suggested by Mischen et al. (2019a, b). The notion of equity appeared in four interviews while culture appeared in three, the environment in two, and the economy in only one. The environment, which many in the Western world treat as synonymous with sustainability, was not as prominently discussed in these interviews as one might expect. The order of importance in which we observed these themes, however, can be explained in terms of the larger cultural heritage of those of Rapanui descent. Living sustainably on a small island requires peace and harmony as much as the sustainable use of natural resources (Jucker 2014). Unlike virtually the rest of the world, in the not-too-distant past, members of the Rapa Nui community could not choose to leave their community in search of different living conditions or to flee conflict. Under these circumstances, the aspects of sustainability that make it possible for people to live in relative harmony—governance, culture, and equity—are likely to persist relative to options that favor conflict and group-level aggression. In the past, the process of monumental architecture construction in the form of *moai* and *ahu* has been posited as a mechanism for bringing individuals in a community together while also group-level conflict (DiNapoli et al. 2017). As DiNapoli (2020) has argued, by investing in monument construction that served conspicuous displays of communities’ competitive ability to control and defend their limited resources, the outcome was greater intra-group cooperation and limited violent conflict between groups.

Polynesian islands share homologous forms of behavior that serves to help mitigate conflict that would otherwise devastate communities on small islands. The practice of *ho’oponopono*, for example, is from oral traditions and ethnohistoric accounts to have been common on island such as Samoa, Hawai’i, Tahiti, and on New Zealand as a means of reconciliation between individuals and groups (Parsons 1985). The tradition included meetings of extended family members to “make right” broken family relations and resolve sources of problems (Pukui and Craighill Handy 1958).

Another striking similarity in our collected narratives is that, unlike the typical environmental discourses described by Dryzek (2005), the relevant relations that our informants described were not between people and the environment, but rather between people and other people. The one exception to this pattern was the

Director of CONAF who emphasized the relationships between administrators and policy makers as well as between administrators and environmental protection policies and practices. She notes that these relationships could be based on conflict or cooperation.

In the three narratives in which we found the concept of culture to be a dominant theme, we also saw that culture and sustainability are viewed as inherently intertwined and, therefore, inseparable (Soini and Birkeland 2014; Soini and Dessein 2016). The intertwining of culture and sustainability is readily explained in terms of the needs of the island's community for much the same reasons as mentioned earlier. Until the last 30 years and before regular air travel, individuals on Rapa Nui were relatively isolated. To be sure, the arrival of Europeans impacted the cultural heritage of the island through their interactions, provisioning of European goods, and the introduction of diseases that dramatically reduced the size of the population. But the islanders have maintained strong cultural traditions despite these changes. For example, while the island was managed as a colonial sheep ranch from the late 19th through the mid part of the 20th century, the Rapanui people, their language, and traditions resolutely persisted (Fischer 2005). Despite efforts by the Chilean government to assimilate the native Rapanui people—including actions such as mandating Spanish as the language of instruction in schools—the Rapanui people were successful in maintaining important cultural traditions and have held on to a strong, independent identity (Delsing 2015). This identity contributed to the persistence of cultural traditions and perceptions despite the isolated and relatively small population. Given this history, there is little wonder that culture and sustainability are viewed on the island as one and the same.

While the fact that governance is part of the dominant narratives of all interviews can be explained in terms of the needs of the community for leadership but also likely reflects the fact that each of the informants played a key role in governance. Governance is included in the narratives as a feature necessary for the community to be sustained as well as a mechanism by which sustainability is achieved. The narratives provided by the Rapa Nui Parliament members equated sustainability with self-determination, the authority to govern themselves. The Mayor, however, perceived self-governance in a slightly more individualistic way as he spoke about the importance of governing oneself rather than having someone else govern you. The Director of CONAF discussed governance as being collaborative and emphasized the importance of agencies working together to achieve sustainability. The Governor viewed autonomy as a means to sustainability, aligning her perceptions with those of the Rapa Nui Parliament members.

Despite sharing a common cultural heritage, the respondents' constructions of sustainability varied considerably likely due different present-day cultural affiliations that come with the roles that the informants' play in the context of their leadership positions. The Mayor, who is elected by the population of Hanga Roa, viewed sustainability as an issue of governance with the primary actors being citizens and elected officials. Similarly, the interview with the Rapa Nui Parliament members included discussions of the role that Parliament plays in the governance of Rapa Nui. However, unlike the Mayor, the members of Parliament characterized the primary actors as indigenous Rapa Nui and "colonizers" with survival as a key

metaphor. The Governor, in contrast, spoke primarily about the role of policy in promoting sustainability and focused on process and coordination, as one might expect from someone whose role is the link between local and national politics. The former governor and archeologist focused most of his attention on past community practices related to *ahu* and *moai* as model systems that previously contributed to the island's sustainability. He noted that the magnitude of these monuments necessarily required the cooperation of community members and that those community-scale activities served to strengthen the bonds within individual groups. Likewise, contemporary activities could also serve analogous functions to the pre-contact construction of monuments to bring the island together. The former governor argued that such cooperative efforts are a central part of Polynesian cultural traditions. While currently framed in Catholic religious practice, the practice of *curanto* in which family groups serve massive feasts to share with all islanders follows long-standing Polynesian traditions of sharing and community building. Similarly, the annual island-wide festival of *Tapaiti* serves to strengthen the community through competition in music, arts, athletics, and other cultural traditions. Finally, the Director of CONAF, an environmental organization, viewed sustainability largely in terms of the environment and viewed administrators as protectors of the environment.

Knowing the administrative, organizational, and professional roles that each of the interviewees plays in governance of Rapa Nui helps us to understand their particular views of sustainability. While there are commonalities that are attributable to their shared cultural heritage, there are also considerable differences based on these cultural affiliations.

Since this study is relatively novel in its approach to the investigation of culture and sustainability, we can only suggest how these interactions could play out in other communities. Post-industrial, agricultural, and environmental tourism-based communities will share different cultural heritages that contribute to the aggregate views on sustainability. Within each community, however, one might expect appointed officials to have perspectives that are aligned by the cultural values of the dominant political party and its view on governance, elected officials to hold perspectives consistent with a majority view on issues, and civil servants in areas such as health, business development, and forestry agencies to reflect share individual and role-based combinations of social, economic, and environmental aspects of sustainability. These *a priori* assumptions, however, do not necessarily determine the extent to which cultural heritage or present-day cultural affiliations might dominate narratives. Additionally, as people move and begin to engage in new biophysical and socio-economic systems, place-based cultural heritage itself may change (Caldas et al. 2015).

Conclusions

Significantly, none of the informants that we interviewed questioned whether sustainability was important for the island and the community living on Rapa Nui. Indeed, in all the narratives, the issue of sustainability was centrally embedded in their considerations of the island's future. Each individual offered unique

perspectives as to what sustainability means in the context of Rapa Nui. These perspectives are informed by their governance and professional roles and shape their suggestions as to what actions, process, and policies would make the island more sustainable. Their shared cultural heritage, however, contributed to themes common to all of the narratives. These common themes highlight the perceived interconnections of the environment, economy, equity, governance, and cultural traditions.

The inclusion of cultural affiliations and cultural heritage as a lens for studying sustainability perspective contributes to our ability to explain the responses of local leaders as well as understanding overall views on sustainability at the scale of the community. Although Rapa Nui has a unique history and cultural heritage, it is not alone in placing value on its unique cultural traditions and practices. Communities around the globe take pride in their shared histories, values, and beliefs. As an increasing number of sustainability policies are enacted at the local level (Mazmanian and Kraft 2009), developing frameworks and methods for exploring how cultural values interact with views of sustainability is critical in the general ability to promote sustainability around the world.

It is also important to recognize, however, that while individuals responsible for the policies and practices related to sustainability at the local level may share cultural values, they will also hold values that differ in important ways due to their roles in political, administrative, organizational, and professional organizations. In our study, we interviewed only six key informants. Thus, we cannot make broad claims about how various role-based cultural affiliations specifically will influence conceptions of sustainability or its achievement. The differences in responses, however, indicate that this dimension of sustainability perspectives is worth continued exploration.

Ultimately, for sustainability action to take place at the local level, leaders will need to be able to come together and agree on problem definitions and courses of action. Within any community, similarities and differences that arise from the overlapping and nested nature of cultural variability and heritage will emerge to hinder and facilitate these actions. In this way, developing an understanding of the cultural components of sustainability perspectives can contribute to the ability of communities to move forward and to make their communities more sustainable places.

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References

- Ali-Toudert F, Ji L (2017) Modeling and measuring urban sustainability in multi-criteria based systems—a challenging issue. *Ecol Ind* 73:597–611. <https://doi.org/10.1016/j.ecolind.2016.09.046>

- Anechiarico F (1998) Administrative culture and civil society: a comparative perspective. *Admin Soc* 30(1):13–34
- Bahn P, Flenley J (1992) *Easter Island, earth island*. Thames and Hudson, London
- Bass SC, Dalal-Clayton DB (1995) *Small island states and sustainable development: strategic issues and experience*. International Institute for Environment and Development, London
- Baumgartner RJ (2009) Organizational culture and leadership: preconditions for the development of a sustainable corporation. *Sustain Dev* 17(2):102–113. <https://doi.org/10.1002/sd.405>
- Bordieu P (1977) *Outline of a theory of practice*. Cambridge University Press, New York
- Caldas MM, Sanderson MR, Mather M, Daniels MD, Bergtold JS, Aistrup J et al (2015) Opinion: endogenizing culture in sustainability science research and policy. *Proc Natl Acad Sci* 112(27):8157–8159. <https://doi.org/10.1073/pnas.1510010112>
- Campbell P (2006) Easter Island: on the verge of a second environmental catastrophe. *Rapa Nui J* 20(1):67–70
- Charola AE (1994) *Easter Island. The heritage and its conservation*. World Monuments Fund, New York
- CODEIPA (2015) *Ma'u Henua: Propuesta De Nueva Administracion Parque Nacional Rapa Nui*. <http://ciperchile.cl/wp-content/uploads/PROPUESTA-MAU-HENUA.pdf>
- Costanza R, Patten BC (1995) Defining and predicting sustainability. *Ecol Econ* 15(3):193–196. [https://doi.org/10.1016/0921-8009\(95\)00048-8](https://doi.org/10.1016/0921-8009(95)00048-8)
- Delaune G (2012) *Rapa Nui on the Verge: Easter Island's struggles with integration and globalization in the information age*. *Berkeley Plan J* 25(1):126–139
- Delsing R (2015) *Articulating Rapa Nui: polynesian cultural politics in a latin American Nation-State*. University of Hawai'i Press, Honolulu
- Diamond J (1995) Easter's end. *Discover* 9:62–69
- Diamond J (2005) *Collapse: how societies choose to fail or succeed*. Viking Press, New York
- DiNapoli RJ (2020) *Factors influencing the construction of monumental architecture: a Rapa Nui (Easter Island) case study*, PhD Dissertation, University of Oregon, Eugene
- DiNapoli RJ, Morrison AE, Lipo CP, Hunt TL, Lane BG (2017) East Polynesian islands as models of cultural divergence: the case of Rapa Nui and Rapa Iti. *J Island Coast Archaeol* 13(2):206–223
- Dryzek JS (2005) *The politics of earth: environmental discourses*, 2nd edn. Oxford University Press, Oxford
- Duran MBP, Rodriguez C (2012) Impactos ambientales generados por el desarrollo turístico en la Isla de Pascua. *Revista Interamericana de Ambiente y Turismo-RIAT* 7(1):42–48
- Duxbury N, Jeannotte MS (2011) Introduction: culture and sustainable communities. *Cult Local Gov* 3(1–2):1–10
- Erez M, Gati E (2004) A dynamic, multi-level model of culture: from the micro level of the individual to the macro level of a global culture. *Appl Psychol* 53(4):583–598. <https://doi.org/10.1111/j.1464-0597.2004.00190.x>
- Figueroa BE, Rotarou ES (2016a) Sustainable development or eco-collapse: lessons for tourism and development from Easter Island. *Sustainability* 8(1093):1–26
- Figueroa BE, Rotarou ES (2016b) Tourism as the development driver of Easter Island: the key role of resident perceptions. *Island Stud J* 11(1):245–264
- Fischer SR (2005) *Island at the End of the World: the turbulent history of Easter Island*. University of Chicago Press, Chicago
- Gober P, Larson KL, Quay R, Polsky C, Chang H, Shandas V (2013) Why land planners and water managers don't talk to one another and why they should! *Soc Nat Resour* 26(3):356–364. <https://doi.org/10.1080/08941920.2012.713448>
- Hajer M, Fischer M (1999) Beyond global discourse: the rediscovery of culture in environmental politics. In: Fischer M, Hajer M (eds) *Living with nature: environmental politics as cultural discourse*. Oxford University Press, New York, pp 1–20
- Henderson KM (2004) Characterizing American public administration: the concept of administrative culture. *Int J Public Sect Manag* 17(2/3):234–250
- Huang L, Wu J, Yan L (2015) Defining and measuring urban sustainability: a review of indicators. *Landsc Ecol* 30(7):1175–1193. <https://doi.org/10.1007/s10980-015-0208-2>
- Hunt TL, Lipo CP (2011) Walking statues: Easter Island's complex history. *Nature* 479:41
- Husted B (2005) Culture and ecology: a cross-national study of the determinants of environmental sustainability. *MIR* 45(3):349–371
- Instituto Nacional de Estadísticas. “Censo 2017”. <http://ine.cl>. Archived from the original on 11 May 2018

- Jucker R (2014) Sustainable development for small island developing states. *J Educ Sustain Dev* 7(2):245–247
- Kitayama S (2002) Culture and basic psychological processes—toward a system view of culture: comment on Oyserman et al. (2002). *Psychol Bull* 128(1):89–96. <https://doi.org/10.1037//0033-2909.128.1.89>
- Linnenluecke MK, Griffiths A (2010) Corporate sustainability and organizational culture. *J World Bus* 45(4):357–366. <https://doi.org/10.1016/j.jwb.2009.08.006>
- Lipo CP, Mischen PA, Hunt TL (2020) Lessons from Rapa Nui (Easter Island, Chile) for governance in conditions of environmental uncertainty. In: Glückler J (ed) *Knowledge for Governance*. Cham, Switzerland
- Maude HE (1981) *Slavers in Paradise: the Peruvian slave trade in Polynesia, 1862-1864*. Stanford University Press, Stanford
- Mazmanian DA, Kraft ME (2009) *Toward sustainable communities: transition and transformations in environmental policy*, 2nd edn. MIT Press, Cambridge
- Mendy FR (2010) Chilean congressional politics under President Lagos: environment and politics in Chile 2000–2006. *Local Environ* 15(2):83–103. <https://doi.org/10.1080/13549830903542349>
- Michael FL, Noor ZZ, Figueroa MJ (2014) Review of urban sustainability indicators assessment—case study between Asian countries. *Habitat Int* 44:491–500. <https://doi.org/10.1016/j.habitatint.2014.09.006>
- Mieth A, Bork HR (2005) History, origin, and extent of soil erosion on Easter Island (Rapa Nui). *Catena* 63(2–3):244–260 (ISI:000233398300007)
- Mischen PA, Homsy GC, Lipo CP, Holahan R, Imbruce V, Pape A et al (2019a) A foundation for measuring community sustainability. *Sustainability* 11(7):1903. <https://doi.org/10.3390/su11071903>
- Mischen PA, Lipo CP, Hunt TL (2019b) Good governance of the commons of Rapa Nui: present and past. *Revista de geografía Norte Grande* 74:61–85. <https://doi.org/10.4067/S0718-34022019000300061>
- Pahl-Wostl C, Tàbara D, Bouwren R, Craps M, Dewulf A, Mostert E et al (2008) The importance of social learning and culture for sustainable water management. *Ecol Econ* 64(3):484–495. <https://doi.org/10.1016/j.ecolecon.2007.08.007>
- Parboteeah KP, Addae HM, Cullen JB (2012) Propensity to support sustainability initiatives: a cross-national model. *J Bus Ethics* 105(3):403–413. <https://doi.org/10.1007/s10551-011-0979-6>
- Park H, Russell C, Lee J (2007) National culture and environmental sustainability: a cross-national analysis. *J Econ Financ* 31(1):104–121. <https://doi.org/10.1007/BF02751516>
- Parker M, Dent M (1996) Managers, doctors, and culture: changing an English health district. *Admin Soc* 28(3):335–361
- Parsons CD (1985) *Healing practices in the South Pacific*. Institute for Polynesian Studies, Honolulu
- Peiser B (2005) From genocide to ecocide: the rape of Rapa Nui. *Energy Environ* 16:513–539
- Pukui MK, Craighill Handy ES (1958) *The polynesian family system in Ka'u*. Mutual Publishing Co, Honolulu
- Romzek BS, Johnston JM (1999) Reforming medicaid through contracting: the nexus of implementation and organizational culture. *J Public Admin Res Theory* 9(1):107–139
- Soini K, Birkeland I (2014) Exploring the scientific discourse on cultural sustainability. *Geoforum* 51:213–223. <https://doi.org/10.1016/j.geoforum.2013.12.001>
- Soini K, Dessein J (2016) Culture-sustainability relation: towards a conceptual framework. *Sustainability* 8(2):167. <https://doi.org/10.3390/su8020167>
- Tata J, Prasad S (2015) National cultural values, sustainability beliefs, and organizational initiatives. *Cross Cult Manag: Int J* 22(2):278–296. <https://doi.org/10.1108/CCM-03-2014-0028>
- Valentin A, Spangenberg JH (2000) A guide to community sustainability indicators. *Environ Impact Assess Rev* 20(3):381–392. [https://doi.org/10.1016/S0195-9255\(00\)00049-4](https://doi.org/10.1016/S0195-9255(00)00049-4)
- Veenstra AS, Lyons BA, Fowler-Dawson A (2016) Conservatism vs. conservationism: differential influences of social identities on beliefs about fracking. *Environ Commun* 10(3):322–336. <https://doi.org/10.1080/17524032.2015.1127851>
- Yesilkagit K (2004) Bureaucratic autonomy, organizational culture, and habituation: politicians and independent administrative bodies in the Netherlands. *Admin Soc* 36(5):528–552. <https://doi.org/10.1177/0095399704268501>