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Ontological Politics of Wildlife: Local People, Conservation Biologists and Guanacos

Robert Petitpas[1], Cristian Bonacic[2],

[1] Department of Geography, University College London, UK; Fauna Australis Wildlife Laboratory, Department of Ecosystems and the Environment, School of Agriculture and Forestry Sciences, Pontificia Universidad Católica de Chile, Chile

[2] Fauna Australis Wildlife Laboratory, Department of Ecosystems and the Environment, School of Agriculture and Forestry Sciences; Center for Intercultural and Indigenous Research - CIIR, Pontificia Universidad Católica de Chile, Chile

Correspondence Address:
Robert Petitpas
Department of Geography, University College London; Fauna Australis Wildlife Laboratory, Department of Ecosystems and the Environment, School of Agriculture and Forestry Sciences, Pontificia Universidad Católica de Chile

Abstract

In this article, we analyse the politics behind human-wildlife relations, based on the different understanding of guanacos by local people and conservationists in Northern Chile. We use a political ontology framework to study the interactions between different ontologies of wildlife. The analysis is based on in-depth interviews, field observations, documents analyses, and personal experience in guanaco conservation research. The relation between guanacos and local people is characterised by frequent and material encounters and the presence of the animal in the domestic sphere through multiple uses. The conservationists account of guanacos is characterised by spatial distribution, population size, habitat, and threat assessments, and the application of universal categories to classify this species. These different relationships with guanacos are related to two different ontologies of wildlife. For conservationists, the nature-society dichotomy is clear—guanacos are defined in a nature without humans, and in order to protect them they should be kept away from human activities. On the contrary, for local people, nature and society are not worlds apart. Guanacos are neither totally wild nor totally domestic. Understanding these differences is important because these ontologies interact and affect each other. In this case, the conservationist ontology was dominant over the local one. Also, the interactions between ontologies affect and are affected by conservation action, and by the general socio-political context. A better understanding of local ontologies is an important step to improve the relationship between conservationists and local communities.

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Full Text

Introduction

The interaction between local population and threatened species should be taken into account in order to establish effective conservation actions (Carman and Carman 2018). But local inhabitants must not be considered only as another element of a wild species habitat that can cause threats or abide to conservation measures (Berkes 2004). Local people are also active agents, that through their interaction with wildlife, and in specific socio-cultural contexts, they build a particular idea of nature and its conservation (Deruiter 2002; Brown 2003). In order to effectively include local population in conservation planning, the local understandings of wildlife should be studied, as these might differ from the scientific and governmental understandings (Gomez-Pompa and Kaus 1992).

In this paper we use an ontological politics approach to analyse the interaction between local and conservationist ontologies of guanaco (a wild camelid) in Northern Chile. This framework allows us to explore the material and social processes behind the enactment of different wildlife ontologies, and thus, to better understand the political processes behind conservation. To understand the ontological politics approach, first, the concept of multiple ontologies will be discussed. Ontology is the study of the underlying structures of reality (Forsyth 2004). Philosophers and researchers from different backgrounds have criticised the modern ontological categories of natural science. In the case of Actor-Network Theory (ANT), by tracing the emergence of scientific facts to social networks, an alternative ontological understanding of the world is proposed, where reality is not "naturally" given and universal (Blaser 2009a). This understanding of reality is related to an idea of modernity based on the separation between "human culture" and "non-human nature" (Latour 1993). In this context, the "natural" in natural science is a human-independent reality. According to Latour (2003), reality is enacted through social interactions where human and non-humans participate. However, the construction of reality is not only based on human-social processes and dominated by a powerful human creator, also ecological processes and other actors (e.g., non-humans) are entangled in the construction of reality (Latour 2003). Also, the enactment of reality is affected by historical, cultural and material practices, and therefore, different enactments, and thus ontologies, can exist in different contexts (Mol 1999). In her analysis of ontological politics, Mol (1999) explains that different enactments imply that ontologies are multiple, but not plural, as in the case of perspectivalism and social constructivism. In the case of perspectivalism, different actors held different interpretations of reality, so there is only one reality but there are different versions of that reality, which can be disputed among the

actors. From a constructivist point of view, reality is the construction that succeeds over other possible constructions, thus the different possible constructions do not coexist. On the contrary, the idea of multiple ontologies implies that the many enactments of reality coexist (Mol 1999; Law and Lien 2013). For example, Doody et al (2014) described how weeds are enacted in the interaction between plants and people in particular places, such as gardens. A different weed will emerge from different kinds of interactions (e.g., agriculture, gardening, weed ecology research). Even in scientific accounts of weeds, there is no single definition that fits all weeds, so the most accepted definition is very flexible, because, as Doody et al (2014) suggest, it allows different interpretations in different contexts. This implies that multiple weeds can coexist and their overlaps can be used to build a broader definition of weed. The idea of multiple ontologies does not necessarily reject the scientific accounts of the world, but places them among other understandings, with which they interact.

This ontological multiplicity requires redefining the place of politics in the study of human-environment interactions. The ontological politics approach goes beyond the description of disputes over different perspectives on the environment, that still rely on the modernist notion of a single nature (Blaser 2009a, 2014) because it implies that even reality is disputed. Two kinds of political interactions can be considered in this ontological approach— (1) the politics behind the enactment of reality, and (2) the politics that shape the interaction between ontologies. Blaser (2009b: 11) points out that the "two connected meanings" of the term political ontology are "the power-laden negotiations involved in bringing into being the entities that make up a particular world or ontology" and " a field of study that focuses on these negotiations but also on the conflicts that ensue as different worlds or ontologies strive to sustain their own existence as they interact and mingle with each other". Therefore, the political is not only in the struggles between ontologies trying to survive (Blaser 2009b) but also in the social processes underlying the enactment of reality (Latour 2003). In these enactments, humans and non-humans are involved in political relations (Whatmore 2013), where the non-humans are not mere materials controlled by humans but are agents as well (Latour 2003).

It is important to mention that ontologies are not considered here as systems to structure reality, as in the types of ontologies or "systems of the properties of existing beings" described by Descola (2013: 120). Instead, drawing on Science and Technology Studies (STS), we consider that realities are constantly in the making, produced in local material and social engagements, but also affected by broader socio-political processes (Mol 1999; Woolgar and Lezaun 2013). Therefore, these contingent and situated ontologies can change as they are susceptible to changing social and material conditions and to the interaction with other ontologies.

The political processes behind the interaction between ontologies are related to their coexistence (Blaser 2013). The simultaneous presence of multiple ontologies leads us to study the interactions between them, in order to understand "how and where different enactments overlap, conflict or support each other" (Goldman et al. 2016: 29). The case of anaemia presented by Mol (1999) is illustrative of these interactions. Anaemia can be determined in different ways, among these are clinical diagnoses (i.e., examinations of symptoms) or statistical detection (i.e., laboratory measures of haemoglobin levels). These two methods represent different versions of anaemia, which do not always coincide; it is possible to have a laboratory detection without having any symptoms. But, according to Mol, it is not necessarily a matter of choice among the possible enactments of anaemia, because these two different versions coexist and can support each other (e.g., both tests can be done in the hospital to inform a medical decision). Furthermore, the different enactments can be even more entangled; to define the statistically normal anaemia levels is necessary to test the blood of healthy individuals, which are in turn classified with a clinical evaluation.

In this manner, the ontological politics approach is concerned with the description of conflicts, reinforcements and other interactions between ontologies (Blaser 2013; Forsyth and Levidow 2015; Goldman et al. 2016). Also, it allows exploration of the role of intersecting ontologies in the broader socio-political context. For example, in a case of wetland pollution in Southern Chile, that resulted in an important mortality of black-necked swans, Sepulveda and Sundberg (2015) described an ontology related to the interaction of local people with the swans, that was not represented by the scientific and public environmental accounts of the event, nor by the previous environmental impact assessments. The authors explained that the conflicts that emerged from the ontological differences allowed a better understanding of the important social and political consequences of this environmental controversy, which triggered, among other things, changes to the national environmental legislation.

In this paper, we propose an ontological politics approach to analyse politics of human-wildlife interactions without recurring to a pre-given, universal definition of nature. Political ecology has been criticised for portraying a too unified scientific perspective and thus overlooking the internal differences and negotiations that take place in the production of science (Campbell 2011). Sepulveda and Sundberg (2015) have argued that by contesting the dominant perspective but not the ontology of nature, the singular nature of natural science is still present in some political ecology research. Our aim is not to challenge the hegemonic view of nature based on modern positivist science (Peet and Watts 1996; Leff 2003), but to understand how this and other understandings interact and shape conservation. We use the case of guanacos in Northern Chile, to describe the engagements of local people and conservation biologists with this wild animal, and how from these different interactions, different ontologies emerge. The differences, overlaps, and interferences between ontologies and the role of the broader social context will be discussed, as well as the implications for conservation.

Methodology

Fieldwork was conducted in Alto del Carmen county, in the Andean region of the Atacama Desert, Chile (28°50'S - 70°20'W). In this rural county, human population is concentrated in two mountainous valleys that converge at Alto del Carmen village. Diaguita indigenous organisations have been constituted in the area since the Chilean government recognized in 2006 the existence of this ethnic group (Molina and Campos 2017). The main economic activities in the area are agriculture and mining. In the valleys there are small scale orchards and large vineyards. Although declining, goat herding is a traditional activity that still exists in the area. Herders lived in mountainous and isolated places, and moved their animals to higher lands during summer. In recent years tourism has been increasing but it is still incipient.

The species considered in this research, guanaco (Lama guanicoe), is a large South American mammal, with a wide distribution range, from Northern Peru to Southern Chile (Bonacic 1991). In Chile, guanaco is classified as a vulnerable species, but also, there are different regional classifications. In the Atacama Region, the species is considered endangered by Chilean law (Grimberg 2010). Guanaco hunting is forbidden, except for some special permits in Tierra del Fuego island. In pre-hispanic times, guanacos had a widespread distribution in almost all Chilean territory. Currently, guanaco populations are highly fragmented. The main threats to guanacos are habitat deterioration and fragmentation, poaching, cattle introduction, and feral dogs.

We considered two situated ontologies of guanacos, or in other words, two different set of contingent practices and knowledges from where two ontologically different guanacos come to be. One ontology is related to local people in Alto del Carmen and the other to wildlife conservation scientists and practitioners. In Alto del Carmen, we analysed the practical engagements with and knowledge about guanacos. Data was obtained from interviews, field notes and document analysis. In-depth, semi-structured interviews were conducted in different localities of the county. The respondents were 13 men and 9 women, between 18 and more than 67 years old, of different occupations (e.g., public services, agriculture, tourism). Most described themselves as Diaguita indigenous people. Also, notes about the material (e.g., guanaco hides) and symbolic (e.g., artistic depictions) presence of guanacos were taken during fieldwork. A document analysis of the local literature was made in Alto del Carmen library. The documents were mainly folk stories or poems that mentioned guanacos.

To understand the conservationists' ontology of guanacos, the National Plan for Guanaco Conservation (NPGC) (Grimberg 2010) was analysed and the editor of the NPGC, park rangers of Llanos de Challe National Park and two conservation scientists were interviewed. Also, the authors reflected on their own experience (e.g., past field surveys) and knowledge about guanacos' conservation (e.g., 'Multisectoral Strategy for the Conservation of Wild South American Camelids of Atacama Region' [(Bonacic et al. 2014)]).

Argument

The Guanaco of Alto del Carmen

The first thing that you see entering Alto de Carmen town is a big sign with the sentence "Welcome to Alto del Carmen" (in Spanish) and a white guanaco in the middle of a landscape. Guanacos were a familiar feature in Alto del Carmen daily life, both indoor and outdoor. In the past, around 30-50 years ago, local people frequently saw these animals near their houses and crops, or in the hills around the villages. Alto del Carmen is a mountainous dry-land with two main valleys, where agriculture and human settlements are located. According to local people, travelling through the mountains, where guanacos were mostly found, was more common in the past. During these movements, it was very usual to see guanacos. Furthermore, hunting trips were done, sometimes as a family activity, in order to get meat for domestic consumption. In that period, there were more people living or spending a long time in the mountains (e.g., herders, artisanal miners), for whom guanacos were part of their everyday environment, and part of their diet as well. But the interaction with guanacos did not take place only out-there-in-the-wild. Guanacos were inside the house as well; in the food plate, the wardrobe, and the medicine cabinet. Older residents remember the times when there was no butchery in the county, then guanacos were an important source of meat. Guanaco meat was usually consumed dry (called charqui) and was very appreciated. According to local people, charqui is the best kind of meat. The wool was widely used as well, mainly for making clothes and bed covers. It is also highly valued, and local people describe it as a fine quality wool. Almost every house used to have a loom to weave guanaco wool. This loom, called telar Diaguita, is considered to be a legacy of the Diaguita culture (the indigenous group of the region), and part of the cultural heritage of Alto del Carmen. Regarding the medicinal uses, guanaco feet were used for treating facial paralysis, and they were available at every house. Some people still have old feet (they were eager to show them) and they still found them an effective medicine. Another interaction with guanacos occurred with captive animals. It was not uncommon to hold guanacos near the houses, generally calves (known as chulengos). Today this practice is illegal, however, 10 guanacos that were captured in the past, remain in a pen in a local vineyard. Some 30 years ago these guanacos used to be in San Felix town, and to visit them was a popular pastime.

Guanacos also have an immaterial presence in Alto del Carmen. Guanacos are present in diverse artistic expressions (e.g., painted walls, building decorations, traditional handicraft) and popular legends (documented in several local books) and are used as an emblem by some local organisations (e.g., indigenous community, farmers association, and agribusiness). Guanacos can be seen in a mural next to the church or in mosaic in the school yard. The most frequent story about guanacos is the myth of the Yastai (a white magical guanaco, and the protector of the herd). A recurrent account about the Yastai is that it appears in front of hunters to protect other guanacos when too many animals are killed. Other stories describe the dual character of the Yastai. The magical guanaco can appear to someone as a good or bad entity, depending on the actions that lead to the encounter. For example, it would be angry and devilish with hunters that kill too many guanacos but it can appear as an angelical spirit to someone in distress. According to a local resident, once he was herding in dense fog when a big howling guanaco warned him of a cliff in his path. The herder claimed that the guanaco was the Yastai who save him and his cattle from an unexpected fall. Through the legend of the Yastai, guanacos are used to communicate moral lessons. A white guanaco (probably the Yastai, because common guanacos are not white) is depicted in the big sign at the entrance of Alto del Carmen village. Regarding the conservation of guanacos, most residents agreed with the legal protection and the hunting prohibition. Nevertheless, there is a contradiction between utilitarian and conservation values; some residents claimed that they do not eat guanaco meat, even though they like it, as they think that guanacos should be protected. An interviewee explained that he does not buy local guanaco meat any more, but he would like his children to try it someday. Furthermore, in the hypothetical scenario of the guanaco's extinction, most people would regret if guanacos disappear from the region.

In Alto del Carmen, an ontology of guanacos emerged from an historical relation between guanacos and local people that was characterised by frequent and material encounters and the presence of the animal in the domestic sphere. Also, guanacos have had a symbolic presence, appearing in stories, legends, decorations, and other expressions. This also suggests that the value toward guanacos goes beyond their practical use.

The Guanaco of Conservation Biologists

The idea of wildlife conservation, with its base in ecological sciences and Western environmental though (Adams 2013), is present today in Atacama. From this perspective, guanaco, or Lama guanicoe, is a South American camelid, a large herbivore, classified as endangered species in the Atacama Region by Chilean law (Grimberg 2010). The description of wild animals, like guanacos, by conservation sciences (e.g., ecology, wildlife management) is mainly focused on taxonomy, spatial distribution, demographics, habitat characteristics and threats. Conservation practitioners (like governmental institutions such as National Forest Corporation, or conservation NGOs) using these same concepts, devise conservation plans, implement actions and design educational strategies. According to taxonomical classifications, guanacos are a species of mammal, which corresponds to the most studied group of wild animals. The spatial distribution corresponds to the spatial occurrence of animals; it describes where animals can be found. Two kinds of spatial distribution are important to classify wild animals; the current distribution (i.e., where the animal can currently be found), and the original distribution (called historical or "natural" extent of occurrence of the animal). In this context, "natural" distribution is understood as where the animal would be if there had not been the human disturbances that shaped the current distribution. This concept implies a non-dynamic view of the spatial distribution of animals. It defines an after and before, not a continually changing distribution over time. Additionally, this "natural" distribution allows classifying the animal as native or exotic, and endemic. In the case of guanacos, native means that they are native to Chile, but they are not endemic because their natural distribution includes other countries. These concepts can be used above or below the national level as well, but in that case, the area will need to be explicit (e.g., native to South America, endemic to Atacama region). In a similar manner, the benchmark for evaluating the demographic of the species (i.e., population) is also the period before the arrival of Europeans to South America. Additionally, the habitat of guanacos is an important element in their ecological characterisation. The habitat is a multi-dimensional space where suitable conditions for the presence of guanacos are met. In other words, it is where the attributes that allow the reproduction and survival of guanacos are present. These attributes are defined by altitude, temperature, vegetation, among other variables. In general, these attributes do not include human presence (an exception will be to say that cities are a suitable area for pigeons). Observed changes in distribution and population are defined by a temporal separation from humans; before and after (modern) human presence. Similarly, the suitable habitat is defined by a spatial separation from humans, as human presence (e.g., settlements, agriculture, industry, infrastructure) replaces wildlife habitat. In the case of guanacos, their habitat has been destroyed or impoverished by human activities. In Alto del Carmen, the natural vegetation of the valleys has been replaced by crops, and movements of guanacos are limited by fences. In the mountains, goats, guided by herders, compete with guanacos by grazing the vegetation and drinking the scarce water. If guanacos enter the space of crops or herders, they can be shot or attacked by dogs.

The interference of humans in the world of guanacos threatened these animals with potential extinction. Guanacos are classified as endangered species in the

Atacama Region. That means that they can become extinct if nothing changes. Because of this status, they are protected by law and are a national conservation priority. The classification of species conservation status follows a scientific criterion based mainly on demographics (i.e., number of individuals, population trends) and spatial distribution, along with the assessment of actual, potential and suspected threats to the species. The Chilean classification is an adaptation of the international criteria of the IUCN Red List (IUCN Species Survival Commission 2000) to the national and regional level. This classification is a scale that indicates how close the species is to extinction. Thus, in order to devise a suitable conservation plan, the threats must be identified. The identified threats to guanacos in the Atacama region are habitat reduction and fragmentation, poaching, attack by dogs and cattle interference (e.g., disease transmission, competition for fodder). All these threats are related to human activities.

In general, the most important wildlife protection measure in the international conservation agenda has been protected areas (Toledo 2005; Palomo et al. 2014). In this manner, wildlife is protected by separating the human from the natural space. In Atacama region, not far from Alto del Carmen county, it is located at the de Challe National Park. Nowadays guanacos are not commonly seen in Alto del Carmen as before, but they can be easily observed in the national park. Some young residents of Alto del Carmen, unlike their parents, have never seen a guanaco in the county, but they have seen them in Llanos de Challe National Park. Today guanacos can be found mostly high in the mountains or outside the county, in the national park.

For conservation scientists and practitioners, the ontology of guanacos is characterised by spatial distribution, population size, habitat, and threat assessments. These characteristics allow to classify guanacos into universal categories (e.g., native, endangered), which are important for the scientific understanding of the environment (Goldman et al. 2016) and to inform conservation policy (e.g., establishment of protected lands, hunting prohibitions).

Differences and Overlaps Between Ontologies

The ontology of guanacos held by local people is based on more close and physical encounters with the animals than the ontology of conservationists. In Alto del Carmen guanacos were frequently seen, hunted, eaten, and used as clothes. In order to get the meat, it was necessary to go inside the guanaco and to know how to kill it, cut it, and how to prepare the food. In a similar manner, the use of the wool required to master several skills. People learnt about guanacos through experience and practice, and usually in a context of work. On the contrary, the interaction with guanacos in the conservation ontology is more distant. People can go to the national park to see guanacos, but they cannot get near them. In this context, the knowledge about guanacos comes from science and is generally transmitted in an abstract way, by books, web pages, park rangers' educational talks, and usually in a context of leisure. Whereas it is possible to feel the quality of the wool and the taste of the meat, it is not possible to touch the conservation status of guanacos or to see their demographics indices. Moreover, from the perspective of conservation, the proximity of human activities to guanacos is seen as negative, especially regarding human productive activities. The national park enables a space to see guanacos in a context of leisure, but where productive activities are not allowed. However, proximity to guanacos and their quotidian use by local people in Alto del Carmen played an important role in the knowledge and appreciation of guanacos.

These two different engagements with guanacos are related to the broader view on the nature-society dualism. For conservation biologists, guanacos represent the world of wildlife, which was in its "natural" state before the arrival of modernity. In this manner, the European colonisation function has a benchmark, which is key for evaluating and defining wildlife today (Blaser 2014). Furthermore, this world of wildlife is portrayed as something separate from the human world. In the case that these two worlds get into contact, the latter threatens the former. Thus, boundaries between the two worlds need to be built in order to protect the natural character of wildlife (Cronon 1996). The nature-society division appears in many forms in this ontology. For example, the habitat of guanacos is defined by ecological elements like altitude, temperature, and natural vegetation; humans are not part of it. The protection of guanacos is done by separating its space from human activity, as in the national park, or trying to avoid human threats. Alternative conservation measures, like human-made habitats or guanaco-friendly agricultural practices that allow the spatial coexistence of humans and guanacos are not mentioned in management plans. The division of nature and society also plays a role in defining the origin of the species (i.e., native or exotic) and therefore the importance of its conservation. Guanacos are native species because their original presence in Atacama was not caused by humans. Donkeys, on the other hand, are considered an exotic species, because they were introduced by humans. Nowadays there are feral donkeys roaming in Atacama, and they are not considered important for conservation, moreover, their presence is considered negative as they feed on native vegetation and compete with native guanacos.

In contrast, society and wildlife do not appear as separate for local people as it is for conservationists.

Some people expressed that they would not like to see guanacos disappear from the region, and often they compared this situation with the disappearance of donkeys. These people explained that donkeys were abundant in the past, but they disappeared because they were heavily hunted. Both guanacos and donkeys were regarded as local animals that were part of the land and were used by local people, and their existence are valued. Differently to the view of conservation science, the "natural" or human origin of animals is less significant to local people. Likewise, the blurring of the nature-culture divide can be noted in other characteristics of the interaction between local people and guanacos. As was mentioned above, guanacos were part of the domestic world, they were inside the house, in the plate and wardrobe, and also people were more frequently present in the mountains were most guanacos dwell. In addition, through the legend of the Yastai, guanacos were even part of the moral world of humans.

Despite the differences, there are some overlaps between local people and conservationists. As mentioned above, local people would regret the extinction of guanacos, and they agree with the idea of conservation and the prohibition of illegal hunting. They do not see conservation measures as something negative, on the contrary, they are concern about the future of the species. Nevertheless, local people still appreciate guanaco meat, and they hope that their grandchildren can taste guanaco meat as they were able to do it in the past. Also, conservation scientists and local people are highly critical of commercial and large-scale hunting. However, contrary to the view of conservationists, hunting is not a singular thing for them. They make the distinction between the extensive, commercial hunting and the traditional hunting for subsistence, which is not disapproved. Another point of view that came up from a few local residents, was the idea of breeding guanacos in captivity to have meat or at least wool, which is a less invasive use. Even one person pointed out that a project of guanaco breeding could be used to reintroduce some guanacos to the wild.

Interferences and the Role of the Broader Context

Unlike the cooperating ontologies of anaemia described by Mol (1999), the two ontologies of guanaco in Alto del Carmen do not support each other. Instead, the scientific version is interferes with the local one. Guanaco hunting and meat consumption are viewed as human threats, and therefore, are now forbidden. In general, local people do not see traditional hunting for self-consumption as a threat, and even some think guanacos should be bred in order to use the wool again. The use prohibitions prevent the material interactions which played an important role in the local enactment (Whatmore 2006) of guanacos. However, it is important to note that guanacos' population has been declining and their habitat is increasingly threatened for several reasons (e.g., agriculture, mining projects, highways). Most interviewees agreed that guanacos are declining, however a couple of them stated that guanacos are more abundant now than in the past. The latter based their opinions on their own herding experiences. They explained that guanacos are almost a plague that compete with cattle in mountainous meadows. According to herders, the presence of guanacos has become more problematic with the hunting prohibitions.

Another way to favour the scientific ontology is through knowledge circulation. Young people, who have not been in direct contact with guanacos, as their parents did, are more likely to see guanacos in the national park. In this protected space, the scientific account of wildlife is widely present and transmitted in talks, workshops, and information boards. Furthermore, the general social context is less favourable to the traditional ontology. New socio-economic conditions help to increase the separation between people and guanacos. Local people make fewer visits to the mountains, many of them are now working in services or administrative jobs in towns, or in large scale vineyards in the valleys. Herders and artisanal miners have almost disappeared. More young people now move to the city to go to university. Additionally, the improvement of public transport and roads allow a better connectivity, more access to resources (which replace guanaco products) and fewer and faster movements through the mountains.

The scientific ontology is easily mobilised into policy (Braverman 2015). Guanaco conservation in North and Central Chile are guided by the national plan for guanaco conservation, which is one of 28 plans of conservation for endangered species in Chile, elaborated by National Forest Corporation (CONAF). The plan is presented in a document edited by Grimberg (2010), which has two parts: a review of current scientific knowledge about guanacos and the conservation plan (including aims and action lines for implementation). The review covers information about ecology, distribution, habitat and threats. Also, there is a section about the importance of guanacos for indigenous people and another that describes the values supporting the protection of the species. Although the interaction between local people and guanacos is included, it is briefly mentioned and centred in pre-European times. Ten values toward guanacos are identified to be present in Chile, but these have a universal character. For example, existence value is exemplified by the buying of lands to protect guanacos by the Wildlife Conservation Society, which is an international NGO. Evolution, ecology and conservation values are referred to international scientific literature. The description of guanacos by Gabriel Gárcia Márquez (world-famous Colombian novelist) in his Nobel Prize speech is used to exemplify an artistic-literary value. Current local values and interactions are not considered in the knowledge base of the plan. Moreover, the traditional values and interactions between indigenous people and guanacos that are mentioned, are not incorporated in the conservation actions proposed.

Conclusion

From different experiences, related to different cultural and historical contexts, different realities emerged (Mol 1999; Law and Lien 2013). This was exemplified by the case of guanacos in Alto del Carmen. The approach of ontological politics allowed to take into account both the social processes and the physical elements (which in turn are co-dependent) that play a role in the enactment of guanacos. What guanacos mean to different people is neither determined only by the physical and ecological characteristics of these animals, nor solely by the social definitions and cultural interpretations of the people who interact with them. Both social and physical features are entangled in a given environment (Latour 2003) where a certain kind of guanaco comes to be. Additionally, underlying political processes shape the ontologies of wildlife. Conflicts and interferences can exist between enactments (Forsyth and Levidow 2015), as it was the case of the scientific ontology of guanacos dominating over the traditional one. Moreover, these relations were affected by the broader socio-political context. The social and physical conditions that take part in the enactment of guanacos are changing over time, but the forces driving these changes are not neutrally distributed. For example, the close encounters between local people and guanacos decreased as rural livelihood became unprofitable, public infrastructure was improved, and hunting was forbidden. Additionally, guanacos are classified as protected native wildlife by the government, and a corresponding educational programme was designed for outreach purposes. Local people can have little impact on the socio-economic conditions and policies that are behind these changes.

Exploring the different ontologies of guanacos can help to bridge the gap between local people, on the one hand, and conservation scientists and practitioners on the other. The ontological politics framework allowed the exploration of the differences, overlaps, and interferences between guanaco ontologies, and the effect of broader social issues (Goldman et al. 2016). Understanding these interactions could be useful to build a better dialogue between local people and conservation biologists (Goldman 2007). From the point of view of conservation, humans are a threat to guanacos, however, local people in Alto del Carmen shared the concern toward guanaco conservation with scientists. Considering the historical use of guanacos by local people as an important part of understanding and appreciating these animals, can help to define an inclusive protection programme. On the other hand, the different ontologies of guanacos highlight important discrepancies about the view of wildlife between the local people and scientists. For local people, guanacos are not from a wild world apart from society; people inhabit the mountains, and guanacos can be found in the houses. On the contrary, conservation scientists define separate spaces for guanacos and people; for them, guanacos belong to the wild. To avoid the negative incursion of society into the wild, space is being physically delimited, as in a national park. Behind this scientific understanding lies the nature-society dualism, which is not so manifest among local people (Blaser 2014). Accepting that different ontologies of wildlife coexist, in this case, one not based on the separation of nature and society, can open the door to new conservation opportunities. As suggested by Goldman (2007), establishing dialogues between local and scientific knowledge would be responsible and also could bring better ecological outcomes. For example, conservationists could be exploring alternatives such as breeding guanacos or fostering local productive practices that are friendly to and can coexist with guanacos.

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